# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1501** **Time: 2 Hours**

**Course Name: Psychiatric / Advise / Ethics** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **When a patient is not aware of his/her metal illness, it is called?**

a) Disorientation b) Lack of insight

c) Unconsciousness d) Lack of concentration

Q.2. **False sensory perception with no basis in reality is known as:**

a) Hallucination b) Delusion

c) Illusion d) Thought insertion

Q.3. **Gamophobia means:**

a) Fear of sound b) Fear of speed

c) Fear of social isolation d) Fear of marriage

Q.4. **Grandiose delusions are associated with:**

a) Manic disorder b) Schizophrenia

c) Obsessive compulsive disorder d) PTSD

Q.5. **Behavior therapy is useful in all of the following conditions, except:**

a) OCD b) Phobia

c) Hysterical conversion reaction d) Mania

Q.6. **The words ethics stands for:**

a) Substances b) Properties for chemical

c) Understanding human nature d) Study of morality

Q.7. **Which of following is not one the underlying principles of the cooperates governance combined code of practice?**

a) Openness b) Acceptability

c) Integrity d) Accountability

Q.8. **A (N)..... is a problem, situation or opportunity requiring and individual, group or organization to choose among several actions that must be evaluated as right or wrong:**

a) Ethical issue b) Crises

c) Fraud d) Indictment

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Q.9. **What is step of micro training?**

a) Repeat and summarize

b) Support retentivity

c) Both a and b

d) None of above

Q.10. **Which methodical procedures are common in counselling?**

a) Non guardianship

b) Problem interaction

c) Advocacy support

d) Pretending to act

## Section – B

04X04 = 16 Marks

Q.1. What is meant by a change of perspective?

Q.2. What is the justice in "Health Care System"?

Q.3. Describe 4 bioethical principles.

Q.4. Define bipolar disorder. Describe pathology and symptom of bipolar disorder.

## Section – C

04X06 = 24 Marks

Q.1. Define argumentation. Draw the model of argumentation and write down the 12 steps of micro training.

Q.2. What do you understand by code of ethics? Elaborate the code of nurse and people.

Q.3. Define psychotherapy. Enlist the behavior psychotherapy.

Q.4. Define schizophrenia. Describe the simple and hebephrenic schizophrenia.

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## Section – B

04X04 = 16 Marks

Q.1. **What is meant by a change of perspective?**

To enable the person seeking advice to perceive his or her situation differently and to cope with it in a different way through new perspectives.

- Problem anamnesis
- Problem interpretation
- Change of perspective
- Development of problem solutions

Q.2. **What is the justice in "Health Care System"?**

**Justice in the health care system**

When it comes to life and health, every person is equally important. Yes, but if the resources are lacking to treat everyone as required. How then should the resources be distributed and which patient should be preferred? First determine three criteria by which a patient should be selected. Then determine three further criteria that are not applicable to you at all.

- Fully employed person
- Who comes first or was registered first (waiting list)
- The most "valuable" person for their relatives (e.g. young mother with three small children)
- Who would benefit most from the treatment from a medical / nursing point of view
- Who is innocent of his illness or accident
- Who pays or is willing to pay the most for treatment
- Who is best insured or has paid high premiums for decades
- The poorest and most neglected person in life so far
- Who suffers most from the disease (in the opinion of the treating person) (physical, psychological, social)
- Who would cause the most difficulties in case of refusal / delay of treatment (legal, political, in the media, by relatives, etc.)
- Indian citizens
- Who credibly assures to live healthy after the treatment and to follow the medical advice
- The most useful person for the economy (e.g. innovative managers)
- The youngest person
- The person whose treatment would be most interesting and useful for science and research, education and training.

- Residents, citizens, taxpayers of the city, canton
- The most "valuable" person for society / culture
- The person who has received the least benefits from the health insurance fund in his or her previous life
- The most sympathetic person in the judgment of doctors and nurses
- The most "productive" person for the economy (can still work for a long time, produce goods and pay taxes)
- Draw / Lottery - Random principle
- Person with the strongest will to live and survive and the strongest motivation to treat
- The person whose illness has caused the most costs

Q.3. **Describe 4 bioethical principles.**

**The 4 bioethical principles**

Bioethicists often refer to the four basic principles of health care ethics when evaluating the merits and difficulties of medical procedures. Ideally, for a medical practice to be considered "ethical", it must respect all four of these principles: autonomy, justice, beneficence, and non-maleficence. The use of reproductive technology raises questions in each of these areas. Four commonly accepted principles of health care ethics, excerpted from Beauchamp and Childress (2008), include the:

**Autonomy**

Requires that the patient have autonomy of thought, intention, and action when making decisions regarding health care procedures. Therefore, the decision-making process must be free of coercion or coaxing. In order for a patient to make a fully informed decision, she/he must understand all risks and benefits of the procedure and the likelihood of success. Personal freedom and the right of every individual to decide freely on his or her own affairs and to act as he or she sees fit:

Autonomy means supporting the sick or healthy individual to achieve his or her health goals.

**Justice**

The idea that the burdens and benefits of new or experimental treatments must be distributed equally among all groups in society. Requires that procedures uphold the spirit of existing laws and are fair to all players involved. The health care provider must consider four main areas when evaluating justice: fair distribution of scarce resources, competing needs, rights and obligations, and potential conflicts with established legislation. Reproductive technologies create ethical dilemmas because treatment is not equally available to all people. A fair and appropriate distribution of resources to treat all people equally and according to their needs:

Providing fair care means respecting the basic rights of each individual and using the available resources in such a way that each person can be treated according to his or her care needs.

**Beneficence / doing good**

Requires that the procedure be provided with the intent of doing good for the patient involved. Demands that health care providers develop and maintain skills and knowledge, continually update training, consider individual circumstances of all patients, and strive for net benefit. This principle refers to the duty, on the one hand, to support fellow human beings so that they receive what is useful to them and contributes to their well-being. But it also expresses the obligation to protect and defend the interests of others, their lives, their safety and their health:

**Non-maleficence / not harming**

Requires that a procedure does not harm the patient involved or others in society. Infertility specialists operate under the assumption that they are doing no harm or at least minimizing harm by pursuing the greater good. However, because assistive reproductive technologies have limited success rates uncertain overall outcomes, the emotional state of the patient may be impacted negatively. This principle is about neither causing nor inflicting physical or psychological damage, intentionally or unintentionally:

Not harming means protecting patients from anything that harms them, endangers their safety or could endanger their lives.

Q.4. **Define bipolar disorder. Describe pathology and symptom of bipolar disorder.**

**Bipolar disorder**

Bipolar disorder is a persistent unstable mood condition in which mania and depression alternate (manic-depressive illness). Symptom-free phases can occur between the episodes of illness. The lifetime risk for bipolar disorder is about 1%, i.e. 1 in 100 people will fall ill during their lifetime. In contrast to depression, men and women are affected about equally often. The age of onset of the disease is significantly earlier in the case of bipolar disorder (at the beginning of the 3rd decade of life).

**Pathophysiology**

Here too, it is assumed that many causes together trigger the disease (multifactorial genesis). A concrete reference to certain life events is usually not given in depressive or manic phases. Nevertheless, psychosocial factors - such as the experience of stress, trauma or conflict - can play a role. A genetic predisposition for bipolar disorders is well documented. A disorder of the neurotransmitters (norepinephrine, serotonin, dopamine) is considered highly probable.

**Symptoms**

Depressive and manic symptoms appear. In the manic phases, the patient is in an elevated mood and shows increased drive and activity. In the depressive phase, on the other hand, he is depressed and lacks drive. Overall, these patients are usually depressed for a longer period than manic patients.

In special cases, mania and depression can occur simultaneously and create a "mixed state", so to speak. This means, for example, that the patient is in a cheerful mood, but on the other hand suffers from lack of drive.

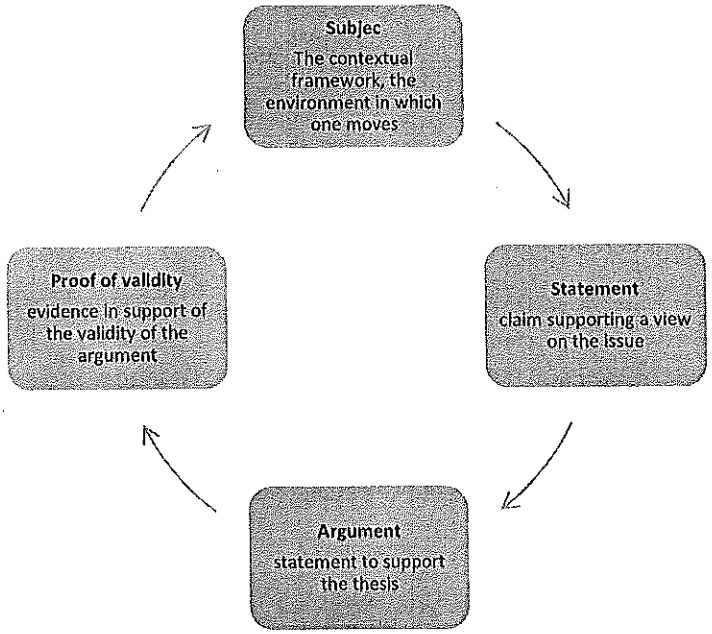
## Section – C

04X06 = 24 Marks

Q.1. **Define argumentation. Draw the model of argumentation and write down the 12 steps of micro training.**

**Definition – Argumentation**

The word argument comes from Latin and means "reason for proof". When we argue, we should give reasons for or against something. In terms of content, we make the interlocutor aware of facts, circumstances, background or consequences of certain phenomena or actions with the aim that the other person agrees with us, understands a situation, supports our goals or acts according to our recommendations.




**steps of microtraining**

1. determine previous knowledge, motivation, attitude, learning requirements
2. consider indicative targets
3. negotiate fine targets
4. supplement knowledge
5. provide illustrative material
6. pretending to act
7. let practice, motivation to practice
8. answer questions
9. offer and hand out information material
10. results, checking knowledge
11. evaluation, giving feedback

create documentation

Q.2. **What do you understand by code of ethics? Elaborate the code of nurse and people.**

**Care ethics (nursing ethics)**

Care ethics is a form of applied ethics. Applied ethics applies general moral principles to a specific area of action and concretizes them in relation to it. Thus, nursing ethics illuminates problems specific to nursing from the perspective of ethics. In nursing ethics, too, it is a matter of perceiving and further developing one's own values. In discussions and in exchange with others, these values are examined and represented.

**Nurses and people**

- The nurse's primary professional responsibility is to people requiring nursing care.
- In providing care, the nurse promotes an environment in which the human rights, values, customs and spiritual beliefs of the individual, family and community are respected.

- The nurse ensures that the individual receives accurate, sufficient and timely information in a culturally appropriate manner on which to base consent for care and related treatment.
- The nurse holds in confidence personal information and uses judgement in sharing this information.
- The nurse shares with society the responsibility for initiating and supporting action to meet the health and social needs of the public, in particular those of vulnerable populations.
- The nurse advocates for equity and social justice in resource allocation, access to health care and other social and economic services.
- The nurse demonstrates professional values such as respectfulness, responsiveness, compassion, trustworthiness and integrity.

## Element of the Code # 1:

### NURSES AND PEOPLE

| Practitioners and Managers | Educators and Researchers | National Nurses Associations |
|---|---|---|
| Provide care that respects human rights and is sensitive to the values, customs and beliefs of people. | In curriculum include references to human rights, equity, justice, solidarity as the basis for access to care. | Develop position statements and guidelines that support human rights and ethical standards. |
| Provide continuing education in ethical issues. | Provide teaching and learning opportunities for ethical issues and decision making. | Lobby for involvement of nurses in ethics committees. |
| Provide sufficient information to permit informed consent to nursing and/or medical care, and the right to choose or refuse treatment. | Provide teaching/ learning opportunities related to informed consent, privacy and confidentiality, beneficence and maleficence. | Provide guidelines, position statements, relevant documentation and continuing education related to informed consent to nursing and medical care. |
| Use recording and information manage-ment systems that ensure confidentiality. | Introduce into curriculum concepts of professional values. | Incorporate issues of confidentiality and privacy into a national code of ethics for nurses. |
| Develop and monitor environmental safety in the workplace. | Sensitise students to the importance of social action in current concerns. | Advocate for safe and healthy environment. |

Q.3. **Define psychotherapy. Enlist the behavior psychotherapy.**

**Psychiatric therapy and psychotherapy**

Depending on the severity of the illness and whether or not it has an organic cause, therapy is carried out either by a psychiatrist or by a psychotherapist. First, the psychiatrist clarifies a possible underlying organic disorder (e.g. a metabolic disorder) as the cause of the mental illness. While in psychiatry the focus is on drug therapy, in psychotherapy psychological techniques such as behavioural therapy, psychodynamic therapy and talk therapy are used. There are overlaps between both fields. For example, the psychiatrist's drug therapy can be supplemented by talk therapy or talk therapy can be supported by medication, e.g. in the case of depression. An individual decision must also be made as to whether the therapy should be carried out on an inpatient or outpatient basis, individually or in a group. Beyond pharmaco- and psychotherapy there are numerous other procedures, such as occupational therapy or light therapy, which can be used additionally.

**Behavioural Therapy**

Behavioural therapy assumes that the behaviour of a person is generally learned. This means that it also considers a behavioural disorder, such as an eating disorder, as something learned. The environment, the social environment and experiences, also in the parental home, play an important role as the cause of the disorder. Since the wrong behaviour was learned, it can be corrected, i.e. replaced by another behaviour, according to the opinion of behavioural therapy. Essential goals are the activation and stabilization of the patient, the development of his social competence and the change of his thinking structures. In this way, negative attitudes are to be reduced and the patient's life is to be shaped positively. In behavior therapy, different methods can be used. Examples:

| | |
|---|---|
| Exposure Therapy | It is mainly used in the treatment of anxiety disorders and aims to confront the patient with his or her fears and slowly desensitize them. |
| Cognitive therapy | Here the basic assumption is that our thoughts and attitudes determine how we feel and behave. The patient should be made aware that his thought processes and patterns are illogical and unrealistic. The old thought processes are then reassessed. This type of behavioral therapy is used, for example, in cases of depression or personality disorders. |
| Self-confidence training | Here, for example, role plays are used to strengthen self-image. The patient gains more self-confidence and acquires social skills, e.g. he learns to express wishes and needs and to say no. |
| Model learning | The patient acquires new skills by observing and imitating. |

Q.4. **Define schizophrenia. Describe the simple and hebephrenic schizophrenia.**

**Schizophrenia**

Schizophrenia is a profound mental disorder that affects thinking, perception and emotions. In the foreground are delusions, hallucinations, perception disorders, conspicuousness of thinking and ego disorders. Often the reference to reality gets lost or the affected persons cannot distinguish between reality and their own "distorted" perception. Accordingly, coping with everyday life is difficult to impossible. About 1% of the population suffers from schizophrenia. The main age of onset of the disease is usually between the ages of 15 and 35

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Schizophrenia is a **chronic brain disorder** that affects less than one percent of the U.S. population. When schizophrenia is active, symptoms can include delusions, hallucinations, disorganized speech, trouble with thinking and lack of motivation.

**Hebephrenic schizophrenia**

Also known as 'disorganised schizophrenia', this type of schizophrenia typically develops when you're 15-25 years old. Symptoms include disorganised behaviours and thoughts, alongside short-lasting

delusions and hallucinations. You may have disorganised speech patterns and others may find it difficult to understand you.

People living with disorganised schizophrenia often show little or no emotions in their facial expressions, voice tone, or mannerisms.

**Simple schizophrenia**

Simple schizophrenia is rarely diagnosed in the UK. Negative symptoms (such as slow movement, poor memory, lack of concentration and poor hygiene) are most prominent early and worsen, while positive symptoms (such as hallucinations, delusions, disorganised thinking) are rarely experienced.

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**Course Code: SHP1501** **Time: 2 Hours**

**Course Name: Psychiatric / Advice / Ethics** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
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## Section – A

10X01 = 10 Marks

Q.1. **Cognitive behavior therapy is used for managing:**

a) Anxiety b) Mania

c) Schizophrenia d) bipolar disorder

Q.2. **When a patient is not aware of his / her mental illness, it is called?**

a) Disorientation b) Lack of attention

c) Unconsciousness d) Lack of concentration

Q.3. **Euthanasia means:**

a) Gently and easy Death b) Painless death

c) unexpected death d) Death

Q.4. **Ethics is a ..... science:**

a) Positive b) Negative

c) Normative d) Theoretical

Q.5. **A client is admitted to a medical nursing unit with a diagnosis of acute blindness after being involved in a hit-and-run accident. When diagnostic testing cannot identify any organic reason why this client cannot see, a mental health consult is prescribed. The nurse plans care based on which mental health condition?**

a) Psychosis b) Repression

c) Conversion disorder d) Dissociative disorder

Q.6. **Rema is admitted in psychiatric ward, refused to eat breakfast by stating that the food is poisoned. This kind of response is an example of:**

a) Hallucination b) Illusion

c) Delusion d) Empathy

Q.7. **The type of delusion commonly seen in depression is / are:**

a) Delusion of nihilism b) Delusion of poverty

c) Delusion of perception d) All of above

Q.8. **Aruna Shanbaug case is related to:**

a) Abortion

b) Surrogacy

c) Pro – life

d) Euthanasia

Q.9. **Guidance can be called a process because:**

a) Defines problems, identifies choice, sets goals and makes plans to reach that goal

b) It helps very individual

c) It is a continuous process

d) It is a voluntary process

Q.10. **Which of the following assumption about moral behavior is reasonably justified?**

i) Most people will behave morally if the socialization process has successfully inculcated the right values

ii) Some people will behave more morally than others even if they have been under the same socialization process

iii) Social situation provides the best stimulus to moral action or inaction; i.e social pressure determines moral action / inaction

iv) Socialisation has no role in developing moral values

a) i and iv

b) i, ii and iii

c) i, ii, iii and iv

d) ii and iii

## Section – B

04X04 = 16 Marks

Q.1. What does empowerment in consulting means?

Q.2. Write down the fundamental rights in India?

Q.3. What is the justice in "Health Care System"?

Q.4. Write down the difference between hallucination of illusion?

## Section – C

04X06 = 24 Marks

Q.1. What do you understand by code of ethics? Elaborate the code of nurse and professional.

Q.2. Describe OCD.

Q.3. What do you meant by counselling? Write down the difference between the adherence and compliance.

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**b) i, ii and iii**

c) i, ii, iii and iv

d) ii and iii

## Section – B

04X04 = 16 Marks

Q.1. What does empowerment in consulting means?

The aim of counselling is always to strengthen self-confidence and self-management skills and to enable people seeking advice to shape their own lives and to take responsibility for them.

Q.2. Write down the fundamental rights in India?

Fundamental rights in India

The Constitution offers all citizens, individually and collectively, some basic freedoms. These are guaranteed in the Constitution in the form of six broad categories of Fundamental Rights, which are justiciable. Article 12 to 35 contained in Part III of the Constitution deal with Fundamental Rights. These are:

- Right to equality, including equality before law, prohibition of discrimination on grounds of religion, race, caste, sex or place of birth, and equality of opportunity in matters of employment.
- Right to freedom of speech and expression, assembly, association or union, movement, residence, and right to practice any profession or occupation (some of these rights are subject to security of the State, friendly relations with foreign countries, public order, decency or morality).
- Right against exploitation, prohibiting all forms of forced labour, child labour and traffic in human beings.

- Right to freedom of conscience and free profession, practice, and propagation of religion.
- Right of any section of citizens to conserve their culture, language or script, and right of minorities to establish and administer educational institutions of their choice; and
- Right to constitutional remedies for enforcement of Fundamental Rights.

Q.3. What is the justice in "Health Care System"?

**Justice in the health care system**

When it comes to life and health, every person is equally important. Yes, but if the resources are lacking to treat everyone as required. How then should the resources be distributed and which patient should be preferred? First determine three criteria by which a patient should be selected. Then determine three further criteria that are not applicable to you at all.

- Fully employed person
- Who comes first or was registered first (waiting list)
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- Who would benefit most from the treatment from a medical / nursing point of view
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- Draw / Lottery - Random principle
- Person with the strongest will to live and survive and the strongest motivation to treat
- The person whose illness has caused the most costs

Q.4. Write down the difference between hallucination of illusion?

**Hallucinations** (false perceptions) are among the perception disorders. This means that the patient hears, sees, smells or tastes something without a corresponding external stimulus. A distinction is made between the following forms:

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| | |
|---|---|
| Auditory hallucinations | The patient hears sounds, noise, a single word or voice that doesn't exist. Some patients associate the voices with familiar people, for example, assume that they hear their mother speaking. Some patients hear several voices and assume that these voices are talking about them, laughing at them or threatening them. Some patients enter into dialogue with the "imaginary" voices, i.e. they speak with these voices. |
| Optical hallucinations | This type of perceptual delusion ranges from simple optical impressions such as flashes of light, to seeing different colours, to seeing figures, mythical creatures, animals or people. Even whole scenes can be experienced. |
| Hallucinations of smell and taste | For example, the patient thinks he smells the smell of corpses. or putrefaction. |
| Cenesthesia | Cenesthesia concerns the perception of the own body. They are extremely varied and often occur in attacks. For example, the patients have the feeling of being petrified or suddenly feel pain. With body hallucinations, in contrast to the cenesthesia, the affected persons experience the body perception as being made from the outside (e.g. "The neighbour electrifies my testicles.") |

## HALLUCINATION VERSUS ILLUSION

| *Hallucination* | *Illusion* |
|---|---|
| False perceptions | Merely misperceptions |
| Reacts on internal stimuli | Responds to real external stimuli |
| Experienced personally and uniquely | Often experienced universally |
| Generally abnormal | Generally normal |
| Difficult to be researched | Can be measured, observed, and researched |
| Originates internally | Originates externally |
| Associated with mental disorders | Not that associated with mental disorders |
| Has more types | Has lesser types |
| Not that linked with arts or entertainment | Highly associated with the arts and entertainment |
| Has a negative connotation due to its link with pathology | Leans towards a positive connotation with its relevance to design, magic tricks, and the like |

DifferenceBetween.net

## Section – C

04X06 = 24 Marks

Q.1. What do you understand by code of ethics? Elaborate the code of nurse and professional.

International Council of Nurses (ICN)

The ICN Code of Ethics for Nurses, Revised 2012. An international code of ethics for nurses was first adopted by the International Council of Nurses (ICN) in 1953. It has been revised and reaffirmed at various times since, most recently with this review and revision completed in 2012.

### 1.1 Preamble

Nurses have four fundamental responsibilities: to promote health, to prevent illness, to restore health and to alleviate suffering. The need for nursing is universal. Inherent in nursing is a respect for human rights, including cultural rights, the right to life and choice, to dignity and to be treated with respect. Nursing care is respectful of and unrestricted by considerations of age, colour, creed, culture, disability or illness, gender, sexual orientation, nationality, politics, race or social status. Nurses render health services to the individual, the family and the community and coordinate their services with those of related groups.

### 1.2 The ICN Code

The ICN Code of Ethics for Nurses has four principal elements that outline the standards of ethical conduct

#### 1.2.1 Nurses and the profession

- The nurse assumes the major role in determining and implementing acceptable standards of clinical nursing practice, management, research and education.
- The nurse is active in developing a core of research-based professional knowledge that supports evidence-based practice.
- The nurse is active in developing and sustaining a core of professional values.
- The nurse, acting through the professional organisation, participates in creating a positive practice environment and maintaining safe, equitable social and economic working conditions in nursing.
- The nurse practices to sustain and protect the natural environment and is aware of its consequences on health.
- The nurse contributes to an ethical organisational environment and challenges unethical practices and settings.

**Element of the Code # 3:**

**NURSES AND THE PROFESSION**

| Practitioners and Managers | Educators and Researchers | National Nurses Associations |
|---|---|---|
| Set standards for nursing practice, research, education and management. | Provide teaching/ learning opportunities in setting standards for nursing practice, research, education and management. | Collaborate with others to set standards for nursing education, practice, research and management. |
| Foster workplace support of the conduct, dissemination and utilisation of research related to nursing and health. | Conduct, disseminate and utilise research to advance the nursing profession. | Develop position statements, guidelines and standards related to nursing research. |
| Promote participation in national nurses' associations so as to create favourable socioeconomic conditions for nurses. | Sensitise learners to the importance of professional nursing associations. | Lobby for fair social and economic working conditions in nursing. Develop position statements and guidelines in workplace issues. |

Q.2. Describe OCD.

Obsessive Compulsive Disorder (OCD)

OCD is a disease in which patients are tormented by recurring obsessive thoughts and actions. These usually follow the same pattern. Attempts to resist them are in vain. Obsessive-compulsive acts are carried out by those affected in order to avert a feared disaster. The patients are aware of the senselessness of the compulsions, but if they do not carry out the actions, it causes fear.

**Pathophysiology**

The origin of the constraints can be explained genetically, organically and psychologically.

One can observe an accumulation of obsessive-compulsive disorders in affected families. In twins, both are usually affected. It is also suspected that certain filter functions in the human brain are defective and that there is an over-functioning of certain regions of the brain. There is an imbalance of the brain messenger substances serotonin and dopamine. Perhaps damage to the brain in childhood can also lead to an obsessive-compulsive disorder later on.

In terms of learning psychology, compulsions are explained by the fact that fears or anxieties are linked to neutral objects. For example, fear is linked to the neutral object "dirt". When the patient removes the dirt, he removes his fear at the same time. The compulsive action of "removing dirt" reduces the fear considerably. At some point, this ritual becomes independent and the patient tries to reduce tension or anxiety by excessive cleaning and washing.

In psychoanalysis (psychodynamic), compulsions can be explained by a very pronounced conscience of the person concerned and equally pronounced urges. Conscience and natural drives are in conflict with each other. In addition, there is often an exaggeratedly strict upbringing regarding the hygiene and cleanliness of the child.

**Symptoms**

Similar to the case of fear, not every compulsion has the same disease value. It is not pathological, for example, if you check whether the front door is actually locked or whether the plane ticket is really in your pocket. Sometimes you also have a certain melody in your head that you just can't get out of your head. However, if the compulsions keep recurring and affect the person in his everyday life, if life is more and more dominated by compulsions and fears, compulsions are to be considered as a disease. The patient's attempts to free himself from his compulsions are usually in vain and associated with great tension and fear. Characteristic of obsessive-compulsive disorders is that they always follow the same pattern. So they are stereotypical. They force themselves on the patient without him being able to do anything about it, although he does understand the absurdity of the compulsions.

**Obsessive thoughts**

They are frequent, recurring ideas or fears that something terrible might happen, for which one would then be responsible. The fears triggered can only be alleviated by coercive action.

**Obsessive actions**

The patient compulsively carries out actions that are against his will and although he is aware of the absurdity. These actions always follow the same pattern, like a ritual, which must never be shortened or changed:

- The most common is the compulsion to control. Countless times they check whether the cooker is off, whether the tap is closed, whether the front door is locked, whether all windows are closed and so on. This can take several hours until everything is in order for the patient. If he cannot perform these compulsive actions, fear and a great inner tension will arise.
- With the compulsion to keep order, everything must be perfectly tidy. All pens have a specific place on the desk and must not be moved by one centimetre.
- Patients with washing obsessions think they are dirty, and sometimes wash their hands for hours to relieve some of the inner tension.

**Forced impulses**

They force themselves upon the patient and want to lead him to act against his own will. They are associated with the fear of causing great harm to others. For example, you take a kitchen knife in your hand and fear that you will have to kill your partner with it. The patient suffers from great fear that the impulses are no longer controllable, which leads to great tension.

**Dealing with "compulsive patients"**

Coercive acts may seem incomprehensible to outsiders, but they should be taken seriously and not ridiculed, because the patient suffers from them and through the coercive acts he avoids or reduces a sometimes very strong feeling of fear. It is important to signal support and empathy to the patient in these situations.

**Diagnostics**

The diagnosis is based on a detailed anamnesis. The symptoms must last at least 2 weeks in order to be able to make a diagnosis of OCD. The patient must find the thoughts unpleasant. They occur again and again following the same pattern. Any resistance to the compulsions is unsuccessful and associated with great fear or inner restlessness. The doctor must rule out the possibility that another mental disorder is present. Compulsions can also occur in the context of depression, anxiety disorder or schizophrenia. Medication and drugs are another possible cause.

**Therapy**

The treatment is usually difficult and lengthy. The aim is to get the compulsions under control with medication and psychotherapy.

Antidepressants such as SSRIs are the most suitable drugs for drug treatment. These relieve anxiety, depression and compulsions at the same time. These drugs must be given for at least 12 weeks, sometimes for years.

In behavioural therapy, the patient is gradually confronted with his or her compulsions (exposure therapy). He must consciously endure his compulsions without carrying out coercive actions. In this way, he learns to overcome his inner tension and fears without the feared occurrence. The avoidance behaviour should be given up. In these situations of greatest tension, the patient tries to relax physically by conscious slow breathing or by muscle relaxation. Obsessive thoughts can be reduced by mental restructuring. The patient should try to distance himself from the contents of the compulsions by becoming aware that they are only part of his obsessive-compulsive disorder and that the fear is not at all justified.

The involvement of the relatives plays an important role in the therapy. Often they too are exposed to a great deal of suffering, as they are included in the compulsions.

Psychodynamically, an attempt is made to weaken the strong superego of the patient, i.e. the strongly developed conscience, and to perceive hidden drives and thoughts as normal and natural.

**OCD and everyday life in the ward**

Patients with OCD in particular often have a very structured daily routine in which the execution of the compulsive acts is firmly anchored. This can be problematic for the daily routine of the carers or even the fellow patients (e.g. if the patient occupies the bathroom and toilet for a long time due to a washing compulsion). A jointly developed daily plan, which also takes existing compulsive acts into account, helps to avoid conflicts.

**Prognosis**

The obsessive-compulsive disorder is often chronic and spreads more and more. The result can be social withdrawal and professional failure. Everyday life may also be massively affected. The therapy is long and difficult. In most cases, it at least relieves the symptoms and thus improves the quality of life.

**There is no health without mental health**

What is normal, what is crazy? Where is the line between "different" and "sick"? How someone judges human behaviour is strongly dependent on his or her character: on culture and mother tongue, on social norms and values. This also applies to mental health assessment: a disorder is defined as behaviour that deviates significantly from the norm - no wonder there is no uniform definition.

In order to be clinically relevant, a mental health problem must be associated with ailments such as pain or with an impairment, for example of the ability to work. Purely socially caused problems are not enough. Homosexuality is not a disease, because gays and lesbians may suffer in countries where they are discriminated against or persecuted, but not in more tolerant societies. The sufferings and dysfunctions of schizophrenics, on the other hand, exist independently of stigmatisation.

The causes of mental disorders are not fully understood and are also difficult to grasp because various factors usually interact. These include biological and social factors, family conditions and stressful life experiences. Even traumatic events or serious crises need not have lasting consequences if those affected have good resilience. On the other hand, people with a history of stress can be thrown off track by even minor events.

The fact that cultural factors play a role is made clear, for example, by eating disorders: they affect young women in Western societies in particular. Anxiety disorders occur more frequently where the stress levels are high. This can be due to high work pressure as well as poverty, violence or life in the city.

Mental disorders are taboo almost everywhere in the world. Those affected are considered bewitched or possessed, or they themselves are blamed for their condition. Some mental disorders are accompanied by severe behavioural problems. In return, the sick are despised, not taken seriously, feared and hated. Aggressive and uncontrolled behaviour, but also severe depressions are still being treated with electric shocks, and shackles and blows are common practice in many countries. Where spirits and demons, magic or divine punishment are used to explain mental suffering, healing is also sought through metaphysical means. People have always relied on healers and priests, traditional rites or exorcisms. The methods of Western psychiatry are in many places just as little common as psychotherapy.

Mental disorders are increasing worldwide. They cannot usually be cured - but they can be treated. This is an important, development-relevant task: Those who are psychologically burdened are less able to cope with their everyday life than others, which has an impact on education, work and social life. According to the World Health Organization (WHO), "There can be no health without mental health". Consequently, the third Sustainable Development Goal (SDG) on health and well-being explicitly includes mental health. According to the WHO, much more needs to be done to achieve it, especially with regard to mental health.

Q.3. What do you meant by counselling? Write down the difference between the adherence and compliance.

Counselling is one of the most traditional and important intervention strategies in the field of health care, but is fundamentally different from the strategies described above, which are primarily based on the expansion of knowledge. The aim of counselling is to provide support in a clearly defined individual problem situation with the aim of enabling the person seeking advice to arrive at viable problem-solving strategies. Counselling can be directed at individuals or groups and uses different forms of communication and media. Counselling is characterised by the following principles:

Counselling is strictly problem-solving oriented:

it aims solely at the problems articulated by the person seeking advice and their solution. It is based on the assumption that people can change and are in principle able to shape their lives independently and control their health situation, but that they need support, competence promotion and strengthening in problem and crisis situations.

Difference Adherence and compliance

Patients' adherence to therapy is often not good. Many players in the health care system, including pharmaceutical companies, are trying to support patients in adhering to their therapy plans through various measures. The digital channel is also increasingly being used. Before we present concrete examples, we would first like to explain the terms compliance and adherence in this post and take a closer look at the problem of non-adherence. The terms compliance and adherence are often used synonymously. However, the newer term adherence gives a much more comprehensive picture of the many factors that can influence the patient's behaviour and which can therefore also be used to support the patient's adherence to therapy.

Definition of Adherence

In medicine, adherence stands for the adherence to the goals set jointly by the patient and the medical staff (doctors, nurses). The concept of adherence is based on the knowledge that adherence to therapy plans and thus the success of therapy is the joint responsibility of the medical staff and the patient. Therefore, both sides should "work together" as equally as possible.

In relation to the patient, adherence means

the active participation in the recovery process, in particular

the willingness to follow medical recommendations, such as taking medication or making lifestyle changes

In relation to healthcare professionals, adherence includes

education and information on the objectives of treatment and on the prescribed medicinal products, and

the adaptation of the therapy to the individual possibilities and needs of the patient.

In addition to the interaction between the patient and medical staff, adherence is influenced by other factors (see below). The adherence model is therefore a "systemic" approach.

Definition of compliance

The older term compliance stands alone for the patient's adherence to the therapy, i.e. for his cooperation in the therapy and his willingness to follow medical prescriptions and recommendations. According to this understanding, the patient bears unilateral responsibility for adherence to the therapy.

Consequences of non-adherence

Non-adherence is a major problem worldwide. In developed countries, only an average of 50% of patients with chronic diseases are adherent. In developing countries, the proportion of adherent patients is even lower. Non-adherence has serious health consequences for the patient. For example, a meta-analysis of the consequences of drug non-adherence after kidney transplantation concluded that kidney transplant patients with lack of adherence have a 7-fold higher risk of transplant loss than patients who

adhere to therapy and that 36% of transplant losses are due to non-adherence. Non-adherence not only has far-reaching consequences for patients' health, it also causes immense costs for health systems. As the prevalence of chronic diseases will continue to rise in the coming decades, measures to improve adherence are important to improve public health but also to prevent the costs for health systems from exploding further. "Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments.

Q.4. Define schizophrenia. Describe the simple and hebephrenic schizophrenia.

Schizophrenia is a **chronic brain disorder** that affects less than one percent of the U.S. population. When schizophrenia is active, symptoms can include delusions, hallucinations, disorganized speech, trouble with thinking and lack of motivation.

Hebephrenic schizophrenia

Also known as 'disorganised schizophrenia', this type of schizophrenia typically develops when you're 15-25 years old. Symptoms include disorganised behaviours and thoughts, alongside short-lasting

delusions and hallucinations. You may have disorganised speech patterns and others may find it difficult to understand you.

People living with disorganised schizophrenia often show little or no emotions in their facial expressions, voice tone, or mannerisms.

Simple schizophrenia

Simple schizophrenia is rarely diagnosed in the UK. Negative symptoms (such as slow movement, poor memory, lack of concentration and poor hygiene) are most prominent early and worsen, while positive symptoms (such as hallucinations, delusions, disorganised thinking) are rarely experienced.

K. Kour

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1502** **Time: 2 Hours**

**Course Name: Pregnancy & Birth** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **Narrowest portion of the fallopian is the:**

a) Interstitial b) Isthmus

c) Infundibulum d) Ampulla

Q.2. **Corpus luteum secretes:**

a) FSH b) LH

c) Progesterone d) Estrogen

Q.3. **The pelvis consist of number of bones are:**

a) Three b) Four

c) Two d) Five

Q.4. **A pregnant woman during her first antenatal visit, she has a two-year-old son born in 40 weeks, a 5-year-old daughter born in 38 weeks, and 7-year-old twin daughters born in 35 weeks, 3 weeks ago she had a spontaneous abortion in 10 weeks of gestation. Using the GTPAL format, which of the following is the correct documentation?**

a) G = 4, T = 3, P = 2, A = 1, L = 4 b) G = 5, T = 2, P = 2, A = 1, L = 4

c) G = 5, T = 2, P = 1, A = 1, L = 4 d) G = 4, T = 3, P = 1, A = 1, L = 4

Q.5. **Relationship of fetal head and limb to its trunk is called:**

a) Lie b) Presentation

c) Attitude d) Position

Q.6. **Fetus get nutrition through:**

a) Ovary b) Amniotic fluid

c) Umbilical cord d) Placenta

Q.7. **Major contribution to amniotic fluid is:**

a) Foetal urine b) Foetal plasma

c) Mother plasma d) Mother urine

Q.8. **Meconium-stained amniotic fluid during delivery indicates:**

a) Prematurity

b) Foetal distress

c) Preterm delivery

d) Foetal death

Q.9. **Ovulation occurs:**

a) 28 days after menstruation

b) One week after menstruation

c) One week before menstruation

d) 14 days before next menstruation

Q.10. **The nurse is performing an assessment of a pregnant client who is at 28 weeks of gestation. The nurse measures the fundal height in centimeters and notes that the fundal height is 30 cm. How should the nurse interpret this finding?**

a) The client is measuring large for gestational age

b) The client is measuring small for gestational age

c) The client is measuring normal for gestational age

d) More evidence is needed to determine size for gestational age

## Section – B

04X04 = 16 Marks

Q.1. Describe the ovum with the help of diagram.

Q.2. What do you mean morula?

Q.3. Describe the mechanism of labor.

Q.4. Write the name of pelvis bony landmark.

## Section – C

04X06 = 24 Marks

Q.1. Define placenta. Explain the function of placenta.

Q.2. Explain the management of first and second stage of labor.

Q.3. How to measure of fundal height?

Q.4. Describe the physiological process in first stage of labor.

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## Section – B

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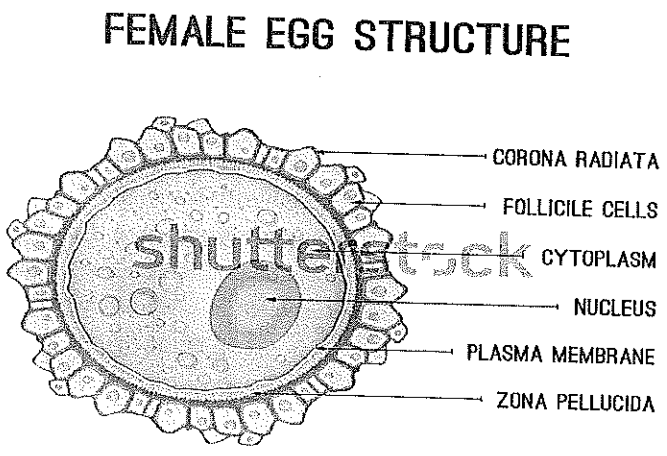
Q.1. **Describe the ovum with the help of diagram.**



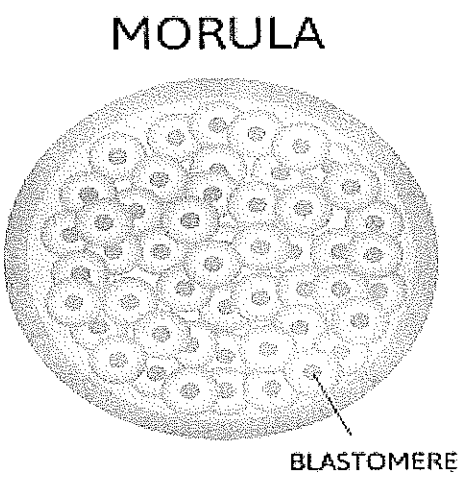

A fully mature ovum is the largest cell in the body and is about 130 microns in diameter. It consists of cytoplasm and a nucleus with its nucleous which is eccentric in position and contains 23 chromosomes. During fertilization, the nucleus is converted intoa female pronucleus. The ovum is surrounded by a membrane called vitelline membrane.

There is an outer transparents mucoprotrotein envelope,the zona pwllucida. The zona pellucida is penetrated by tiny channels which are throught to be important for the transport of the materials from the granulosa cells to the oocyte. in between the viteline membrane and the zona pellucida, there is a narrow space called privitelline space which accomodates the polar bodies. The human oocyte after its escape from the follicle, retains a covering of granulosa cells known as the corona radiata derived from the cumulus oophorus.

Q.2. **What do you mean morula?**

**Morula**

After the zygote formation, typical mitotic division of the nucleus occurs producing two blastomeres. The two cell stage is reached approximately 30 hours after fertilization. Each contains equal cytoplasmic volume and chromosome numbers. The blastomeres continue to divide by binary division through 4,8,16 cell stage untill a cluster of cells is formed and is called morula. The morula after spending about 3 days in the uterine tube enters the uterine cavity through the narrow uterine ostium on the 4th day in the 16-24 cell stage.

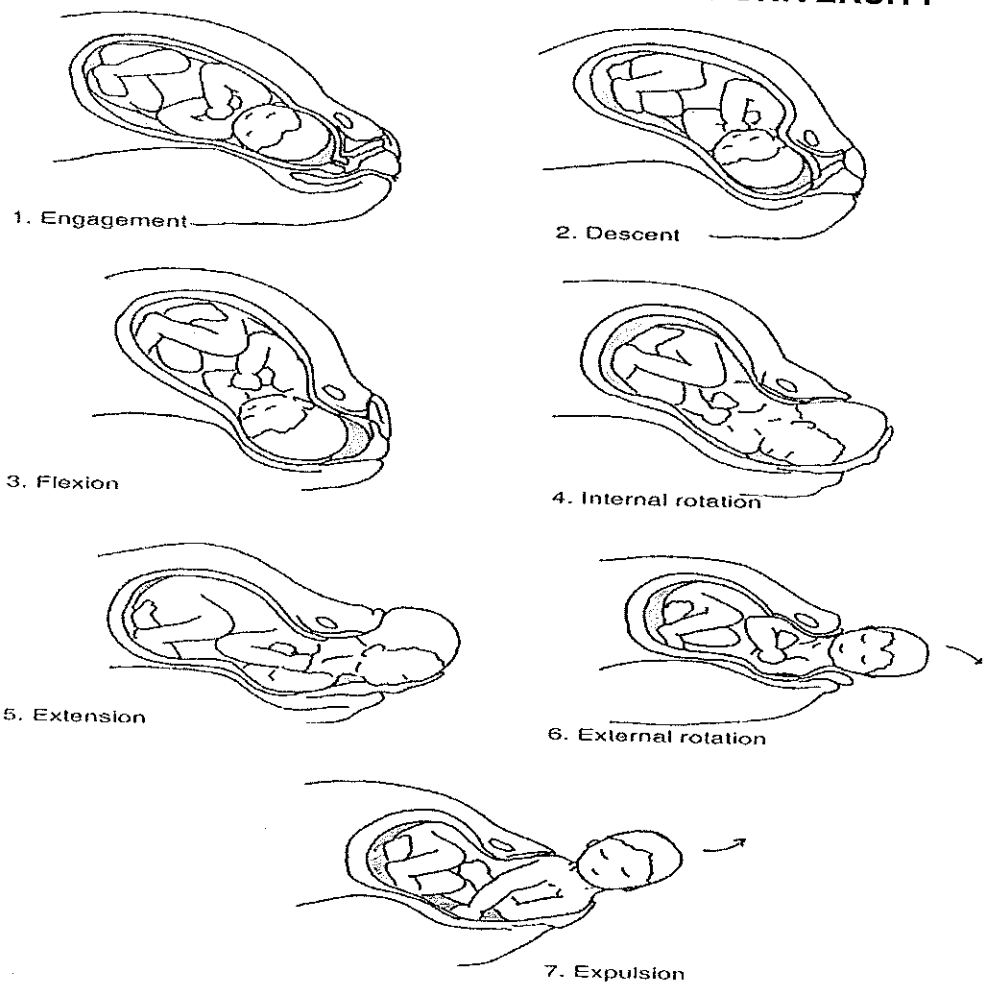



Q.3. **Describe the mechanism of labor.**

**Mechanism of Labour**

Mechanism of labour is defined as the adaptation and the positional changes occurring on the fatal head during its passage through the birth canal.

The occipitonasal position is the commonest, the mechanism of the labour in such position will be described the principal movements are:




1. **Engagement:**

The mechanism by which the biparetal diameter, the gretest transverse diameter of the fetal head in vertex presentation passes through the pelvic inlet is known as engagement. The fetal head may engage during the last few weeks of pregnancy (Primigravida) or during labor (Mutipara).

2. **Descent:**

It should be undertood that throughout the first and second stage of labor, there is more or continues movement of decent for birth of the newborn. In primigravida where engagement usually occurs before the onset of labor, decent may occurs in the second stage. In mutipara, decent usually occurs with engagement in labor.

3. **Flexion:**

- When the head is fully flexed, the small suboccipitobregmatic diameter 9.5cm engage.
- Presenting diameter is suboccipito frontal 10cm in occipito anterior presentation with slight deflexion, while it is even larger occipitofrontal (11cm) in complete deflexion as seen in occipito posterior presentation.
- Although some degree of flexion of the head is seen at the begining of labor, full flexion occurs when the decending head meets resistance from the cervix walls of pelvis and pelvic floor during descent.

4. **Internal Rotation:**

- Internal rotation brings the anteroposterior diameter of the fetal head in to alignment with the anteroposterior diameter of the maternal pelvis.
- This is accomplished by rotation of the occiput to the anterior portion of the maternal pelvis during contraction, the leading part (Occiput) is driven dowmwards on to pelvic floor.
- The slope of the pelvic floor determines the direction of the rotation . In a well flexed vertex presentation, the occiput leads and meets the pelvic floor first and rotates anteriorly through $1/8^{th}$ of a circle ($45^0$) this causes a slight twist in the neck of the fetus ($45^0$) as the head is no longer in direct aligment with the shoulders.

- As the fetal head now lies in the widest (Anteroposterior) diameter of the pelvic outlet, an easy escape is facilitated the occiput slips under the pubic arch and crowning occurs when the head nolonger recedes between contraction and the widest transverse diameter (Biparital) in born.

5. **Crowning:**

   After internal rotation of the head further descent occurs until the suboccipuT lies underneath the pubic arch at this stage the maximum diameter of the head (Biparietal Diameter) stretches the vulval outlet without any recession of the head even after the contraction is over called crowning of the head.

6. **Extension:**

   Delivery of the head takes place by extension through "Couple of Force" theory. The driving force pushes the head in a downward direction while the pelvic floor offers a resistance in the upward and forward direction. The downward and upward forces neutralise and remaining forward thrust helping in extension. The successive parts of the fetal head to be born through the stretched vulval outlet are vertex, brow and face. Immediately following the release of the chin through the anterior marin of the stretched perineum, the head drops down, brining the chin in close proximity to the maternal anal opening.

7. **Restitution:**

   It is the visible passive movement of the head due to untwisting of the neck sustained during internal rotation. Movement of restitution occurs rotation the head through $1/8^{th}$ of a circle in the direction opposite to that of internal rotation. The occiput thus points to the maternal thigh of the corresponding side to which it originally lay.

8. **External Rotation:**

   It is the movement of rotation of the head visible externally due to internal rotation of the shoulders. As the anterior shoulder rotates towards the symphysis pubic from the oblique diameter, it carries the head in a movement of external rotation through $1/8^{th}$ of a circle in the same direction as restitution. The shoulders now lie in the antero-posterior dimeter. The occiput points directly towards the maternal thigh corresponding to the side to which it originally directed at the time of engagement.

Q.4. **Write the name of pelvis bony landmark.**

1. symphysis pubis
2. Pubic crest
3. Pubic tubercle
4. Pectineal line
5. Iliopubic eminence
6. Iliopectineal line
7. Sacro-iliac articulation
8. Anterior border of the ala of sacrum
9. sacral promontory

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. **Define placenta. Explain the function of placenta.**

**Placenta**

The human placenta is discoid, because of its shape, haemochorial because of direct contact of the chorion with the maternal blood and decidua, because some maternal tissue is shed at parturition. The placenta is attached to the uterine wall and established connection between the mother and fetus through the umbilical cord.

**Placental Function:**

1. Nutrition- The fetus needs the some nutrients as anyone else, amino acids are required for body building. glucose for energy, calcium and phosphorous for bones and teeth and iron and other minerals for blood formation. All the nutrients are selected by the placenta from the maternal blood.
2. Excretion - In intrauterine life, very little amount of waste products are produced. The main substances are excreted from the fetus is $CO_2$, Bilirubin, Uria, Uric acid are excreted to the maternal blood by simple diffusion.
3. Respiration - In intrauterine life lungs don't exchanges gases. There is no gaseous exchange intake of $O_2$ output of $CO_2$ take from mother's haemoglobin by simple diffusion.
4. Barrier- Placenta provide protection from infection. Towards the end of pregnancy small antibodies, immunoglobulins IgG will be transfer to the fetus and provides immunity for about 3 months on the newborn baby after the birth.
5. Endocrine- The placenta provide many hormone such as HCG by the cytotrophoblastic layer of the chorionic villi 7th and 10th weeks and gradually reduces as the pregnancy advances. HCG is excreted in the mother's urine as is the pregnancy test. Oestrogen, Progesterone and HPL (Human Placental Lactogen) and HPL helps in glucose metabolism.
6. Storage- The placenta metabolism glucose stores it in the form of glycogen and reconverts it to glucose as required the placenta can also store iron and the fat soluble vitamin's.

Q.2. **Explain the management of first and second stage of labor.**

**Management of the First Stage**

**Principles:**

- Non-interference with wathful expectancy so as to prepare the patient the natural birth.
- To mother carfully the progress of labour, maternal condition and fetal behaviour so as to detect any intrapartum complication early.

**Actual Management:**

**General:**

Antiseptic dressings are as describe before.

Encouragement, emotional support and assurance are given to keep up the morale.

Constant supervision in ensured.

**Bowel:**

An enema with soap and water or glycerine suppository is traditionally given in early stage. This may be given if the rectum feels loaded on vaginal examination. But enema neither shorter the duration of labour nor reduced the infection rate.

**Rest and Ambulation:**

If the membranes are intact, the patient is allowed to walk about. the attitude prevents venacaval compression and encourages descent of the head. Ambulation can reduce the duration of labour, need of analgesia and improves maternal comfort.

**Diet:**

There is delayed emptying of the stomach in labour. Low pH of the gastric contents is a real danger if aspirated following general anaesthesia when needed unexpectedly. So food is withheld during active labour. Fluid in the form of plain water, ice chips or fruit juice may be given in early labour. Intravenous fluid with ringer solution is started where any intervention is anticipated or the patient is under regional anaesthesia.

**Bladder Care:**

Patient is encouraged to pass urine by herself as full bladder often inhibits uterine contraction and may lead to infection. If the woman cannot go to toilet, she is given a bed pan. Privacy must be maitaned and comfort must be ensured. If the patient fails to pass urine specially in late first stage, catheterisation is to be done with strict aseptic precautions.

**Relief to Pain:**

The common analgesics drug used is pethidine 50-100 mg IM when the pains are established in the active phase of labour. If necessary, it is repeated after 4 hr.

**Assessment of progress of labour and partograph recording:**

Pulse, Blood pressure, Temperature Recoded.

**Abdominal Palpation:** Uterine contraction, Pelvic grip, FHR

**Vaginal Examination:**

Dilatation of the cervix in centimetres in relation to hours of labour is a reliable index to note the progress.

To note the position of the head and degree of flexion

To note the station of the head in relation to the ischial spine.

Colour of liquor

Degree of moulding of the head

**Management of the Second Stage**

**The transition from the first stage to the second stage is evidenced by the following features:**

- Increasing intensity of uterine contraction
- Urge to defecate with descent of the presenting part
- Complete dilatation of the cervix as evidenced on vaginal examination
- Appearance of bearing down efforts

**Principles:**

- To assist in the internal expulsion of the fetus slowly and steadily.
- To prevent perineal injuries.

**General Mesure:**

- The patient should be in bed.
- Constant supervision is mandatory and the FHR is recorded at every five minute.
- To administration analgesics, is available in the form of Gas $N_2O$ and $O_2$ to relive pain during contraction.
- Vaginal examination is done at the beginning of the second stage not only to confirm its onset but to detect any accidental cord prolapse. The position and the station of the head are once more to be reviewed and the progressive descent of the head is ensured.

**Preparation for delivery:**

**Position:** Position of the woman during delivery may be lateral or partial sitting. Dorsal position with $15^0$ left lateral tilt is commonly favoured as it avoids aortocaval compression and facilitates pushing effort.

**The accoucheur scrubs up** and puts on sterile gown, mask and gloves and stands on the right side of the table.

**Toileting the external genitalia** and inner side of the thighs is done with cotton swabs soaked in savlon or dettol solution. Essential aseptic procedure are remembered as 3 'C's.

Clean hands

Clean surface

Clean cutting and ligaturing of the cord

**Conduction of delivery:** To assistance required in spontaneous delivery is divided into three phases.

Delivery of the head

Delivery of the shoulders

Delivery of the trunk

**Immediate care of the newborn:**

Soon after the delivery of the baby, Air passage should be cleaned, APGAR rating, Clamping and ligature of the cord.

Q.3. **How to measure of fundal height?**

**Measurement of the Fundal Height:**

- Fundal height provides information regarding the progressive gross screening tool for detection of problems related to fundal height.
- The fundal height can be measured in one of three methods

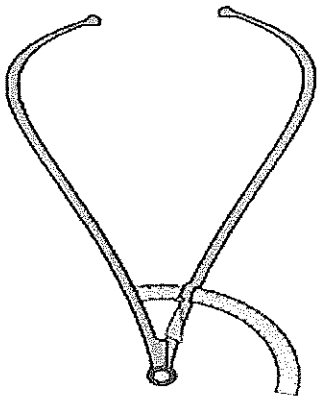
**First Method:**

Measure - Symphysis to fundus

Measure in Cm.

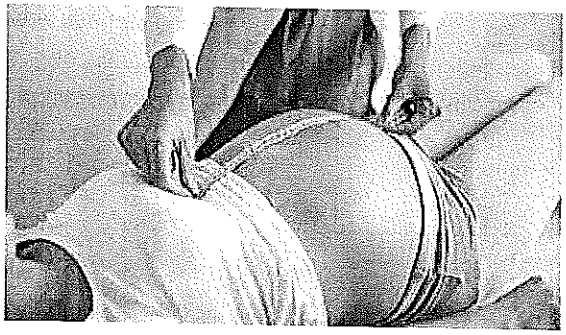
- The first method combines knowledge of where to expect the fundal height to be at various weeks of gestation in relation to the women's symphysis pubis, umbilicus and the tip of the xiphoid process and the use of the examiners fingerbreadths as the measuring tool.
- In order to determine the height of the fundus, the midwify places her hand just below the xiphisternum pressing gently. She move her hand gently down the abdomen until she feels the curved upper border of the fundus she notes the number of finger breadths, which can be comfortable accommodated between the two.
- First there is considerable variation between women in the distance from their symphysis pubis to their xiphoid process and in the location of the umbilicus between there two points.
- Second there is a considerable variation between examiners in the width of their fingers.

**Second Method:**

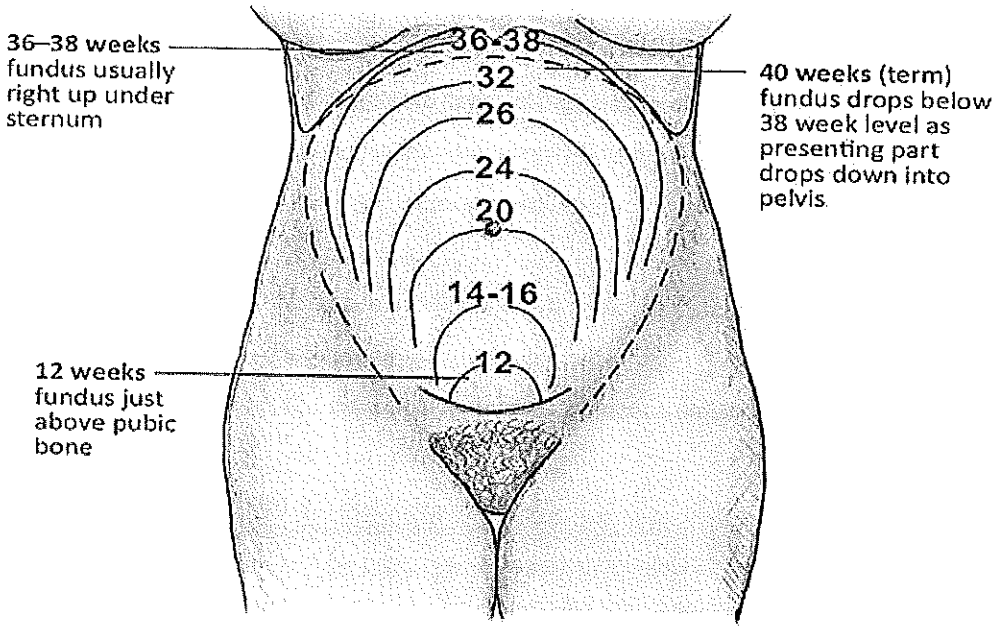


- The caliper method of measuring fundal weight is probably the most accurate method of measuring the fundal height after the 22-24 weeks of gestation.
- In order to use a caliper or external pelvimeter place one tip on the superior border of the symphysis pubis and other tip aat the top of the fundus. Both placements are in the abdominal midline.
- The measurement in then read on a centimeter scale located on are close to where the two ends of the calipers come together.

**Third Method:**



- Measurement fundal height with a tape is the most frquently used method for obtaining and exact measurement.
- It is probably the second most accurate method of measuring fundal height after 20-24 weeks of gestation.
- The zero line of the tape measure is placed on the superior border of the symphysis pubis and the tape measure streched across the countour of the abdomen to the tap of the fundus.
- The abdominal midline is used as the line of measurement.
- In order to avoid error in locating the superior border, you must palpate for the symphysis pubis. The number of centimetres measure should be approximately equal to about 22-24 weeks of gestation.




| | |
|---|---|
| Before 12th weeks | - Uterus palpate in pelvic region below the symphysis pubis. |
| At 12th Weeks | - Uterus palpate abdominally above the symphysis pubis. |
| At 20th Weeks | - Two finger below umbilicus |
| At 22th Weeks | - On umbilicus |
| At 28th Week | - 1/3 above umbilicus or 2/3 below xiphisternum |
| At 30th Weeks | - Between umbilicus & xiphisternum |
| At 32th Weeks | - 1/3 below xiphisternum or 2/3 above umbilicus |

At 36th Weeks - Just below the xiphisternum (Near sub costal area)

At 38th Weeks - At xiphisternum

At 40th Weeks - Uterus again comes to the level 36th weeks.

Q.4. **Describe the physiological process in first stage of labor.**

**Physiology process in First Stage of Labor**

A. **Uterine Contraction in Labor:**

Uterine contractions start from one of the two cornual region pacemakers to spread over entire uterus and down wards.

Their frequency, intensity and duration varies they show the following characteristics.

- The uterine contractions are regular and progressively increase in frequency and duration with relaxation in between.
- They show fundal dominance with intensity being strongest at the fundus and gradually decreasing downward.
- There is synchronization of the uterine activity between the two embryological halves of the uterus.
- With the onset of true labor pains, intra- amniotic pressure rises above 22 mmhg during uterine contraction reaching a peak of 4 mm of hg in first stage and about 99 mm of hg is second stage.
- The resting tone of intra-amniotic pressure is 6-10 mm of hg during relaxation (In between uterine contraction).
- Uterine muscle fibers show property of retraction.
- There is pain during uterine contraction.
- Uterus differentiates in to upper and lower segment.

B. **Tonus:**

Tonus is the uterine baseline tone in between two contraction and is inversely proportional to relaxation.

C. **Intensity:**

As labor progresses the intensity of uterine contraction as demonstrated by intrauterine pressure increase progressively being 40-50 mm of hg at peak in first stage of labor and 80-100 at peak in second stage of labour.

D. **Duration:**

Contraction last for about 30 second gradually it increase in duration with the progress of labor and lasts much longer in the second stage.

E. **Frequency:**

In the early stage of labor the contraction come at intervals of 10-15 min. The intervals gradually shorten with advancement of labor until in the second stage when it comes every 2-3 minutes.

F. **Retraction:**

Retraction is a unique property of the uterine muscle fibers in which the muscle fibers once shortened during contraction.

The advantage of retraction in normal labor are as follows:

- Lower uterine segment is formed and cervical changes (Dilation and effacement) occurs due to retraction.
- Decent of the presenting part down wards which ultimately leads to expulsion of the fetus.
- It help innin separation and expulsion of placenta.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1502** **Time: 2 Hours**

**Course Name: Pregnancy & Birth** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **Which should avoid during pregnancy?**

a) Smoking b) Alcohol

c) Tobacco chewing d) All of above

Q.2. **Endometrium in pregnancy is known as:**

a) Decidua b) Decubitus

c) Trophoblast d) Gravid endometrium

Q.3. **In a lecture on sexual functioning, the nurse plans to include the fact that ovulation occurs when the.**

a) Oxytocin level is high b) Blood level of LH is high

c) Progesterone level is high d) Endometrial wall is sloughed off

Q.4. **The chief source of progesterone is:**

a) Adrenal medulla b) Corpus luteum

c) Ovary d) Adrenal cortex

Q.5. **A pregnant woman during her first antenatal visit, she has a two-year-old son born in 40 weeks, a 5-year-old daughter born in 38 weeks, and 7-year-old twin daughters born in 35 weeks, 3 weeks ago she had a spontaneous abortion in 10 weeks of gestation. Using the GTPAL format, which of the following is the correct documentation?**

a) G = 4, T = 3, P = 2, A = 1, L = 4 b) G = 5, T = 2, P = 2, A = 1, L = 4

c) G = 5, T = 2, P = 1, A = 1, L = 4 d) G = 4, T = 3, P = 1, A = 1, L = 4

Q.6. **As individual has the maximum number of oocytes:**

a) By puberty b) At birth

c) By middle age d) At 20 weeks of gestation

Q.7. **In face presentation, the denominator is the:**

a) Vertex b) Frontal eminence

c) Acromion d) Mentom

Q.8. **Antenatal mother reports her last period started on 22nd July 2014 and she has a regular menstrual period which lasts for 4 days. What is the expected date of confinement?**

a) May 2, 2015
b) April 29, 2015
c) April 22, 2015
d) May 3, 2015

Q.9. **Amniocentesis should not be performing during first 3 month of pregnancy, why?**

a) There are more chance of infection
b) There is not enough amniotic fluid
c) Chances of damage of foetus
d) All of above

Q.10. **The nurse is performing an assessment of a pregnant client who is at 28 weeks of gestation. The nurse measures the fundal height in centimeters and notes that the fundal height is 30 cm. How should the nurse interpret this finding?**

a) The client is measuring large for gestational age
b) The client is measuring small for gestational age
c) The client is measuring normal for gestational age
d) More evidence is needed to determine size for gestational age

## Section – B

04X04 = 16 Marks

Q.1. Write down the function of amniotic fluid.
Q.2. What do you understand of lie? Describe the types of lie.
Q.3. Describe the mechanism of labor.
Q.4. Describe the placental circulation.

## Section – C

04X06 = 24 Marks

Q.1. Define placenta. Explain the structure of placenta with the help of a diagram.
Q.2. What to you understand by involution of the uterus in puerperium period?
Q.3. How to measure of fundal height?
Q.4. Describe the events of second stage of labor.

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## Section – B

04X04 = 16 Marks

Q.1. Write down the function of amniotic fluid.

Function of amniotic fluid:

Its main function is to protect the fetus

During Pregnancy:

It acts as a shock absorber, protecting the fetus from possible extraneous injury.

Maintains an even temperature

The amniotic sac and thereby allows for growth and free movement of the fetus.

Its provide nutritive of small amount of protein and salt content and water supply to the fetus is quite adequate.

During Labour:

The amnion and chorion are combined to form a hydrostatic wedge, which help in dilatation of the cervix.

It flushes the birth canal at the end of first stage of labour and by its aseptic and bactericidal action protects the fetus and prevents ascending infection to the uterine cavity.

Clinical Importance:

Study of the amniotic fluid provides useful information about the well being and also maturity of the fetus.

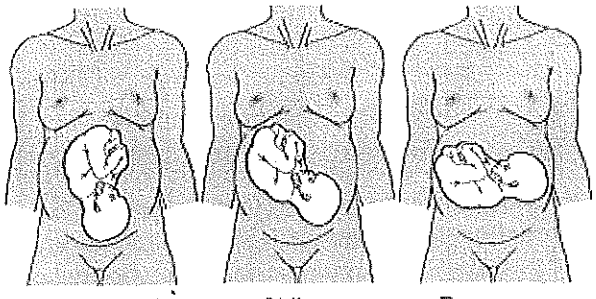
Excess or less volume of liquor amnii is assessed by amniotic fluid index. It is measured to diagnose the clinical condition of polyhydramnios or oligohydramnios respectively.

Rupture of the membranes with drainage of liquor is a helpful method in induction of labour.

**Q.2. What do you understand of lie? Describe the types of lie.**

**Lie:**

The relationship of the long axis of fetus to the long axis of uterus.




**Longitudinal Lie:** Long axis of the fetus is parallel to long axis of the mother.

**Transverse Lie:** Presentation in which the long axis of the fetus is crosswise to that of the mother.

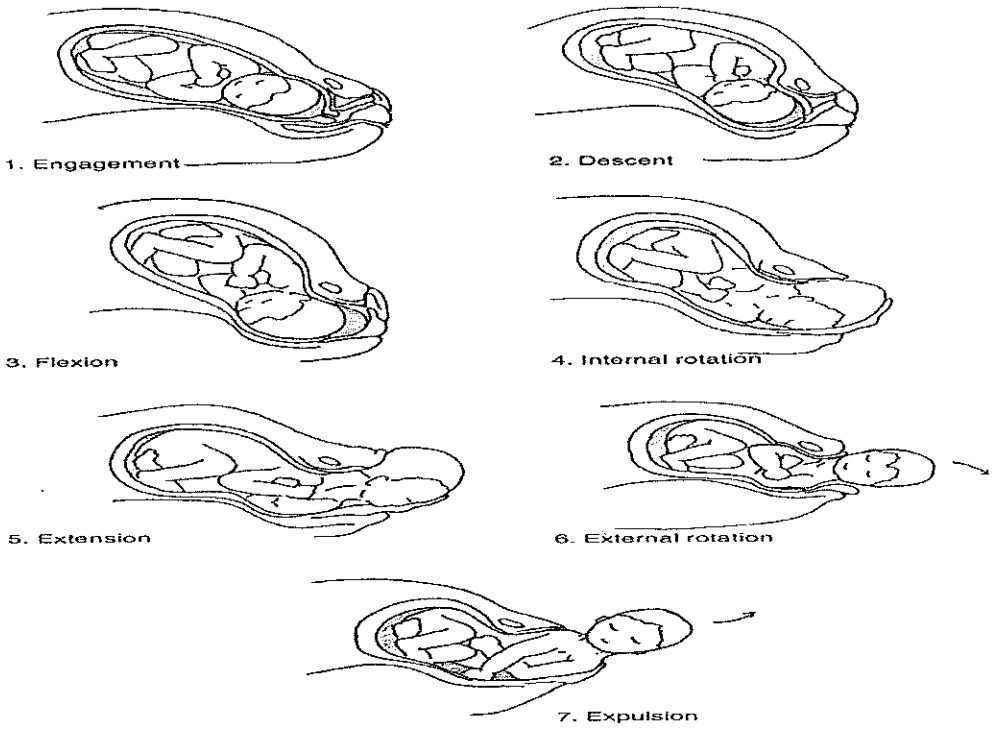
**Oblique Lie:** Presentation in which the long axis of the fetus is oblique to that of the mother.

Q.3. Describe the mechanism of labor.

**Mechanism of Labour**

Mechanism of labour is defined as the adaptation and the positional changes occurring on the fatal head during its passage through the birth canal.

The occipitonasal position is the commonest, the mechanism of the labour in such position will be described the principal movements are:



1. **Engagement:**

   The mechanism by which the biparetal diameter, the gretest transverse diameter of the fetal head in vertex presentation passes through the pelvic inlet is known as engagement. The fetal head may engage during the last few weeks of pregnancy (Primigravida) or during labor (Mutipara).

2. **Descent:**

   It should be undertood that throughout the first and second stage of labor, there is more or continues movement of decent for birth of the newborn. In primigravida where engagement usually occurs before the onset of labor, decent may occurs in the second stage. In mutipara, decent usually occurs with engagement in labor.

3. **Flexion:**

- When the head is fully flexed, the small suboccipitobregmatic diameter 9.5cm engage.
- Presenting diameter is suboccipito frontal 10cm in occipito anterior presentation with slight deflexion, while it is even larger occipitofrontal (11cm) in complete deflexion as seen in occipito posterior presentation.
- Although some degree of flexion of the head is seen at the begining of labor, full flexion occurs when the decending head meets resistance from the cervix walls of pelvis and pelvic floor during descent.

4. **Internal Rotation:**

- Internal rotation brings the anteroposterior diameter of the fetal head in to alignment with the anteroposterior diameter of the maternal pelvis.
- This is accomplished by rotation of the occiput to the anterior portion of the maternal pelvis during contraction, the leading part (Occiput) is driven dowmwards on to pelvic floor.
- The slope of the pelvic floor determines the direction of the rotation . In a well flexed vertex presentation, the occiput leads and meets the pelvic floor first and rotates anteriorly through $1/8^{th}$ of a circle ($45^0$) this causes a slight twist in the neck of the fetus ($45^0$) as the head is no longer in direct aligment with the shoulders.
- As the fetal head now lies in the widest (Anteroposterior) diameter of the pelvic outlet, an easy escape is facilitated the occiput slips under the pubic arch and crowning occurs when the head nolonger recedes between contraction and the widest transverse diameter (Biparital) in born.

5. **Crowning:**

   After internal rotation of the head further descent occurs until the subocciput lies underneath the pubic arch at this stage the maximum diameter of the head (Biparietal Diameter) stretches the vulval outlet without any recession of the head even after the contraction is over called crowning of the head.

6. **Extension:**

   Delivery of the head takes place by extension through "Couple of Force" theory. The driving force pushes the head in a downward direction while the pelvic floor offers a resistance in the upward and forward direction. The downward and upward forces neutralise and remaining forward thrust helping in extension. The successive parts of the fetal head to be born through the stretched vulval outlet are vertex, brow and face. Immediately following the release of the chin through the anterior marin of the stretched perineum, the head drops down, brining the chin in close proximity to the maternal anal opening.

7. **Restitution:**

   It is the visible passive movement of the head due to untwisting of the neck sustained during internal rotation. Movement of restitution occurs rotation the head through $1/8^{th}$ of a circle in the direction opposite to that of internal rotation. The occiput thus points to the maternal thigh of the corresponding side to which it originally lay.

8. **External Rotation:**

   It is the movement of rotation of the head visible externally due to internal rotation of the shoulders. As the anterior shoulder rotates towards the symphysis pubic from the oblique diameter, it carries the head in a movement of external rotation through $1/8^{th}$ of a circle in the same direction as restitution. The shoulders now lie in the antero-posterior dimeter. The occiput points directly towards the maternal thigh corresponding to the side to which it originally directed at the time of engagement.

Q.4. Describe the placental circulation.

**Placental Circulation**

Placental circulation consists of independent circulation of blood in two system:

**Utero-placental Circulation: (Maternal Circulation)**

It is concerned with the circulation of the maternal blood through the intervillous space. A mature placenta has a volume of about 500 ml of blood; 350 ml being occupied in the villi system and 150ml lying in the intervillous space. As the intervillous blood flow at term estimated to be 500-600 ml per minute.

The blood in the intervillous space is completely replaced about 3 to 4 times per minute. The villi depends on the maternal blood flow their nutrition.

**Arterial Circulation:**

About 120-200 spiral arteries open into the intervillous space by piercing the basal plate randomly at numerous sites. Spiral arteries are converted to large bore uteroplacental arteries.

**Trophoblast cells that do not take part in villous structure are known as extravillous trophoblast:**

ETV are of two types

**Endovascular** that migrates down the lumen of the spiral arteries and replaces the endothelium

**Interstitial** that invades as far as the inner third of the myometrium

**Venous Drainage:**

The venous blood of the intervillous space drains through the uterine veins which pierce the basal plate randomly like the arteries.

**Feto - Placental Circulation:**

The two umbilical arteries carry the impure blood flow the fetus. They enter the chorionic plate underneath the amnion, each supplying one half of the placenta. The arteries break up into small branches which enter the stem of the chorionic villi. Each in turn divides into primary, secondary and tertiary vessels of the corresponding villi. The blood flow into the corresponding venous channels either through the terminal capillary networks or through the shunts. The fetal blood flow through the placenta is about 400ml per minute.

## Section – C

04X06 = 24 Marks

Q.1. Define placenta. Explain the structure of placenta with the help of a diagram.

The placenta is **an organ that develops in your uterus during pregnancy**. This structure provides oxygen and nutrients to your growing baby and removes waste products from your baby's blood. The placenta attaches to the wall of your uterus, and your baby's umbilical cord arises from it.

The human placenta is discoid, because of its shape, haemochorial because of direct contact of the chorion with the maternal blood and decidua, because some maternal tissue is shed at parturition. The placenta is attached to the uterine wall and established connection between the mother and fetus through the umbilical cord.

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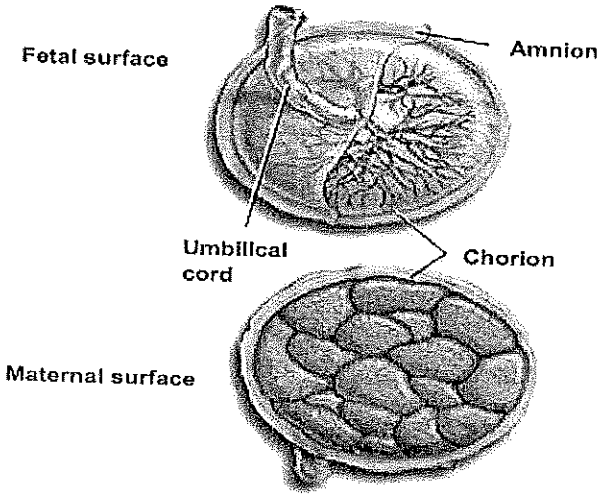



**Structure:**

The placenta consists of two plates.

**The chorionic plate** lies internally. It is lined by the amniotic membrane. The umbilical cord is attached to this plate.

**The basal plate** lies to the maternal aspect. between the two plates lies the intervillous space containing the stem villi with their branches, the space being filled with materanl blood.

**Amniotic Membrane:**

It consists of single layer of cubical epithelium loosely attached to the adjacent chorionic plate. It takes no part in formation of the placenta.

**Chorionic Plate:**

From within outwards it consist of

Primitive mesenchymal tissue containing branches of umbilical vessels

Cytotrophoblast

Syncytiotrophoblast

**Basal Plate:**

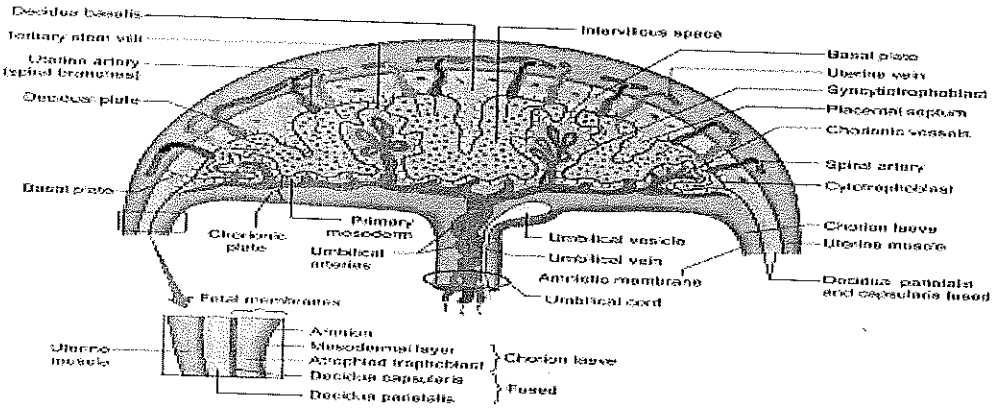
It consist of the following structure from outside inward

Part of the compact and spongy layer of the decidua basalis

Nitabuch's layer of fibrinoid degenration of the outer syncytiotrophoblast at the junction of the cytotrophoblastic shell and decidua

Cytotrophoblastic shell

Syncytiotrophoblast



**Intervillous space:**

It is bounded on the inner side by the chorionic plate and the outer side by basal plate. limited on the periphery by the fusion of the two plates. It is internally on all sides by the syncytiotrophoblast and is filled with slow flowing maternal blood.

**Stem villi:**

These arise from the chorionic plate and extends to the basal plate. with the progessive development - Primary, Secondary and Tertiary villi are formed. Functional unit of the placenta is called a fetal cotyledon. Which is derived from a major primary stem villus. These major stem villi pass down through the intervillous space to anchor onto the basal plate. The intervillous space and are called nutritive villi.

**Structure of a Terminal Villus:**

In the early placenta each terminal villus has got the following structure from outside inward.

Outer syncytiotrophoblast

Cytotrophoblast

Basement membrane

Central stoma containing fetal capillaries, primitive mensenchymal cells, connective tissue and a few phagocytic cells.

Q.2. What to you understand by involution of the uterus in puerperium period?

**Normal Puerperium**

Puerperium is the period following during which the body tissue, specially the pelvic organs revert approximately to the pregnant state both anatomically and physiologically.

Involution is the process whereby the genital organs revert back approximately to the state as they were before pregnancy. The woman is termed as a puerpera.

**Duration:**

Puerperium begins as soon as the placenta is expelled and lasts for approximately 6 weeks when the uterus becomes regressed almost to the non-pregnant size. The period is arbitrarily divided into-

Immediate- within 24 hours

Early - up to 7 days

Remote- up to 6 weeks

**Involution of the Uterus:**

**Anatomical Consideration-**

**Uterus-** Immediately following delivery, the uterus becomes firm and retracts with the alternate hardening and softening. The uterus measures about 20x12x7.5 cm (Length, breadth and thickness) and weight about 1000 gm. At the end of 6 weeks, its measurement is almost similar to that of the non-pregnant state and weighs about 60 mg. The placenta site contracts rapidly presenting a raised surface with measure about 7.5 cm and remains elevated even at 6 weeks when it measures about 1.5 cm.

**Lower uterine Segment-**

Immediately following delivery, the lower segment becomes a thin, flabby, collapsed structure. It takes a few weeks to revert back to the normal shape and size of the isthmus, the part between the body of the uterus and internal OS of the cervix.

**Cervix-**

The cervix contracts slowly; the external OS admits two fingers for a few days but by the end of first week, narrows down to admit the tip of a finger only. The contour of the cervix takes a longer time to region (6 weeks) and the external OS never back to the nulliparous state.

Q.3. How to measure of fundal height?

**Measurement of the Fundal Height:**

- Fundal height provides information regarding the progressive gross screening tool for detection of problems related to fundal height.
- The fundal height can be measured in one of three methods

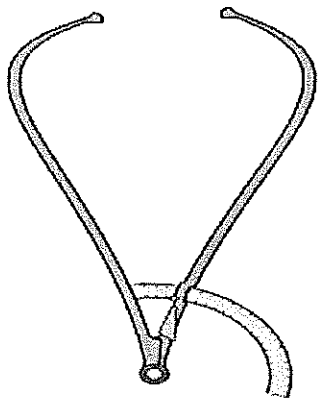
**First Method:**

Measure - Symphysis to fundus

Measure in Cm.

- The first method combines knowledge of where to expect the fundal height to be at various weeks of gestation in relation to the women's symphysis pubis, umbilicus and the tip of the xiphoid process and the use of the examiners fingerbreadths as the measuring tool.
- In order to determine the height of the fundus, the midwify places her hand just below the xiphisternum pressing gently. She move her hand gently down the abdomen until she feels the curved upper border of the fundus she notes the number of finger breadths, which can be comfortable accommodated between the two.
- First there is considerable variation between women in the distance from their symphysis pubis to their xiphoid process and in the location of the umbilicus between there two points.
- Second there is a considerable variation between examiners in the width of their fingers.

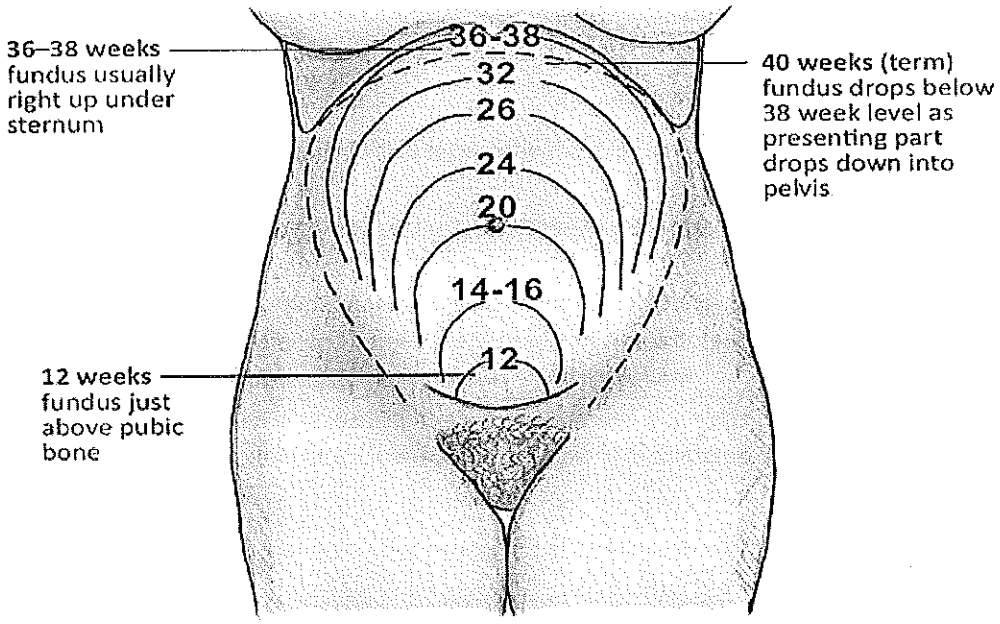
**Second Method:**



- The caliper method of measuring fundal weight is probably the most accurate method of measuring the fundal height after the 22-24 weeks of gestation.
- In order to use a caliper or external pelvimeter place one tip on the superior border of the symphysis pubis and other tip aat the top of the fundus. Both placements are in the abdominal midline.
- The measurement in then read on a centimeter scale located on are close to where the two ends of the calipers come together.

**Third Method:**

- Measurement fundal height with a tape is the most frquently used method for obtaining and exact measurement.
- It is probably the second most accurate method of measuring fundal height after 20-24 weeks of gestation.
- The zero line of the tape measure is placed on the superior border of the symphysis pubis and the tape measure streched across the countour of the abdomen to the tap of the fundus.
- The abdominal midline is used as the line of measurement.
- In order to avoid error in locating the superior border, you must palpate for the symphysis pubis. The number of centimetres measure should be approximately equal to about 22-24 weeks of gestation.




| | |
|---|---|
| Before 12th weeks | - Uterus palpate in pelvic region below the symphysis pubis. |
| At 12th Weeks | - Uterus palpate abdominally above the symphysis pubis. |
| At 20th Weeks | - Two finger below umbilicus |
| At 22th Weeks | - On umbilicus |
| At 28th Week | - 1/3 above umbilicus or 2/3 below xiphisternum |
| At 30th Weeks | - Between umbilicus & xiphisternum |
| At 32th Weeks | - 1/3 below xiphisternum or 2/3 above umbilicus |

At 36th Weeks - Just below the xiphisternum (Near sub costal area)

At 38th Weeks - At xiphisternum

At 40th Weeks - Uterus again comes to the level 36th weeks.

Q.4. Describe the events of second stage of labor.

**Events in Second Stage of Labor**

The second stage beings with the complete dilatation of the cervix and ends with the expulsion of the fetus.

Second stage of two phases-

1. **Propulsive:** From full dilatation until head touches the pelvic floor.
2. **Expulsive:** Since the time mother has irresible desire to bear down and push until the baby is delivered.

- With the full dilatation of the cervix, the membranes usually rupture and there is escape of good amount of liquor amnii.
- The volume of the uterine cavity is there by reduced simultaneously uterine contraction and retraction become stronger.
- The uterus becomes elongated contraction, while the antero-posterior and transverse diameter are reduced.
- Delivery of the fetus is accomplished the downward thrust offered by uterine contraction supplemented by voluntary contraction of abdominal muscles against the resistance offered by bony and soft tissue of the birth canal.
- There is always a tendency to push the fetus back in to the uterine cavity by the elastic recoil of the tissue of the vagina and the pelvic floor.
- Increasing contraction and retraction the upper segment becomes more and more thicker with corresponding thinning of lower segment.
- After the expulsion of the fetus the uterine cavity is permanently reduced in size only to accommodate the after birth.
- The expulsive force of uterine contraction is added by voluntary contraction of the abdominal muscle called "Bearing Down" efforts.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1503** **Time: 2 Hours**

**Course Name: Skin & Wound Management** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **All of the following are layers of epidermis except:**

a) Stratum corneum b) Stratum granulosum

c) Stratum lucidum d) Stratum upper skin

Q.2. **Neuropathy means:**

a) Pain due to nerve damage is present b) Pain due to nerve damage is absent

c) Both A & B d) None of the above

Q.3. **Full form of PVD is:**

a) Peripheral vascular disease b) Portable vascular disease

c) Peripheral vasomotor disease d) None of above

Q.4. **Rabies is an ..... disease:**

a) Infectious viral disease b) Yeast infection

c) Infectious bacterial disease d) None of the above

Q.5. **Botulism is caused by:**

a) Clostridium botulinum bacteria b) Clostridium tetani

c) Clostridium pneumonia d) Clostridium difficile

Q.6. **In four principles of wound bed preparation the "TIME" pneumonic T stands for:**

a) Time management b) Tissue management

c) Treatment management d) Triage management

Q.7. **PAD refers to:**

a) Peripheral arterial occlusive disease b) Peripheral arterial obstructive disease

c) Both A & B d) None of the above

Q.8. **Tetanus Is caused by :**

a) Mycobacterium tuberculosis b) Pseudomonas aeruginosa

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Q.9. **If a patient is cold, if a patient is feverish, if a patient is faint, if he is sick after taking food, if he has bedsore, it is generally not the fault of disease but of the nursing. This was said by:**

a) Charles David
b) Louis pasteur
c) Nightingale
d) Carl louis

Q.10. **MRSA is abbreviated as:**

a) Methicillin resistant staphylococcus aureus
b) Microbial résistant staphylococcus aureus
c) Médical resistant staphylococcus aureus
d) Moist resistant staphylococcus aureus

## Section – B

04X04 = 16 Marks

Q.1. Write down the characteristics of epidermis and dermis.
Q.2. Describe chronic venous insufficiency and peripheral arterial occlusive.
Q.3. Draw the flow chart of triangle of wound assessment.
Q.4. How to surgical wound cleansing.

## Section – C

04X06 = 24 Marks

Q.1. Elaborate the moist wound care in different wound healing phases.
Q.2. Define decubitus ulcer. Explain the intrinsic factors of decubitus ulcer.
Q.3. What is erysipelas?
Q.4. Describe the four principles of **"TIME"** wound bed preparation.

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# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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Q.1. **Write down the characteristics of epidermis and dermis.**

**Epidermis (upper skin)**

The epidermis represents a keratinized squamous epithelium, which consists of five different cell layers. Dueto its strength and density, this epithelium is well equipped for its protective functions. The five different layersare (from the outside to the inside):

- Stratum corneum (horny cell layer)
- Stratum lucidum (shiny layer)
- Stratum granulosum (granule cell layer)
- Stratum spinosum (spiny cell layer)
- Stratum basale (basal cell layer)

The keratinization (orthokeratosis) of the skin is an important and physiological process:

- Cell division as a precondition for growth and regeneration occurs in the two lowest cell layers (Stratumspinosum & Stratum basale). From there, the cells move forward to the skin surface, whereby the cells are completely keratinized in the course of this cell migration.

On their way there, the **living keratinocytes** increasingly accumulate keratin and lose cell nucleus as well asother cell organelles until they are embedded as **dead horny cells** in the horny cell layer and are finally re- jected as small skin flakes. Under physiological conditions this process takes about 30 days. The epidermis is**avascular** and is supplied by diffusion of nutrients from the blood vessels of the dermis. If the skin bleeds, forexample during an abrasion, the capillaries of the dermis are already open. The epidermis has to bear the brunt of the protective tasks, including the defence against ultraviolet rays. Wound healing is not considered complete until a new and resilient epithelium has formed that can once again protect the body externally.

**Dermis (corium, sclera)**

The epidermis is followed by the dermis on the inside. It is a connective tissue **rich in vessels and nerves**,which is divided into 2 layers:

- into the outer papillary layer (stratum papillare)
- lies directly under the epidermis
- it provides nutrients and oxygen to the germinating layer of the epidermis
- into the inner reticular layer (stratum reticulare)
- lies below the papillary layer

- it contains collagen and elastin fibres
- collagen give the skin a plump and youthful appearance
- elastin gives the skin its elastic properties

The layers differ in the density and arrangement of their connective tissue fibres, but are not separated fromeach other.

Q.2. **Describe chronic venous insufficiency and peripheral arterial occlusive.**

**Chronic venous insufficiency (CVI)**

a reflux disorder of the venous blood occurs. Since the venous valves are no longer fully functional, the bloodflows back towards the feet. The resulting pressure on the surrounding tissue in the ankle area can then leadto the development of a **venous leg ulcer (ulcus cruris venosum).**

**Peripheral arterial occlusive:**

A disturbance of the arterial circulation, e.g. due to a peripheral arterial occlusive disease (pAOD), leads to a deficient blood supply to the tissue and thus to the development of an **arterial leg ulcer (ulcus cruris arteri-osum)**

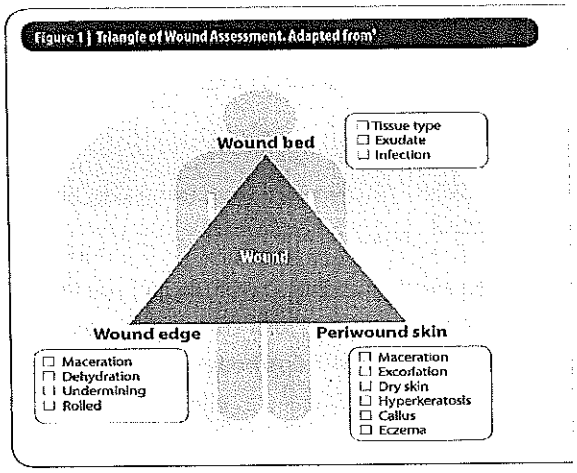
Q.3. **Draw the flow chart of triangle of wound assessment.**

**The Triangle of Wound Assessment**

The Triangle of Wound Assessment is a holistic framework that allows practitioners to assess and manage all areas of the wound, including the periwound skin. The Triangle of Wound Assessment is a new tool that extends the current concepts of wound bed preparation and TIME beyond the wound edge. It divides assessment of the wound into three areas:

- the wound bed
- the wound edge and
- the periwound skin.

It should be used in the context of a holistic assessment that involves the patient, caregivers and family.



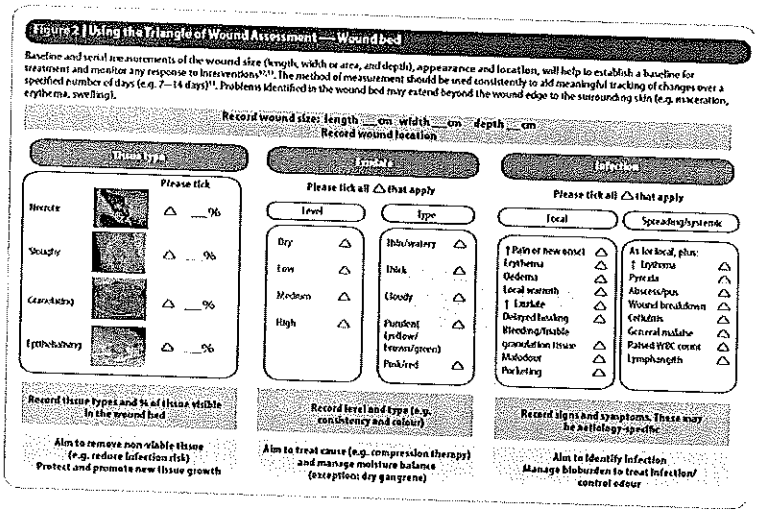

**Using the Triangle of Wound Assessment**

A holistic assessment aims to gain an overview of the patient's medical condition, the cause, duration and status of the wound, together with any factors that may impede healing including: comorbidities, e.g. diabetes, cardiovascular disease, respiratory disease, venous/arterial disease, malignancy, medications, e.g. corticosteroids, anticoagulants, immunosuppressants, chemotherapeutic agents, nonsteroidal anti-inflammatorydrugs, systemic or local infection (e.g. osteomyelitis) ,reduced oxygenation and tissue perfusion, increased age, pain, poor nutrition and hydration, lifestyle, e.g. high alcohol intake, smoking, obesity. In addition, it is important to

understand how the wound is affecting patient daily living, e.g. pain levels between and during dressing changes, sleep disturbance, strikethrough and malodour.

**The Triangle of Wound Assessment identifies three distinct, yet interconnected, zones:**

**Wound bed**: look for signs of granulation tissue, while seeking to remove dead or devitalised tissue, manage exudate level and reduce the bioburden in the wound.




Q.4. **How to surgical wound cleansing.**

### I. Surgical wound cleansing

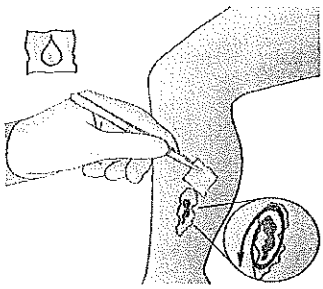
This procedure is fast, effective and removes invasive avital tissue, necroses, plaque and/or foreign bodies. After informing the patient and excluding coagulation disorders, the doctor removes the affected tissue using scalpels, sharp spoon, ring curette or water jet pressure. Wound pockets can also be opened by this procedure, so that exudate produced there can drain off more easily.

**Procedure of wound cleansing**

- Perform professional hand disinfection
- put on sterile gloves. Take care not to touch bottles, tubes or work surfaces with contaminated gloves.
- if mouth protection is not worn, do not speak unnecessarily - especially not over the wound area or sterile material.
- With the sterile forceps, residues of used wound therapeutics are lifted from the wound base and disposed of in the waste container. The forceps themselves are deposited in the instrument disposal container.
- If the doctor has ordered it, a smear is taken for a bacteriological examination. The smear should always be taken from the middle of the wound bed.
- Hydrogels and alginates in the wound area are removed with a wound irrigation. The irrigation is con-tinued until the returning irrigation solution is clear and no residues of the wound therapeutics are visible.
- For hydrocolloids, hydrogels and calcium alginates, a complete flushing is particularly important. **Theformed gels can easily be mistaken for pus**.
- Infected wounds are now treated with a disinfecting wound irrigation.
- The base of the wound and surrounding skin areas is not rubbed off (as far as possible), as this wouldremove the newly formed upper skin cells. The result would be delayed wound healing. Only if not allresidues could be

removed during wound irrigation can the wound area be dabbed with moist and sterile compresses.

- A new compress is used with each operation.
- **In the case of non-septic wounds:** the wound area is cleaned from the inside outwards with tweezersand the compresses or ball swabs soaked in NaCl solution.



**In the case of septic wounds** from the outside inwards.

**A new compress is used for each wiping procedure.**

Dab the wound area dry, as wound dressings adhere better to dry skin. Skin maceration is also avoided. After wound cleansing is complete, change gloves, disinfect hands and cover the wound according to the phase.

**Application of a suitable wound dressing**

The wound area is treated with a care product in accordance with the doctor's instructions. The appropriate wound treatment product is selected according to the doctor's instructions and the determined wound condition. The packaging is opened so that the product can be removed in a sterile condition. The wound therapeutics are applied in such a way that they have direct contact with the complete wound bed. Various wound dressings can be reduced to a suitable size using sterile scissors. The remainders are immediately used up or discarded. A covering dressing suitable for the wound exudation is selected and fixed. The "non-touch technique" is used during the entire procedure of changing the dressing.

## Section – C

04X06 = 24 Marks

Q.1. **Elaborate the moist wound care in different wound healing phases.**

**Moist wound care in different wound healing phases**

**I. Wound care in the exudation phase**

In the first phase of wound healing, the materials used must reliably absorb exudate. The exudation flushes impurities such as dirt particles and bacteria from the wound, which must be bound in the wound dressing. Even impaired and dead cell material is absorbed by the appropriate wound dressings. The materials must be able to keep the wound moist, among other things to prevent crust formation. Depending on the amount of exudation, wound depth and wound condition, highly absorbent (**alginates, hydrofibre**) or moderately absorbent wound dressings can be used (**hydrocolloid, foam**). Infected wounds or injuries that are considered at risk of infection can be treated with decontaminating wound dressings.

**II. Wound care in the granulation phase**

In the second healing phase the formation of new tissue plays a central role. While a dry environment tends to hinder the formation of new cells, a moist climate has a beneficial effect on the healing process. Wound dressings which enable the wound to be kept constantly moist and prevent the formation of scabs are particularly suitable for this purpose. **Hydrocolloid wound dressings and foam** are suitable for this purpose.

**III. Wound care in the epithelization phase**

The third and final phase of wound healing is characterized by the new formation and spread of skin cells, which ideally close the wound completely. Moist wound dressings can significantly support this process. In

addition, the wound should be carefully protected from external influences so as not to jeopardise the healing process. For patients with chronic wounds in particular, achieving and completing the third phase of wound healing represents an extraordinary success, as they often have a long ordeal behind them. **Hydrocolloids and foam wound dressings** are also ideally suited here.

### IV. Wound therapy of critically colonised and infected wounds

If there is a suspicion of colonisation or infection of the wound with multi-resistant pathogens, wound swabs should be taken. How to make a wound swab:

- Select transport medium with liquid (follow the instructions for use)
- Inform patients about the swab procedure
- Disinfect hands
- Put on disposable gloves
- Remove surface coatings mechanically and/or with a sterile compress using 0.9% NaCl solution
- Select method of sample collection (Levine or Essener Kreisel)
- Complete the consignment note
- Completely fill in label on liner
- List reference to previous antibiotic therapy
- Specify desired examination
- Storage at room temperature
- Sample transport promptly

Q.2. **Define decubitus ulcer. Explain the intrinsic factors of decubitus ulcer.**

**Decubitus ulcer (bed sore or pressure ulcer)**

"If a patient is cold, if a patient is feverish, if a patient is faint, if he is sick after taking food, if he has **bedsore**, it is generally not the fault of the disease, but of the nursing." (Nightingale, 1860)

A pressure sore belongs to the serious health problems of patients/residents in need of care. The occurrence of a decubitus can be largely prevented. Of outstanding importance for successful prophylaxis is that the nursing staff ensure systematic risk assessment, information, training and advice for patients/residents and, if necessary, their relatives, promotion of movement, pressure relief and distribution as well as continuity and evaluation of prophylactic measures.

**Definition:**

A decubitus is a tissue damage caused by high and prolonged pressure. This process can also be negatively influenced by friction or shear forces. Decubitus is a skin defect that is usually caused by the pressure of the patient's own body weight on the underlying surface, but can also be forced by the pressure of the bone from within on the tissue. It is therefore also called a pressure sore. Such pressure sores form in permanently sitting or lying immobile patients. Older people are particularly frequently affected by these chronic wounds due to changes in the skin, reduced mobility and sensitivity. A pressure ulcer can vary in size and depth. Such wounds are usually infected. This means that healing can often take months. In the case of very deep ulcers, surgical intervention is often unavoidable. However, dead cell structures, so-called necroses, must also be removed. In order to understand the problem and the development of a decubitus ulcer in its extent, it is necessary to deal with the structure and function of the skin.

**Intrinsic factors**

a) **Reduced mobility / immobility**

Reduced mobility is understood to be an illness-related, limited mobility. It is one of the most important, if not the most important, risk factor for the development of a pressure sore. As a result of greatly reduced mobility,it is often not possible or only insufficiently possible for the patient to change his or her position while sitting orlying down. He cannot counteract the pressure on certain parts of the body. In addition to these effects of immobility, there is also poor lung ventilation, slower digestion, stiffening of the joints, loss of skeletal muscle tone, etc. But the psyche of a patient is also severely affected by immobility. Such patients are often prone todepressive moods, which in turn promote and reinforce immobility.

b) **Age**

The age of a patient is of great importance in determining the degree of risk of decubitus. The skin of olderpeople shows changes in its structure: this results in greater vulnerability.

- Older people usually suffer from underlying diseases that can have a negative impact on the risk ofpressure sores.
- Overall, there is often a reduced general condition.
- Mobility is often restricted by age.
- This group of people usually drinks too little and is therefore often dehydrated.

c) **Malnutrition**

Malnutrition leads to a reduced general condition, tiredness, exhaustion and weakness. This ultimately also promotes the immobility of a patient. In the case of already existing pressure sores, it also delays the processof wound healing.

a) **Dehydration - exsiccosis**

Patients in reduced general condition often drink too little. The lack of liquid in the body causes the skin to dryout. Besides this effect, such exsiccosis also leads to changes in mental abilities. The patients are clouded and articulate themselves in a way that is unusual for them. Various factors contribute to this. On the one hand,the sensation of thirst diminishes with age, i.e. the elderly person does not notice that he or she has a lack offluids. On the other hand, in old age the kidneys tend to be activated at night, which explains the frequent needto urinate at night. Of course, this fact is perceived as annoying and drinking is therefore often restricted. Incontinence also increases the desire to drink even less. Without the knowledge of these interrelationships, the elderly person therefore often brings himself into the fatal state of fluid deficiency.

b) **Incontinence**

Incontinence is the inability to excrete urine or stool in a controlled manner. Although a Patient is provided withincontinence articles such as pads/pants in such a case, stool, urine and bacteria have a permanent effect onthe skin. Skin damage is the result.

c) **Metabolic and neurological diseases**

The effects and complications of existing underlying diseases, such as diabetes mellitus or stroke (apoplexy),can promote the development of pressure sores. The late complications of diabetes mellitus are nervous dis-orders (**neuropathies**), vascular diseases (**diabetic macro- and microangiopathies**), pathological changesin the kidneys (**nephropathies**) and changes in the ocular fundus (**retinopathies**). Neuropathies often lead toreduced pain sensation, i.e. pain caused by pressure is not perceived by the patient. There are no movementsthat lead to pressure relief. Diabetic macro- and microangiopathy cause reduced blood circulation. If blood vessels are additionally compressed from the outside when blood flow is already reduced, the death of the corresponding cells is inevitable. But also, the wound healing of already existing pressure ulcers is extremelyprotracted and complicated due to the poor blood supply. The symptoms of a stroke can, according to its ethology (origin), be signs of **sensitivity and paralysis**. The sensitivity disorders lead to reduced stimulus transmission. In turn, pressure can be perceived poorly or not at all. The one-sided paralysis (paresis) consid-erably reduces the mobility of the resident. The affected sides of the body are often negated, i.e. the residentno longer sees this side of the body as

belonging to him. Here, too, the underlying disease poses a consider-ably increased risk of pressure sores

d) **Infections**

Infections have a negative effect on the metabolism and weaken the body's own defences and thus also the general condition of the patient. In addition, infection patients develop fever, which in turn leads to increased sweating. The resulting moisture softens the skin and reduces its resistance

Q.3. **What is erysipelas?**

**Erysipelas**

Erysipelas is a relatively common bacterial disease, mostly caused by Streptococcus pyogenes - the same bacterium that causes strep throat. Erysipelas infections can enter the skin through minor trauma, insect bites,dog bites, eczema, athlete's foot, surgical incisions and ulcers and often originate from streptococci bacteria in the **patient's own nasal passages**. Infection sets in after a small scratch or abrasion spreads, resulting intoxaemia. **Preferred location:**

- The infection may occur on any part of the skin, including the face, arms, fingers, legs and toes; it tends to favour the extremities.
- Due to the **typical sharp demarcation** of healthy skin areas from flaming redness, the diagnosis is quite easy to make.

**Symptoms:**

- acute fever
- chills
- swelling, redness, overheating and pressure pain of the affected skin.

**Risk factors**

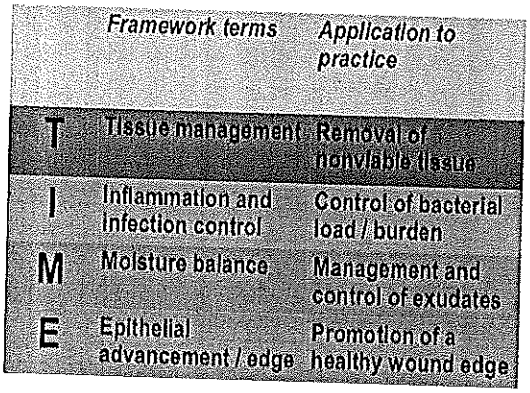
Erysipelas is most common among the elderly, infants, and children. People with immune deficiency, diabetes, alcoholism, skin ulceration, fungal infections, and impaired lymphatic drainage (e.g., after mastectomy, pelvic surgery, bypass grafting) are also at increased risk.

Q.4. **Describe the four principles of "TIME" wound bed preparation.**

**Principles of TIME Wound Bed Preparation**

The TIME mnemonic is composed of the following factors: tissue management, infection or inflammation, moisture balance, and edge of wound. Assessing and managing each of these elements is critical to comprehensive wound care.

PRINCIPLES = TIME




**T=Tissue Management and Debridement**

The goal of debridement is to remove the necrotic tissue, such as eschar and slough. Invisible to the naked

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Patients in reduced general condition often drink too little. The lack of liquid in the body causes the skin to dryout. Besides this effect, such exsiccosis also leads to changes in mental abilities. The patients are clouded and articulate themselves in a way that is unusual for them. Various factors contribute to this. On the one hand,the sensation of thirst diminishes with age, i.e. the elderly person does not notice that he or she has a lack offluids. On the other hand, in old age the kidneys tend to be activated at night, which explains the frequent needto urinate at night. Of course, this fact is perceived as annoying and drinking is therefore often restricted. Incontinence also increases the desire to drink even less. Without the knowledge of these interrelationships, the elderly person therefore often brings himself into the fatal state of fluid deficiency.

b) **Incontinence**

Incontinence is the inability to excrete urine or stool in a controlled manner. Although a Patient is provided withincontinence articles such as pads/pants in such a case, stool, urine and bacteria have a permanent effect onthe skin. Skin damage is the result.

c) **Metabolic and neurological diseases**

The effects and complications of existing underlying diseases, such as diabetes mellitus or stroke (apoplexy),can promote the development of pressure sores. The late complications of diabetes mellitus are nervous dis-orders (**neuropathies**), vascular diseases (**diabetic macro- and microangiopathies**), pathological changesin the kidneys (**nephropathies**) and changes in the ocular fundus (**retinopathies**). Neuropathies often lead toreduced pain sensation, i.e. pain caused by pressure is not perceived by the patient. There are no movementsthat lead to pressure relief. Diabetic macro- and microangiopathy cause reduced blood circulation. If blood vessels are additionally compressed from the outside when blood flow is already reduced, the death of the corresponding cells is inevitable. But also, the wound healing of already existing pressure ulcers is extremelyprotracted and complicated due to the poor blood supply. The symptoms of a stroke can, according to its ethology (origin), be signs of **sensitivity and paralysis**. The sensitivity disorders lead to reduced stimulus transmission. In turn, pressure can be perceived poorly or not at all. The one-sided paralysis (paresis) consid-erably reduces the mobility of the resident. The affected sides of the body are often negated, i.e. the residentno longer sees this side of the body as

belonging to him. Here, too, the underlying disease poses a consider-ably increased risk of pressure sores

**d) Infections**

Infections have a negative effect on the metabolism and weaken the body's own defences and thus also the general condition of the patient. In addition, infection patients develop fever, which in turn leads to increased sweating. The resulting moisture softens the skin and reduces its resistance

Q.3. **What is erysipelas?**

**Erysipelas**

Erysipelas is a relatively common bacterial disease, mostly caused by Streptococcus pyogenes - the same bacterium that causes strep throat. Erysipelas infections can enter the skin through minor trauma, insect bites,dog bites, eczema, athlete's foot, surgical incisions and ulcers and often originate from streptococci bacteria in the **patient's own nasal passages.** Infection sets in after a small scratch or abrasion spreads, resulting intoxaemia. **Preferred location:**

- The infection may occur on any part of the skin, including the face, arms, fingers, legs and toes; it tends to favour the extremities.
- Due to the **typical sharp demarcation** of healthy skin areas from flaming redness, the diagnosis is quite easy to make.

**Symptoms:**

- acute fever
- chills
- swelling, redness, overheating and pressure pain of the affected skin.

**Risk factors**

Erysipelas is most common among the elderly, infants, and children. People with immune deficiency, diabetes, alcoholism, skin ulceration, fungal infections, and impaired lymphatic drainage (e.g., after mastectomy, pelvic surgery, bypass grafting) are also at increased risk.

Q.4. **Describe the four principles of "TIME" wound bed preparation.**

**Principles of TIME Wound Bed Preparation**

The TIME mnemonic is composed of the following factors: tissue management, infection or inflammation, moisture balance, and edge of wound. Assessing and managing each of these elements is critical to comprehensive wound care.

PRINCIPLES = TIME

| | *Framework terms* | *Application to practice* |
|---|---|---|
| T | Tissue management | Removal of nonviable tissue |
| I | Inflammation and infection control | Control of bacterial load / burden |
| M | Moisture balance | Management and control of exudates |
| E | Epithelial advancement / edge | Promotion of a healthy wound edge |

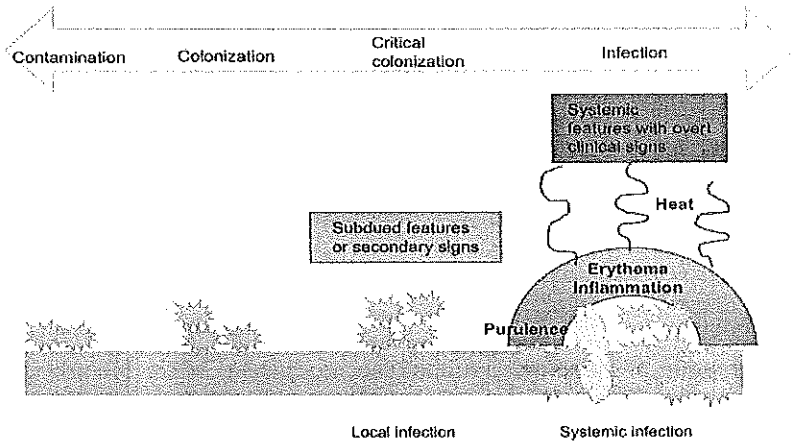
**T=Tissue Management and Debridement**

The goal of debridement is to remove the necrotic tissue, such as eschar and slough. Invisible to the naked

eye, senescent or aberrant cells may harbour bacteria, increase the risk of infection, delay the healing process and impair macrophage function. Additionally, any foreign material that inhibits healing such as toxins, microbes, biofilms, bacteria, yeast or viruses, as well as substances such as dressing residue, animal hair or dander, suture material or any other types of debris, should be removed. Until the wound bed is prepared and debrided, the wound bed is not fully visible, and appropriate assessment is not possible. When debridement of a wound is contemplated, a number of considerations must be taken into: account, including the condition of the patient, the cost of the products, the therapeutic effectiveness, the efficiency of the procedure and resources available. There are also many ways to debride a wound, including sharp surgical and conservative sharp debridement, as well as mechanical, enzymatic, biological and autolytic debridement. Matching the appropriate method to the patient's overall needs is essential to achieving the best outcome. Non-viable tissue can impede healing and obstruct inspection of the underlying wound. This makes it important that all necrotic tissue, devitalized tissue and bacteria be removed from the wound area. This helps ensure that the wound has a healthy base for healing.

**I = Inflammation and Infection Control**

Inflammation is a component of the healing process, and it is important to remember that all wounds are contaminated with microorganisms. These low levels of bacteria can actually stimulate wounds to repair themselves. It is when the organisms profusely increase in the wound bed that they extend the inflammatory phase of wound healing and can severely retard or prevent wound repair. Understanding the difference in inflammation and infection is important because they can manifest very similarly with erythema, warmth, pain and oedema. To this point, it is also very helpful to differentiate among contamination, colonization and infection.




**Wound contamination** is the presence of **non-replicating/ multiplying bacteria**. When the host controls the environment, healing is not impaired by these bacteria. When wound bed preparation is not achieved and wound management is not effective, then bacteria will begin to replicate. If there is an increase in the number of bacteria, depending on the virulence of those bacteria, this process can begin to overwhelm the host. **Colonisation means** Bacteria multiply, but there is **no host response. Critical colonization** is the proliferation of bacteria in the host, resulting in delayed wound healing, but **still without an overt host reaction**. Critical colonization is usually associated with increased pain previously not reported by the patient. When **a wound is infected**, it now has the presence of replicating bacteria that are invading the tissue whether superficially or by deep penetration. Again, the host response will show a local reaction or a systemic reaction, and infection is a clinical diagnosis based on signs and symptoms, not just the presence of bacteria or the number of bacteria in the wound.

Bacterial colonies can impede wound healing and threaten the health of the patient. It is important for wound bed preparation to manage bacterial levels to prevent infection, improve patient comfort and reduce the risk of complication. Health care professionals should examine patients for signs of bacterial colonization such as tissue damage, odour, fever, inflammation and exudate. If infection is suspected, wounds should be cleaned

with an antiseptic solution and treated with appropriate topical and/or systemic therapies. Antimicrobial dressings can help reduce the bacterial load in the wound area. It is also important to debride the wound area regularly to reduce the presence of biofilms that may be resistant to topical antibiotics.

**M = Moisture Management**

Wound moisture is a critical component of the wound healing process. A moist wound environment can promote rapid healing, aid cellular activities, and prevent eschar formation. However, excessive moisture can cause maceration of the wound area and impede healing. It is important that health care professionals assess and actively manage the wound's moisture balance to improve patient outcomes. A key component of maintaining the optimal moisture balance in the wound is exudate management.. Exudate (drainage), a liquid produced by the body in response to tissue damage, is present in wounds as they heal. It consists of fluid that has leaked out of blood vessels and closely resembles blood plasma. Exudate can result also from conditions that cause oedema, such as inflammation, immobility, limb dependence, and venous and lymphatic insufficiency. However, in many cases the wound will produce too much or too little exudate, thereby creating suboptimal conditions. Dry wounds should be treated with an occlusive, semi-occlusive or appropriate moisture-donating dressing to help create a moist environment. Excessively moist wounds should be treated with a dressing that absorbs and traps exudate, such as a foam dressing

**E = Edge Management**

After providing appropriate wound bed preparation, including the management principles of tissue/debridement, infection, inflammation and moisture balance, if wound repair and healing are stalled with no progress made within two to four weeks, advanced treatments may be considered when the epithelium fails to migrate.In a properly healing wound, the epidermal margins should contract, reducing the size of the wound. If this process is not occurring, or if it is occurring too slowly, it is important for health care professionals to attempt to identify potential problems that may be preventing the wound from healing. In many cases, these causes may be related to other elements of the TIME model of wound bed preparation. Dry or excessively moist woundedges, infection, epibolic (rolled wound edges), necrotic tissues and biofilms can all prevent the epidermal margin from migrating. Performing regular assessments of the wound area and the advancemen

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1503** **Time: 2 Hours**

**Course Name: Skin & Wound Management** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **What are the phase of wound healing?**

a) Proliferative phase b) Inflammatory phase

c) Blister phase d) Both a and b

Q.2. **Which intervention can the nurse delegate to nursing assistive personnel (NAP) in caring for a patient with a wound?**

a) Assisting the site for signs of redness or swelling

b) Reporting the presence of wound odor

c) Removing the soiled outer dressing

d) Opening sterile dressing during the surgery changes

Q.3. **Which practice protects the nurse from infection when changing the dressing on an infected pressure ulcer?**

a) Begin antibiotic therapy before the dressing change

b) Use appropriate personal protective equipment

c) Adhere to sterile technique during the intervention

d) Complete the dressing change in an effective, efficient manner

Q.4. **Which action would minimize the risk for cross contamination while cleansing an infected abdominal surgical wound?**

a) Cleansing the wound with sterile water

b) Blotting the incision with dry gauze

c) Wearing sterile gloves to cleanse the wound

d) using a new gauze pad for each stroke while cleansing the wound

Q.5. **When changing a patient's surgical dressing 24 hours postoperative, when would the nurse apply sterile gloves?**

a) After performing hand hygiene at the start of the procedure

b) Before removing the inner dressing

c) After removing the original dressing materials and performing hand hygiene a second time

d) Just before cleansing the wound with sterile water

Q.6. **What strategy should be included in pressure ulcer prevention?**

a) Use moisture ointment with incontinence

b) Reposition immobile patient every 4 hours

c) Maintain bed at 45° angle

d) Massage reddened bony prominences

Q.7. **Which is not basic principle of wound management?**

a) Minimize trauma

b) Assess & manage wound

c) Remove infection

d) Apply pressure to wound

Q.8. **When working with an older person, you would keep in mind that the older person is most likely to experience which of following changes with aging?**

a) Thinning of the epidermis

b) Thickening of the epidermis

c) Oiliness of the skin

d) Increasing elasticity of the skin

Q.9. **Which of the following are clinical goals of wound care?**

a) Assess patient & wound

b) Select appropriate products to manage wound

c) Re – Evaluate the plan as patient & wound characteristics change

d) All of above

Q.10. **When educating a patient about wound healing the health care worker should include what is the teaching?**

a) Inadequate nutrition delays wound healing and increase risk of infection

b) Chronic wound heals better in a dry, open environment so leave them open to air

c) Fat tissue heels more rapidly because there is less vascularization

d) long term steroid use diminished the inflammatory response and speeds up wound healing

## Section – B

04X04 = 16 Marks

Q.1. Write down the disorders of wound healing.

Q.2. Define cellulitis. Write down the four symptom of cellulitis.

Q.3. Draw the flow chart of triangle of wound assessment.

Q.4. Elaborate the types of exudate.

## Section – C

04X06 = 24 Marks

Q.1. Elaborate the wound tumor.

Q.2. Describe the stages of wound.

Q.3. Define varicose vein. Explain the treatment and compression therapy.

Q.4. Describe the four principles of **"TIME"** wound bed preparation.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2020-21 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1503** **Time: 2 Hours**

**Course Name: Skin & Wound Management** **Max. Marks: 50**

**Instruction:**

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2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

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## Section – B

04X04 = 16 Marks

Q.1. Write down the disorders of wound healing.

**Disorders of wound healing**

A wound is always related to the whole organism. The elimination of all factors inhibiting wound healing is a fundamental requirement for successful wound treatment

- Seromas
- Wound dehiscence / ruptures
- Soft tissue necroses
- Hypertrophic scarring
- Keloids

Q.2. Define cellulitis. Write down the four symptom of cellulitis.

**Cellulites**

Cellulitis is a common, potentially serious bacterial skin infection. The affected skin appears swollen and red and is typically painful and warm to the touch. Cellulitis usually affects the skin on the lower legs, but it can occur in the face, arms and other areas. It occurs when a crack or break in your skin allows bacteria to enter.

**Symptoms**

Possible signs and symptoms of cellulitis, which usually occur on one side of the body, include: Red area of skin that tends to expand

- swelling
- tenderness
- pain
- warmth
- fever
- red spots
- blisters
- skin dimpling

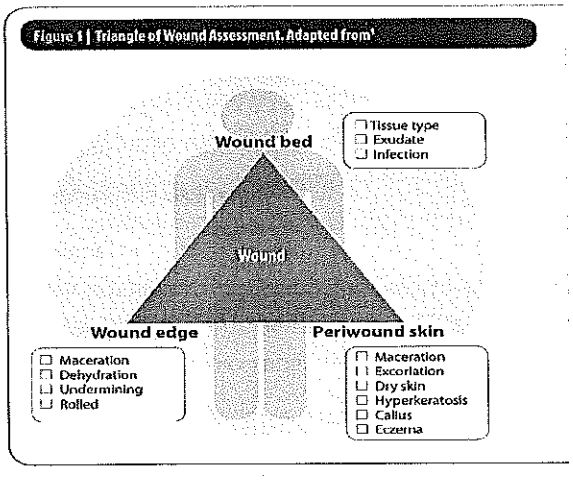
Q.3. Draw the flow chart of triangle of wound assessment.

**The Triangle of Wound Assessment**

The Triangle of Wound Assessment is a holistic framework that allows practitioners to assess and manage all areas of the wound, including the periwound skin. The Triangle of Wound Assessment is a new tool that extends the current concepts of wound bed preparation and TIME beyond the wound edge. It divides assessment of the wound into three areas:

- the wound bed
- the wound edge and
- the periwound skin.

It should be used in the context of a holistic assessment that involves the patient, caregivers and family.



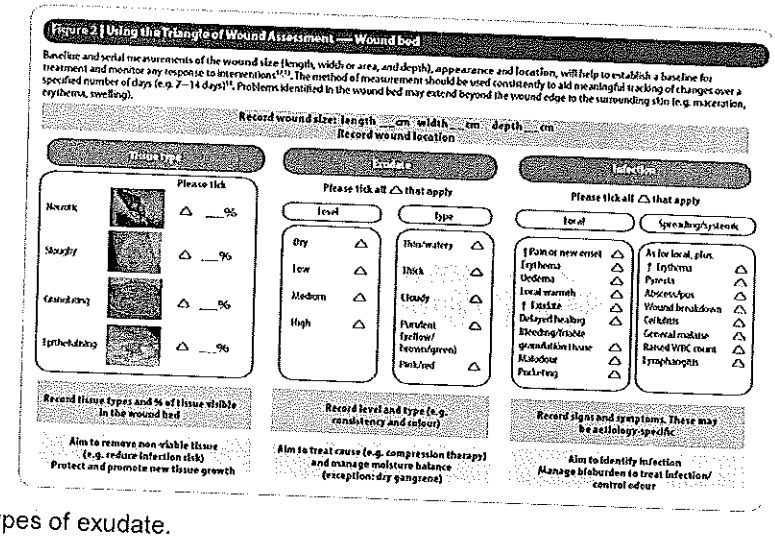

**Using the Triangle of Wound Assessment**

A holistic assessment aims to gain an overview of the patient's medical condition, the cause, duration and status of the wound, together with any factors that may impede healing including: comorbidities, e.g. diabetes, cardiovascular disease, respiratory disease, venous/arterial disease, malignancy, medications, e.g. corticosteroids, anticoagulants, immunosuppressants, chemotherapeutic agents, nonsteroidal anti-inflammatorydrugs, systemic or local infection (e.g. osteomyelitis) ,reduced oxygenation and tissue perfusion, increased age, pain,

poor nutrition and hydration, lifestyle, e.g. high alcohol intake, smoking, obesity. In addition, it is important to understand how the wound is affecting patient daily living, e.g. pain levels between and during dressing changes, sleep disturbance, strikethrough and malodour.

**The Triangle of Wound Assessment identifies three distinct, yet interconnected, zones:**

**Wound bed:** look for signs of granulation tissue, while seeking to remove dead or devitalised tissue, manage exudate level and reduce the bioburden in the wound.




Q.4. Elaborate the types of exudate.

**Types of exudates**

- **Serous**—thin, clear, watery plasma, seen in partial-thickness wounds and venous ulceration. A mod-erate to heavy amount may indicate heavy bio-burden or chronicity from a subclinical infection. **Serousexudate in the acute inflammatory stage is normal.**
- **Sanguineous(bloodred)** —bloody drainage (fresh bleeding) seen in deep partial-thickness and full-thickness wounds during angiogenesis. **A small amount is normal in the acute inflammatory stage.**
- **Serosanguineous**—thin, watery, pale red to pink plasma with red blood cells. **Small amounts may be seen in the acute inflammatory or acute proliferative healing phases.**
- **Purulent**—thick, opaque drainage that is tan, yellow, green, or brown. **Purulent exudate is never normal and is often associated with infection or high bacteria levels.**

## Section – C

04X06 = 24 Marks

Q.1. Elaborate the wound tumor.

In patients suffering from advanced tumour diseases, so-called "exuding wounds" can develop. These wounds usually occur in the advanced stages of cancer and often affect the entire body. Tumors can develop on all living body tissues, for example in cancer. The formation of new tissue (neoplasia) is caused by a defective regulation of cell growth. Basically, a tumour is a swelling. A swelling takes up space, such as a cyst, an oedema or a tumour. Even in the case of an inflammation, the term tumour can therefore be used. Not every tumour is immediately indicative of a malignant change. In medicine there are two different types of tumours:

- Benign tumors
- Malignant tumors

**Benign tumors**

A benign tumor is defined as a tissue formation that is only local and does not metastasise, i.e. spreads via the lymph nodes into other tissues. Benign tumors are clearly differentiated from the surrounding tissue, usually grow very slowly and do not attack neighbouring organs. Benign tumous include moles, lipomas, fibromas, port-wine stains, haemangiomas or keloids. A benign tumor can change smoothly into a degenerated tumour as it grows. In tumour wounds, benign and malignant cells can thus be detected at the same time.

**Malignant tumors**

The situation is different with malignant tumors: they grow into healthy tissue and often go unnoticed for a long time. Metastases and also primary tumours have the property of proliferating rapidly. An extensive ulceration develops. Hypertrophic tissue with heavily exuding wounds usually occurs in the prefinal or final stage of the disease. The majority of malignant tumor wounds are primary skin tumors or skin metastases from another primary tumor. Skin tumors occur particularly frequently in the case of carcinomas of the breast, lung and salivary glands. Due to uninhibited cell growth and the complete breakdown of the tumor's own blood supply, the tissue is extensively destroyed. This process is also described in medicine as "exulcerative".

**Exuding tumors**

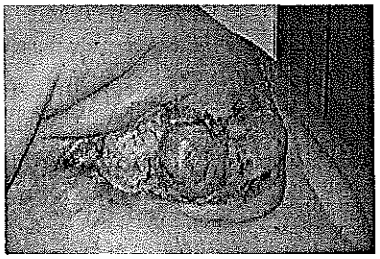
According to the British Columbia Cancer Agency, an exuding wound is defined as a "malignant lesion of the skin caused by a primary skin tumour, a skin metastasis from another primary tumor, or the breakthrough of a tumour from underlying tissue layers". (Source: Guidelines of the DGP Section Care: Exulcerative Tumor Wounds, 2014, p. 3.) Exuding tumor wounds are divided into three groups:

- Primary skin tumors (e.g. melanoma, squamous cell carcinoma)
- Tumor infiltration through a tumor located directly under the skin (e.g. breast carcinoma)
- Skin metastases (due to spreading of a primary tumor)

**Symptoms of exuding tumor wounds**

Malignant tumor wounds are caused by the penetration of cancerous cells into the skin and the blood and lymph vessels supplying it, leading to massive destruction of the surrounding tissue. This promotes the growth and multiplication of germs. Colonisation or infection of the wound often causes the following symptoms:

- (Severe) exudation
- Wound odour
- Bleeding
- Pain
- Further tumor growth can also lead to a renewed enlargement of the wound.



tumor right breast

**Importance of exuding tumour wounds**

**In tumour wounds, the focus is not on the healing of the wound. The focus is on improving the quality of life of the patient and family members.** For all those involved - patient, relatives and carers - an excrescenttumour wound is a heavy burden. As the tumour breaks through the body shell, the disease becomes obvious.The body sensation and especially the body image changes suddenly. Self-confidence and self-esteem can be lost, dejection, depression and also the powerlessness over one's own body, affect the life of most patientsvery much.

**Meaning for the patient**

The symptoms, such as strong exudation and odour formation, are perceived as unpleasant, embarrassing and very stressful, especially by those affected. Due to this extreme stress, helplessness and depression can lead to social withdrawal. The tumour is constantly present. The aim is to help the affected persons to cope with their fears and feelings and to make everyday life as normal as possible.

**Meaning for relatives**

Relatives of patients with an excrescent tumour wound are often completely overwhelmed by the situation. The sight of a tumour wound can cause a feeling of disgust and thus lead to a distancing from someone who is otherwise very close. Here the aim is not to leave people alone with their fears and feelings. In palliative medicine, this involves the development of strategies for dealing with the situation, which are taught to relatives so that they can better cope with the difficult situation. In order to reduce the isolation of those affected as much as possible, the relatives should therefore be involved.

**Meaning for nurses**

For nursing staff, the treatment of an excrescent tumour wound is a great challenge. Empathy, overcoming fear of contact and a high degree of expertise are required to treat these wounds. Alleviating the suffering of the patient is the main priority. Patients have the opportunity to address their fears and desperation to the nursing staff. They experience the necessary respect in a protected space. Nursing professionals are aware of their limits and should seek external help if they are overburdened.

**Treatment and therapy**

**Painless, atraumatic dressing change**

In patients with exuding tumour wounds, the main focus is on alleviating the symptoms while maintaining quality of life. Changes should be well assessed and documented in order to be able to choose the right wound management for the patient. Dressing changes are always stressful for the patient. The surrounding skin is often very sensitive to pain, so even the slightest touch can cause severe pain. A regular pain assessment before, during and after the dressing change is therefore essential. An accompanying, adequate pain therapy is also useful. Timely administration of the pain medication before the dressing change as well as a procedure agreed with the patient should be a priority.

**Odour reduction**

Wound odour can be caused by a bacterial infection or by the cell decay of the tumour. Putrid odours are not only a burden to the person affected, but also to relatives and nursing staff.To minimise odours, special wound dressings for wound cavities can be selected. The wound dressings must completely cover the wound to prevent the escape of odour. If the wound and the patient's condition allow, showering the wound with tap water can provide relief. Additional measures to improve the patient's well-being may include the supply of fresh air and daily change of clothing and bedding. Placing lavender sachets or scented sticks on the wound and covering it with cling film can also mask the smell for a certain period of time.

**Exudate management and wound dressings**

Tumour wounds often show a very high exudate volume - sometimes up to more than 1 litre per day. Due to the strong exudation, the wound edge and the surrounding skin can macerate strongly. Macerated skin is always an entry point for bacteria and fungi. A well-chosen wound dressing absorbs the wound exudate and maintains the moist, warm wound environment.

**Itching**

Itching, also known as pruritus, is a common occurrence in patients with breast cancer. First of all, it should be clarified whether there is any incompatibility with the dressing material. Possibilities to reduce itching are cooling lotions containing urea, local anaesthetics in gel or cream form as well as essential oils. Relaxation methods or distraction can also help. The patient should definitely be prevented from giving in to the itching, as this can only cause further pain or even bleeding, which in turn worsens the situation of the wound.

**Bleeding**

Since tumor wounds are very sensitive, spontaneous bleeding can occur again and again. Bleeding often occurs when the wound is cleaned or due to external influences, such as clothing that is too tight. If the bleeding is arterial in nature, it can sometimes be insatiable. Certain considerations must be made here, such as an emergency plan or an emergency box with materials in case of bleeding. In these extreme situations, patients must never be left alone. In case of anxiety and restlessness, the tumour wound can also be covered with dark cloths.

Q.2. Describe the stages of wound.

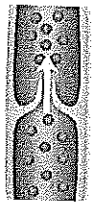
| Stage of wound | note | Aim of treatment |
|---|---|---|
| **Necrotic tissue and ischaemia**<br>**Black/brown tissue hard eschar**<br>  | Especially with arterial ulcers and diabetic foot syndrome, necroses can occur as a result of a lack of blood circulation. The tissue no longer receives nutrients and oxygen and dies as a result. In the process it turns black. Necrosis can be dry and leathery, but also moist. One also speaks of dry and moist gangrene. While dry necrosis should be treated dry (as the only condition of a chronic wound) and does not need to be removed immediately, moist necrosis is a dangerous source of infection. | • Restore the blood circulation situation (medication, surgery)<br>• Autolytic debridement, softening of coatings in small dry necroses<br>• Disinfection of moist, infected wounds |
| **Fibrin coating yellow tissue sloughy**<br>+/-Infection | The fibrin layers can be yellow, yellow-green or yellow-brown. The coagulation process is supported by the formation of fibrin, which lies over the wound like a net and thus serves as a basis for the anchoring of fibroblasts and as a basic substance of the granulation tissue. During wound healing, it can happen that too much fibrin is produced and deposited in the wound. The so-called fibrin | • Autolytic debridement, i.e. softening of coatings and removal by wound cleansing<br>• uptake of excess exudate<br>• Reduction of wound depth if necessary |

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

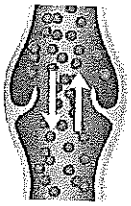
Q.3. Define varicose vein. Explain the treatment and compression therapy.

**Varicose veins**

Far more frequently, however, the wounds are caused by damaged veins. Varicose veins are a very clear sign that the veins are not functioning properly. The calf muscles pump the blood to the heart. In the veins, venous valves ensure that the blood cannot flow back again. If the valves cannot close properly and the veins are bulging, the blood flows back towards the feet.



Healthy valves keep blood flowing normally



Unhealthy valves cause abnormal blood flow, leading to pooling and pressure

**Compression therapy**

Causal therapy is essential for healing of venous leg ulcers. This consists, on the one hand, of improving venous return through compression and movement and, on the other hand, through surgical measures such as the rehabilitation of the veins.

**Compression therapy is essential to allow the wound to heal.**

Proper and professional compression therapy results in a permanent increase in venous return and thus a reduction in pressure and volume overload in the venous system of the legs. Using different materials and procedures, a successively decreasing compression pressure is generated in the direction of the heart, which reduces the venous cross-section. Venous valves that have not yet been destroyed can resume their function as backwater valves, oedema is reduced, venous return transport is promoted and waste products and metabolites are removed. The reduction of the oedema is pain-relieving. In addition, compression therapy forms a stable abutment for the leg muscles, so that the work of the muscle pumps - especially the ankle and calf muscle pumps - is intensified. This initially causes peripheral decongestion. This is followed by the healing of ulcerations. In addition, compression therapy prevents the formation of new oedemas and the development of thromboses.Various materials are available for compression therapy. These include among others:

- short-stretch, medium-stretch and long-stretch bandages,
- Zinc glue bandages,
- Padding materials, e.g. cotton wool, foam, pads,
- Ulcer stocking systems,
- Medical compression stockings (MCS) and
- The attending physician decides which materials should be used

**Basics of bandaging**

The superiority of a certain bandaging technique has not been proven. Decisive for the efficiency is the proper and professional execution of the chosen method.

- At the beginning a tubular bandage made of cotton is put on to protect the skin up to below the knee
- Adequate underpadding prevents undesirable side effects such as unnoticed constrictions, nervedamage, pressure necrosis or blisters
- To reduce the risk of injury, the enclosed fixing clamps are not used
- The heel must always be included.
- Make sure that the foot is in dorsiflexion (= at right angles to the calf); otherwise there is a danger oftoe contact
- The bandage roll is guided directly on the skin under permanent tension, so that the bandage modelsitself evenly on the leg.

**Indications for immediate removal of compression bandaging**

- blue or white coloration of the toes
- Sensations and feelings of numbness
- Increasing pain
- Shortness of breath and sweating
- Acute movement restrictions

Q.4. Describe the four principles of **"TIME"** wound bed preparation.

**Principles of TIME Wound Bed Preparation**

The TIME mnemonic is composed of the following factors: tissue management, infection or inflammation, moisture balance, and edge of wound. Assessing and managing each of these elements is critical to comprehensive wound care.

PRINCIPLES = TIME

| | *Framework terms* | *Application to practice* |
|---|---|---|
| T | Tissue management | Removal of nonviable tissue |
| I | Inflammation and infection control | Control of bacterial load / burden |
| M | Moisture balance | Management and control of exudates |
| E | Epithelial advancement / edge | Promotion of a healthy wound edge |

**T=Tissue Management and Debridement**

The goal of debridement is to remove the necrotic tissue, such as eschar and slough. Invisible to the naked eye, senescent or aberrant cells may harbour bacteria, increase the risk of infection, delay the healing process and impair macrophage function. Additionally, any foreign material that inhibits healing such as toxins, microbes, biofilms, bacteria, yeast or viruses, as well as substances such as dressing residue, animal hair or dander, suture material or any other types of debris, should be removed. Until the wound bed is prepared and debrided, the wound bed is not fully visible, and appropriate assessment is not possible. When debridement of a wound is contemplated, a number of considerations must be taken into: account, including the condition of the patient, the cost of the products, the therapeutic effectiveness, the efficiency of the procedure and resources available. There are also many ways to debride a wound, including sharp surgical and conservative sharp debridement, as well as mechanical, enzymatic, biological and autolytic debridement. Matching the appropriate method to the patient's overall needs is essential to achieving the best outcome. Non-viable tissue can impede healing and obstruct inspection of the underlying wound. This makes it important that all necrotic tissue, devitalized tissue and bacteria be removed from the wound area. This helps ensure that the wound has a healthy base for healing.

**I = Inflammation and Infection Control**

Inflammation is a component of the healing process, and it is important to remember that all wounds are contaminated with microorganisms. These low levels of bacteria can actually stimulate wounds to repair themselves. It is when the organisms profusely increase in the wound bed that they extend the inflammatory phase of wound healing and can severely retard or prevent wound repair. Understanding the difference in inflammation and infection is important because they can manifest very similarly with erythema, warmth, pain and oedema. To this point, it is also very helpful to differentiate among contamination, colonization and infection.

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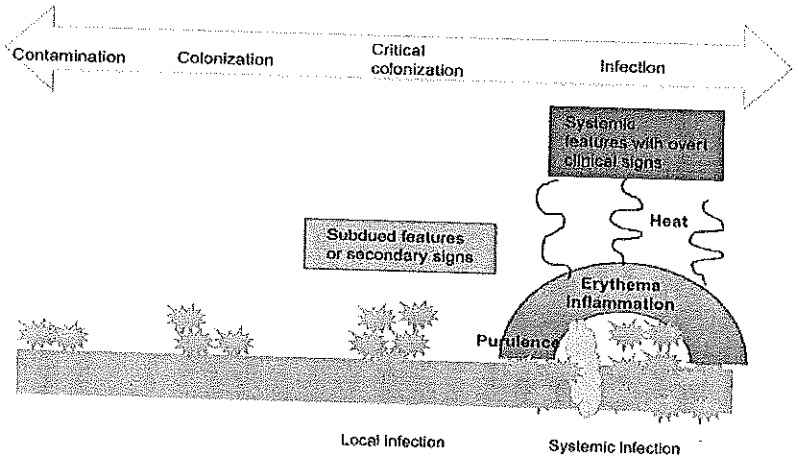


**Wound contamination** is the presence of **non-replicating/ multiplying bacteria**. When the host controls the environment, healing is not impaired by these bacteria. When wound bed preparation is not achieved and wound management is not effective, then bacteria will begin to replicate. If there is an increase in the number of bacteria, depending on the virulence of those bacteria, this process can begin to overwhelm the host. **Colonisation means** Bacteria multiply, but there is **no host response. Critical colonization** is the proliferation of bacteria in the host, resulting in delayed wound healing, but **still without an overt host reaction**. Critical colonization is usually associated with increased pain previously not reported by the patient. When **a wound is infected**, it now has the presence of replicating bacteria that are invading the tissue whether superficially or by deep penetration. Again, the host response will show a local reaction or a systemic reaction, and infection is a clinical diagnosis based on signs and symptoms, not just the presence of bacteria or the number of bacteria in the wound.

Bacterial colonies can impede wound healing and threaten the health of the patient. It is important for wound bed preparation to manage bacterial levels to prevent infection, improve patient comfort and reduce the risk of complication. Health care professionals should examine patients for signs of bacterial colonization such as tissue damage, odour, fever, inflammation and exudate. If infection is suspected, wounds should be cleaned with an antiseptic solution and treated with appropriate topical and/or systemic therapies. Antimicrobial dressings can help reduce the bacterial load in the wound area. It is also important to debride the wound area regularly to reduce the presence of biofilms that may be resistant to topical antibiotics.

**M = Moisture Management**

Wound moisture is a critical component of the wound healing process. A moist wound environment can promote rapid healing, aid cellular activities, and prevent eschar formation. However, excessive moisture can cause maceration of the wound area and impede healing. It is important that health care professionals assess and actively manage the wound's moisture balance to improve patient outcomes. A key component of maintaining the optimal moisture balance in the wound is exudate management.. Exudate (drainage), a liquid produced by the body in response to tissue damage, is present in wounds as they heal. It consists of fluid that has leaked out of blood vessels and closely resembles blood plasma. Exudate can result also from conditions that cause oedema, such as inflammation, immobility, limb dependence, and venous and lymphatic insufficiency. However, in many cases the wound will produce too much or too little exudate, thereby creating suboptimal conditions. Dry wounds should be treated with an occlusive, semi-occlusive or appropriate moisture-donating dressing to help create a moist environment. Excessively moist wounds should be treated with a dressing that absorbs and traps exudate, such as a foam dressing

**E = Edge Management**

After providing appropriate wound bed preparation, including the management principles of tissue/debridement, infection, inflammation and moisture balance, if wound repair and healing are stalled with no progress made within two to four weeks, advanced treatments may be considered when the epithelium fails to migrate.In a properly healing wound, the epidermal margins should contract, reducing the size of the wound. If this process is not occurring, or if it is occurring too slowly, it is important for health care professionals to attempt to identify potential problems that may be preventing the wound from healing. In many cases, these causes may be related to other elements of the TIME model of wound bed preparation. Dry or excessively moist woundedges, infection, epibolic (rolled wound edges), necrotic tissues and biofilms can all prevent the epidermal margin from migrating. Performing regular assessments of the wound area and the advancemen

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1505** **Time: 2 Hours**

**Course Name: Home & Chronic Care** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **Alzheimer disease is associated with:**

a) Dementia b) Delusion

c) Displacement d) Delirium

Q.2. **Alpha cells of pancreas secretes:**

a) Insulin b) Somatostatin

c) Somatotropin d) Glucagon

Q.3. **Insulin is not administration through the oral route because:**

a) It causes GIT bleeding b) It causes nausea and vomiting

c) It is destroyed by GIT d) None of these

Q.4. **Multiple sclerosis affects the central nervous system which part of the CNS is usually attacked:**

a) Neuron b) Myelin

c) Plaques d) Vertebra

Q.5. **The most common complication of a patient on insulin therapy is:**

a) Hyperglycaemia b) Hypoglycaemia

c) Hypernatremia d) Hyperkalaemia

Q.6. **Which type of breath smell in diabetic ketoacidosis patient:**

a) Fishy smell b) Citrus smell

c) Fruity smell d) All of above

Q.7. **A shuffling gait is typically associated with the patient who has:**

a) Multiple sclerosis b) Down's syndrome

c) Reynaud's disease d) Parkinson's disease

Q.8. **Which stage of the trajectory work model does the patient require emergency treatment?**

a) Acute stage b) Crises stage

c) Comeback stage d) Downward stage

Q.9. **"Mask like face" is related to which disease:**

a) Tetanus

b) Hyperthyroidism

c) Parkinson's disease

d) Down's syndrome

Q.10. **The term "Health" is defined in many ways. The most accurate definition of the health would be:**

a) Health is a state of complete, mental and social well – being

b) Health is the state of body and mind in a balanced condition

c) Health is the reflection of smiling face

d) Health is the symbol of economic prosperity

## Section – B

04X04 = 16 Marks

Q.1. Define health. Explain the manageability and meaningfulness.

Q.2. Describe the complication of insulin therapy.

Q.3. Write down the care measure of Parkinson's disease.

Q.4. What do you understand by "**FAST**" warning sign?

## Section – C

04X06 = 24 Marks

Q.1. Define multiple sclerosis. Explain the early sign of multiple sclerosis.

Q.2. Define vascular dementia. Explain the mild and severe dementia.

Q.3. Define diabetes mellitus. Describe the causes, symptom, and management of diabetes mellitus.

Q.4. Explain the stages of chronic illness.

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## Section – B

04X04 = 16 Marks

Q.1. **Define health. Explain the manageability and meaningfulness.**

Definition of "health"

In 1948 the WHO defined health as follows:

**"Health is a state of complete mental, physical and social well-being and not merely the absence of disease or infirmity. To enjoy the best possible state of health is a fundamental right of every human being, without distinction of race, religion, political opinion, economic or social status".**

**Manageability**

This expresses the degree to which people are convinced that they can overcome challenges and problems with the available resources. Knowledge of your own resources. The ability to deal with events. A belief that you have the skills or ability, the support, the help, or the resources necessary to take care of things, and that things are manageable and within your control.

**Meaningfulness**

Looking behind the meaningfulness of life processes leads people to believe that their actions have a value regardless of the outcome. Meaningfulness of a coping attempt. The belief that all events have a meaning. This conviction makes it easier to accept what has happened. A belief that things in life are interesting and a source of satisfaction, that things are really worthwhile and that there is good reason or purpose to care about what happens.

Q.2. **Describe the complication of insulin therapy.**

1. Allergic reaction

   Common symptoms of an allergic reaction include: **sneezing and an itchy, runny or blocked nose** (allergic rhinitis) itchy, red, watering eyes (conjunctivitis) wheezing, chest tightness, shortness of breath and a cough. a raised, itchy, red rash (hives)
2. Lipodystrophy

- Lipodystrophy is **a problem with the way your body uses and stores fat.** It's called acquired when you aren't born with it. It often affects the fat that's just under your skin, so it can change the way you look. It also can cause other changes in your body.

3. Lip hypertrophy
4. Dawn phenomenon

- he dawn phenomenon, also called the dawn effect, is the term used to describe an **abnormal early-morning increase in blood sugar (glucose)** — usually between 2 a.m. and 8 a.m.

5. Somogyi phenomenon

The Somogyi effect or phenomenon happens **when you take insulin before bed and wake up with high blood sugar levels**. According to the theory of the Somogyi effect, when insulin lowers your blood sugar too much, it can trigger a release of hormones that send your blood sugar levels into a rebound high.

Q.3. **Write down the care measure of Parkinson's disease.**

- carry out all changes of position so that the blood pressure can be adjusted step by step.
- If the patient wants to get up from a lying position, he/she should remain sitting on the edge of the bed for a few moments.
  Any temperature change that is too rapid can lead to so-called "freezing".
- provide and adjust the medication for the patient. A timer can be used to remind the patient to take the medicine regularly.
- make sure that the patient actually takes the medication. In particular, they check whether the tablet has been swallowed or whether it is still in the mouth.
- If necessary, the nursing staff will administer the medication
  The effects and side effects of the medication are observed and documented. If necessary, the doctor treating the patient is informed. Example: In the later course of the illness, there may be a so-called "fluctuation". This leads to dyskinesia immediately after taking a high dose of L-dopa and to akinesia when the effect wears off.
- offer sufficient drinks.
- perform repeated mouthwashes.
- If necessary, the patient should refrain from smoking and eating spicy food. Both dry out the mouth additionally.
  If necessary, have the doctor prescribe a saliva substitute.
- carry out good skin care or instruct the patient to carry it out themselves.
- pay attention to thorough intimate hygiene. The skin is carefully dried.
- The hair is washed regularly. To prevent dandruff formation, a special medical hair care product is used if necessary
  Intertrigo prophylaxis is carried out 2 times a day
- On hot days, the patient should restrict sporting or physical activities
  and avoid direct sunlight.
- offer cutlery with thick handles and a bowl with a raised rim to maintain independence as long as possible.
- offer a spoon instead of a fork. It is easier to handle.
- allow sufficient time for eating.
- pay attention to the consistency of the food. They document which form of food causes the least amount of choking.

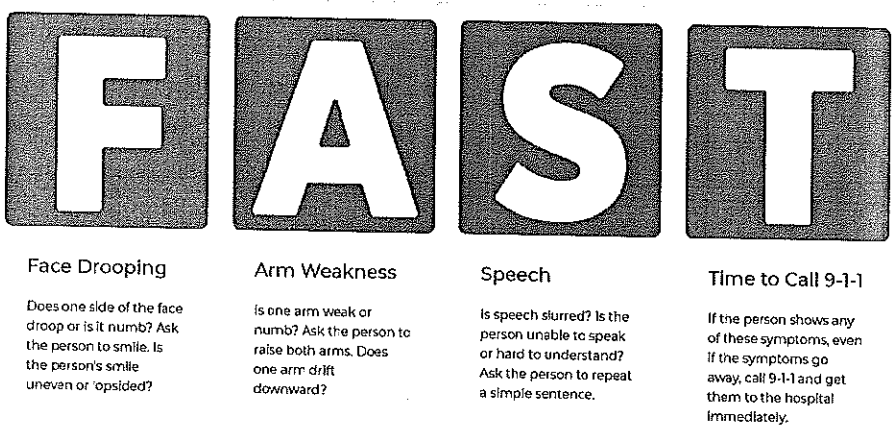
carry out thorough dental and oral hygiene after each meal. Food residues often remain in the oral cavity for a longer period of time and then attack the tooth substance.

- use cups with handles. They fill these only up to halfway to avoid spilling.
- always offer a served cup.
- may keep a dietary diary if the person concerned reports that he or she feels better or worse after eating certain foods.
- adjust the diet together with a nutritionist if necessary. A diet rich in calories and fluids is recommended. People with tremor need considerably more calories.
- Harder pastries can be dipped in coffee or tea. This makes it easier to bite off and swallow
- The patient is given the first dose of L-dopa three quarters of an hour before getting up. The nurses check and document whether this relieves early morning akinesia.
- advise the patient to use the mirror in the bathroom. This allows for better self-control.
- The patient should sit in front of the sink and support his or her elbows when washing, brushing teeth and shaving. This reduces tremor.
- suggest the purchase of an electric toothbrush. This has a thicker handle and carries out the brushing movements partly automatically.
- If necessary, the patient can dry himself/herself if a bathrobe is used instead of towels.
- do not put the resident under time pressure and stress. They leave him enough time.

Q.4. **What do you understand by "FAST" warning sign?**

By learning and sharing the F.A.S.T. warning signs, you just might save a life from stroke.

Use the letters in "F.A.S.T." to spot stroke signs and know when to call 1-0-8




Additional Symptoms of Stroke

- Sudden NUMBNESS or weakness of face, arm, or leg, especially on one side of the body
- Sudden CONFUSION, trouble speaking or understanding speech
- Sudden TROUBLE SEEING in one or both eyes
- Sudden TROUBLE WALKING, dizziness, loss of balance or coordination
- Sudden SEVERE HEADACHE with no known cause

## Section – C

04X06 = 24 Marks

Q.1. **Define multiple sclerosis. Explain the early sign of multiple sclerosis.**

**Definition**

Multiple sclerosis (MS) is a potentially disabling disease of the brain and spinal cord (central nervous system).

In MS, the immune system attacks the protective sheath (myelin) that covers nerve fibers and causes communication problems between the brain and the rest of the body. Eventually, the disease can cause permanent damage or deterioration of the nerves.

Signs and symptoms of MS vary widely and depend on the amount of nerve damage and which nerves are affected. Some people with severe MS may lose the ability to walk independently or at all, while others may experience long periods of remission without any new symptoms.

*1.1.1.1 Early signs of MS*

Some of the most common first symptoms are:

- Fatigue (a kind of exhaustion which is out of all proportion to the task undertaken)
- Stumbling more than before (indicating problems with balance or co-ordination in the legs)
- Unusual feelings in the skin (such as pins and needles, pain or numbness)
- Slowed thinking (resulting in forgetting things, poor concentration, or getting lost)
- Problems with eyesight (blurred or altered vision, or pain moving the eyes)
- There are other symptoms of MS but these are less commonly experienced early in the course of the condition.

*1.1.1.2 Invisible symptoms and effects of multiple sclerosis*

Fatigue, bladder and bowel problems, heat sensitivity, depression, memory problems, pain, sexual problems and sensitivity disorders are among the most common invisible symptoms and effects of multiple sclerosis.

***a. Fatigue (chronic tiredness)***

The often greatly reduced physical performance with abnormally rapid fatigue and exhaustion has an extremely stressful effect on everyday life. Nevertheless, it is possible that the environment does not perceive this burden at all or only insufficiently. A circumstance that can lead to a lack of understanding of the environment and increase the subjective burden.

***b. Bladder and bowel disorders***

Bladder emptying disorders are a common symptom of multiple sclerosis. It can lead to particularly frequent or very sudden urge to urinate and to urinary incontinence. In many cases, the bladder cannot be emptied completely. Urinary retention in the bladder can lead to urinary tract infections.

Constipation, which can also be a problem in healthy people of advanced age, is one of the most common symptoms of long-term illness. In rare cases, similar to bladder dysfunction, urge incontinence and complete faecal incontinence can occur.

***c. Heat Sensitivity***

Around 80 percent of people with multiple sclerosis are affected by the so-called "Uhthoff syndrome". This is mainly due to the fact that dysfunctions of pre-damaged nerves caused by external heat or increased body temperature occur more frequently than under normal temperature conditions. The symptoms can worsen fatigue and, in the worst case, manifest themselves as

temporary, complete paralysis, but always regress. The Uhthoff phenomenon can be controlled mainly with cooling measures and sport.

*d. Depression*

Depression can have very different individual causes and its manifestations are also varied. It is a common side effect of the constantly challenging confrontation with the MS disease and is usually easily treatable. Psychotherapy and specialist medical treatment are particularly helpful, often a combination of both.

*e. Thinking and memory problems*

Problems with thinking and memory are called cognitive problems. They might include forgetfulness, finding it hard to focus or concentrate, or a general sense of being too tired to think, known as cognitive fatigue. Also included in this category might be impulsiveness, trouble making decisions, or visuospatial problems where you find you are bumping into things or having trouble finding your way around.

Up to two-thirds of people with MS complain of memory problems as the disease progresses.

Neuropsychological testing can help determine whether the cognitive problems caused by MS are actually cognitive or whether depression is the cause of the concentration and memory problems. If the memory deficits can be objectified, tailor-made exercise programmes can help to train memory and attention and compensate for deficits in this way.

*f. Pain*

There are several fairly common MS symptoms that might involve pain of some kind. Most are temporary, but some can be more persistent. Some pain or altered skin sensations in MS are caused by nerve damage, but some might be due to poor posture or muscle spasms which put pressure on the body in some way. Nerve pain might take the form of trigeminal neuralgia, which is pain in the face that you might think is a sore tooth or earache. It might also be experienced as an uncomfortable squeezing sensation known as "the MS Hug", or shooting pains in the neck and back called Lhermitte's sign or Lhermitte phenomenon [1].

Q.2. **Define vascular dementia. Explain the mild and severe dementia.**

**Vascular dementia**

**Definition**

Vascular dementia is widely considered the second most common cause of dementia after Alzheimer's disease, accounting for 5% to 10% of cases. Many experts believe that vascular dementia remains underdiagnosed — like Alzheimer's disease — even though it's recognized as common.

In vascular dementias, nerve cells die as a result of circulatory disorders of the brain. The severity of the dementia depends on the extent of the circulatory disorder.

The most common variant of vascular dementia is caused by a thickening of the wall in small blood vessels that supply blood to the deep structures of the brain. High blood pressure is the most important risk factor. The vascular disease causes small infarcts and damage to nerve fibres.

A rarer form of vascular dementia is **multi-infarct dementia,** in which the brain is damaged by many small strokes. Multi-infarct dementia usually starts suddenly and usually progresses gradually. The symptoms of the disease are very similar to those of Alzheimer's disease, but physical disorders such as numbness or paralysis can also occur.

Vascular brain changes often coexist with changes linked to other types of dementia, including Alzheimer's disease and Lewy body dementia. Several studies have found that vascular changes and other brain abnormalities may interact in ways that increase the likelihood of dementia diagnosis

#### *1.1.1.3 Mild dementia*

In the early stages of the disease, impairments of short-term memory are of primary importance. The sick person cannot remember the content of conversations or cannot find objects that have been dropped. In addition, there are disturbances in planning and organizing thinking, word finding and orientation disorders.

The sick often experience consciously that they forget something. They are confused because other people claim things they cannot remember. This seems threatening to them and embarrassing situations occur more often. Depending on their personality structure, the patients react depressively, aggressively, defensively or with withdrawal. They try to maintain a "facade".

In this stage, the affected persons are largely independent in their everyday tasks. Only complicated activities, such as managing a bank account or using public transport, can only be carried out with help. The ability to make judgements and solve problems is limited, but not eliminated. For this reason, those affected at this stage of the disease must be involved in decisions regarding their treatment and care.

Symptoms may not be widely apparent at this stage, but family and close friends may take notice and a doctor would be able to identify symptoms using certain diagnostic tools.

#### *1.1.1.4 Severe dementia*

In the advanced stage there is a high degree of mental deterioration, the language is limited to a few words or dries up completely. Dementia patients are dependent on help for all the tasks of daily life. As a rule, control over the bladder and bowel as well as over posture is lost. Many can no longer walk without help, need a wheelchair or become bedridden. Stiffening of the limbs, swallowing disorders and seizures can occur.

The susceptibility to infections increases. Alzheimer's disease itself does not lead to death. The most common cause of death is an infectious disease.

At this stage, individuals may:

- Require around-the-clock assistance with daily personal care
- Lose awareness of recent experiences as well as of their surroundings.
- Experience changes in physical abilities, including walking, sitting and, eventually, swallowing
- Have difficulty communicating.
- Become vulnerable to infections, especially pneumonia.

The person living with Alzheimer's may not be able to initiate engagement as much during the late stage, but he or she can still benefit from interaction in ways that are appropriate, like listening to relaxing music or receiving reassurance through gentle touch. During this stage, caregivers may want to use support services, such as hospice care, which focus on providing comfort and dignity at the end of life. Hospice can be of great benefit to people in the final stages of Alzheimer's and other dementias and their families.

Q.3. **Define diabetes mellitus. Describe the causes, symptom, and management of diabetes mellitus.**

Diabetes mellitus is a chronic disease characterised by hyperglycaemia: excessive levels of glucose in the blood.

The condition results from insulin deficiency or insulin resistance. Insulin is the hormone produced by the **pancreas** that is essential for regulating **carbohydrate** and **fat metabolism** in the body.

**Risk factor for type 1st diabetes:** There are several modifiable and nonmodifiable risk factors for type 1st diabetes. The risk of type 1st diabetes increases from birth ad peaks between the ages of 10 and 14 years. On average, there appears to be little difference in risk between males and females however, although no studies have reported a higher incidence among females, some studies have reported a higher incidence for males (DIMOND Project Group, 2006).

All first degree relatives (including parents) of an individual diagnosed with type 1st diabetes are also at increased risk of the disease. For example, their siblings have a risk of developing type 1st diabetes of between 1 in 10 and 1 in 30, their parents of 1 in 34 and their offspring of 1 in 20 (Gregory et al., 2010). This suggests that there is a strong genetic component to type 1st diabetes, with several specific genes identified that increase susceptibility to the disease.

**Risk factors for type 2nd diabetes:** Mayer-Davis et al (2011) argue that an ecologic approach is useful for an understanding of the risk of type 2nd diabetes. Rather than tackling risk factors in isolation, this approach sees risk of disease emerging as a product of individuals interacting with their social, cultural and physical environment. Type 2nd diabetes is a complex disease, and multiple risk factors have been identified, many of which may be overlapping and interrelated.

***Nonmodifiable risk factors for type 2nd diabetes:***

These include:

- age
- family history
- genetic susceptibility
- ethnic origin

**Age:** historically, type 2nd diabetes was regarded as a disease of middle age, with most cases arising in people over the age of 40 years. However, there has been a worrying trend for increasing numbers of diagnosis in people younger than this, and even in children.

**Family history:** this is an important risk factor and reflects both genetic and environmental origins. Having a parent with diabetes may increase the risk of diabetes up to sixfold, with the higher estimates where the parent is the mother.

**Genetic susceptibility:** many gene variants confer susceptibility to type 2nd diabetes but the effect is relatively modest, and genetic screening is not warranted.

**Ethnic origin:** self- identified race and ethnicity also appear to be risk factors for type 2nd diabetes.

**Modifiable risk factors for type 2nd diabetes:**

This include:

- overweight and obesity
- low levels of physical activity

**Overweight and obesity:** The most important modifiable risk factor for type 2nd diabetes is excess body fat. Overall obesity and central obesity (as measured by **waist to hip ratio** or **waist circumference**) are strong, independent predictors of diabetes. With the prevalence of obesity estimated at over one quarter in many high income countries, overweight and obesity are implicated in 60% of all cases of diabetes.

Obesity leads to the development of insulin resistance and to dysfunction of the insulin-secreting beta cells in the pancreas, both of which are strong independent risk factors for type 2nd diabetes.

Weight management plays an essential role in reducing the risk of type 2nd diabetes. In terms of diet, there needs to be an emphasis on reduced total energy intake and also reduced intake of foods with high levels of fats, sugars and alcohol. Other dietary habits may also be important, independent of weight status. Diet characterised by high intake of red and processed meats, sweets, fried foods and refined grains may increase the risk of diabetes compared with diets with higher intake of fruit, vegetables, fish, poultry and whole grain. Similarly, reduced intake of fats (specially saturated fats), increased intake of whole grains and dietary fibre, increased intake of low- fat dairy products, and increased consumption of nuts, have all been associated with a reduced risk of diabetes.

**Low levels of physical activity:** With high proportion of the populations of high-income countries not meeting minimum physical activity recommendation for health, a sedentary lifestyle is another important modifiable risk factor for type 2nd diabetes.

The effect of physical activity on reducing the risk of type 2nd diabetes arises not only through weight management, but also through the favourable effect that physical activity confers on insulin sensitivity, glycaemic control, blood pressure, lipid profile, fibrinolysis, endothelial function and inflammatory defence systems.

**The metabolic syndrome:** the presence of the metabolic syndrome is a recognised risk factor for type 2nd diabetes, conferring at least a fivefold increased risk of developing the disease. **The International Diabetes Federation** states that a person to be defined as having the metabolic syndrome, they must have central obesity, together with at least two of the following four risk factors: raised triglycerides, reduced HDL cholesterol, raised blood pressure and raised fasting plasma glucose (international diabetes federation, 2006). Up to one-quarter of the world's population is thought to have the metabolic syndrome.

**Other suggested risk factors for type 2nd diabetes:** include smoking, dysfunctional sleep patterns and depression, although the direction of causality may be confounded by other known risk factors (such as obesity).

With increasing interest in a life course approach to risk, and drawing on baker's (1999) fetal origins hypothesis, there are several risk factors from early life that increase the risk of type 2nd diabetes. These include either small or large birth weight, exposure to diabetes in utero (with the mother having diabetes or gestational diabetes during pregnancy) and not be breastfed in early life.

**Management of diabetes and prevention of diabetic complications:**

Treatment of diabetes hinges on helping people with the condition to control their blood glucose levels and minimising their risk of developing complications over time. People with type 1st diabetes require treatment with **insulin** to control their glucose levels, whereas those with type 2nd diabetes may be able to manage their condition through **lifestyle management (diet and exercise)** or by using oral blood glucose control therapies.

**Care and management of diabetes of children and young people:**

Most people diagnosed with type 1st diabetes are under the age of 18 years. At diagnosis, children and young people should be offered a package of care from a multidisciplinary paediatric diabetes care team that includes expertise in clinical, educational, dietetic, lifestyle, mental health and foot care aspects of diabetes. They may be offered home based or inpatient care depending on

their particular circumstances. A structured programme of education should be offered at diagnosis that covers insulin therapy end delivery of insulin; self-monitoring of blood glucose; the effects of diet, physical activity and illness on glycaemic control; and the detection and management of hypoglycaemia.

**Type 1 Diabetes**

Type I Diabetes is found mostly in children and young adults. People with Type I Diabetes do not make enough insulin in their bodies and must have insulin shots every day to make sure they have enough insulin so that the food they eat can turn into energy.

**Symptoms of Type 1 Diabetes**

Someone may have Type 1 Diabetes if they have any of these symptoms and are a child or young adult:

- Urinate often
- Very thirsty or very hungry
- loss of weight
- Very tired or weak
- Blurred vision
- Trouble sleeping

**Type 2 Diabetes**

Type 2 Diabetes is found mostly in people over 45, but is showing up in younger patients because of unhealthy diets and lack of regular exercise. People with Type 2 Diabetes either cannot make enough insulin or cannot use the insulin they do make very well.

You are at risk for Type 2 Diabetes if you:

- Are older than 45 years of age
- Are overweight and/or do not exercise regularly
- Are related to someone with diabetes, such as a parent, brother or sister
- Gave birth to a baby that weighed 9 pounds or more or had gestational diabetes while pregnant

Are African American, Hispanic/Latino, Native American, Asian American or Pacific Islander

**Symptoms of Type 2 Diabetes**

- Any of the symptoms of Type 1 Diabetes (listed above)
- Dry mouth
- Cuts or bruises that heal slowly
- Tingling or numbness in hands or feet
- Skin, gum or bladder infections that keep coming back

**Gestational Diabetes**

Gestational Diabetes is when a pregnant woman, who has never had diabetes before, has high blood sugar levels during pregnancy. Gestational Diabetes can sometimes turn into Type 2 Diabetes.

### Pre-Diabetes

Before developing Type 2 Diabetes, most people have blood sugar levels that are higher than the normal range. This is called pre-diabetes because these higher blood sugar levels are a sign that you will develop Type 2 Diabetes if your blood sugar levels remain high.

**It is possible to prevent Type 2 Diabetes from developing by lowering your blood sugar levels.** Health care providers usually recommend getting to a healthy weight through a healthy diet and a moderate exercise program, like walking.

### How can I treat my Diabetes?

The most important thing you can do to treat your Diabetes is to check your blood sugar every day, and to keep your blood sugar in the normal range.

## How can I keep my blood sugar in the normal range?

### Eat a healthy diet

- Do eat 3 meals a day, at about the same time every day.
- Do eat a variety of healthy foods, including foods like whole grains, vegetables and fruits.
- Don't skip a meal.

### Take your medicine

- Oral medicines (taken by mouth) can make your body produce more insulin or help your body use the insulin it makes.
- Some people need to add insulin to their bodies. Insulin is injected with a needle.

### Avoid Low Blood Sugar

- Low blood sugar is from your blood having too much insulin, which won't happen if you are eating regular healthy meals, taking your medicine, and staying at a healthy weight with regular exercise.

## What lifestyle changes should I make?

### Quit smoking

- Smoking increases the risk of complications such as heart disease, stroke, and circulation issues.

### Maintain a healthy weight with exercise

- Keep a healthy weight. Your health care provider can tell you what a healthy weight is for your height and body type.
- Choose any activity you enjoy, and try to exercise 4 to 6 days a week for 30 minutes or longer.

### See your health care provider

- See your health care provider as scheduled and get an eye exam once a year.

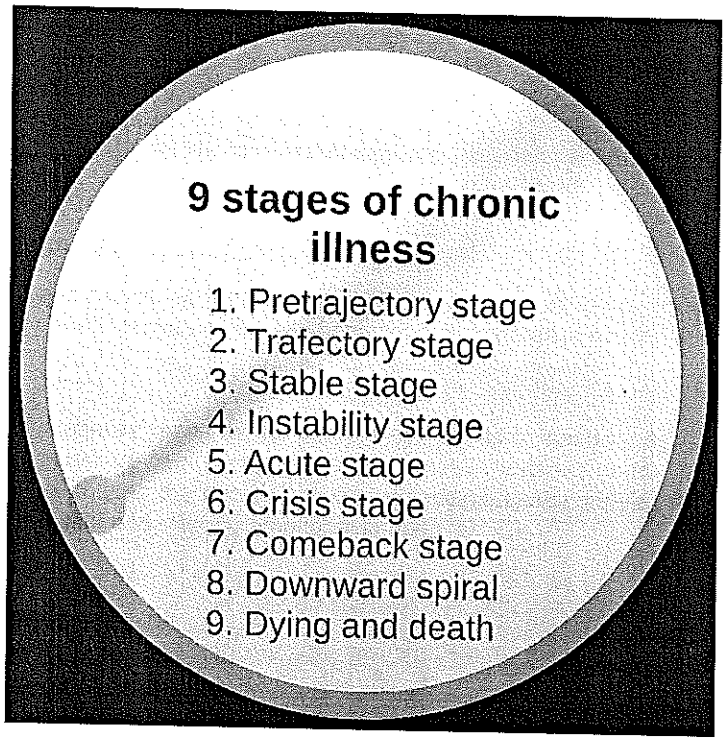
**Call your health care provider right away if you have any of these warning signs:**

- You start feeling very thirsty and are urinating more than usual
- You feel sick to your stomach or vomit more than once
- Your breathing becomes deeper and faster than usual
- Your breath smells sweet and/or you experience tingling around the mouth
- You feel uncoordinated, shaky, weak, drowsy, confused, dizzy, start to tremble, or see blurry or double.

Q.4. **Explain the stages of chronic illness.**

**Stages of chronic illness**

In the course of their studies, Corbin & Strauss have established that the courses of chronic diseases are very individual and different depending on the respective experiences of the persons affected, but have certain aspects in common. They have summarised these commonalities in the form of the description of 8 stages of the course of the disease.




The pre-trajectory stage

The pre-trajectory phase describes the stage at which the person is at risk for developing a chronic condition because of genetic factors or lifestyle behaviours that increase susceptibility to chronic illness.

The trajectory stage

The trajectory phase is characterized by the onset of symptoms or disability associated with a chronic condition. Since symptoms are being evaluated and diagnostic tests are performed, this phase is often accompanied by uncertainty as the person awaits a diagnosis. Nursing care often involves preparing patients for diagnostic tests and offering emotional support.

The stable stage

The stable phase of the trajectory indicates that symptoms and disability are being managed adequately. Although the patient is doing well, nursing care is still important at this time to reinforce positive behaviours and to offer ongoing monitoring.

The unstable stage

The unstable phase is characterized by an exacerbation of illness symptoms, development of complications, or re-activation of an illness in remission. During this phase, a per-son's everyday activities may be temporarily disrupted because symptoms are not well controlled. There may also be more diagnostic tests and a trial of new regimens until some degree of control over symptoms is achieved. During this time of uncertainty, patients look to nurses for guidance and support.

The acute stage

The acute phase is characterized by sudden onset of severe or unrelieved symptoms or complications that require hospitalization for their management. This phase may require major modification of the person's usual activities for a period of time. Nurses are intensely involved in the care of the chronically ill patient during this period, providing direct care and emotional support to the patient and family members.

The crisis stage

The crisis phase is characterized by a critical or life-threatening situation that requires emergency treatment or care. During this phase patients and their families depend upon the skill, knowledge, and support of nurses and other professionals to stabilize their conditions.

The comeback stage

The comeback phase is the period in the trajectory marked by recovery after an acute period. It includes learning to live with or to overcome disabilities and a return to an acceptable way of life within the limitations imposed by the chronic condition. Although aspects of care may shift to other health care providers during the rehabilitative phase, the role of nurses as organizers of care and collaborators in the recovery of patients is essential.

The downward stage

The downward phase marks the worsening of a condition. Symptoms and disability continue to progress despite attempts to gain some control through treatment and management regimens. A downward turn does not necessarily mean imminent death; the downward trend can be arrested and an illness restabilized. Nurses working in clinics and physicians' offices can play an important role in helping patients understand and come to terms with what is happening to them.

The dying stage

The dying phase is characterized by the gradual or rapid decline in the trajectory despite efforts to halt the disorder or slow the decline through illness management; it is characterized by failure of life-maintaining body functions.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 5th Semester,**

**End-Sem. Examination**

**Course Code: SHP1505** **Time: 2 Hours**

**Course Name: Home & Chronic Care** **Max. Marks: 50**

**Instruction:**

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

## Section – A

10X01 = 10 Marks

Q.1. **Which activities would best meet the diversional needs of a client who markedly impaired with Alzheimer disease?**

a) Playing a simple card game
b) Singing familiar disease
c) Working with play dough
d) Putting a puzzle together

Q.2. **Other name for Type I diabetes mellitus is:**

a) Juvenile diabetes
b) Adult-onset diabetes mellitus
c) Gestational diabetes
d) DM with infection

Q.3. **The nurse is teaching a client to self – administer insulin. The instruction should include teaching the client to:**

a) Inject the needle at a 45° angle into the muscle
b) Rotate injection site
c) Vigorously massage the area after injection
d) All of above

Q.4. **Multiple sclerosis is characterized by:**

a) Impaired cerebral circulation
b) Progressive demyelisation of CNS
c) Deficiency of the neurotransmitter dopamine
d) Deterioration of the spinal column

Q.5. **The home care nurse visits a client recently diagnosed with diabetes mellitus who is taking humalin NPH insulin daily. The client asks the nurse how to store the unopened vials of insulin. The nurse should tell the client to take which action?**

a) Store the insulin in a dark, dry place
b) Freeze the insulin
c) Keep the insulin at room temperature
d) Refrigerate the insulin

Q.6. **Which of the following is the earliest sign of dementia?**

a) Speech disorder
b) Loss of attention
c) Memory slips
d) Visual perception problems

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Q.7. **The development of multiple cognitive deficits manifested by memory impairment and cognitive disturbance would indicate which diagnosis?**

a) Delirium

b) Asperger's syndrome

c) Dementia

d) Schizophrenia

Q.8. **Which stage of the trajectory work model does the patient require emergency treatment?**

a) Acute stage

b) Crises stage

c) Comeback stage

d) Downward stage

Q.9. **All the following are included in diabetic teaching plan except:**

a) Change position frequently to increase circulation

b) Inspect feet and legs daily for any changes

c) Keep the unused insulin in the refrigerator

d) Keep legs elevated on 2 pillows while sleeping

Q.10. **The term "Health" is defined in many ways. The most accurate definition of the health would be:**

a) Health is a state of complete, mental and social well – being

b) Health is the state of body and mind in a balanced condition

c) Health is the reflection of smiling face

d) Health is the symbol of economic prosperity

## Section – B

04X04 = 16 Marks

Q.1. Describe the sense of coherence.

Q.2. Define diabetes mellitus. Difference between the type 1st and type 2nd diabetes mellitus.

Q.3. Write down the pathophysiology of multiple sclerosis.

Q.4. What do you understand by moderate dementia?

## Section – C

04X06 = 24 Marks

Q.1. Define multiple sclerosis. Explain the eight sign and symptom of sclerosis.

Q.2. Define Aizheimer dementia. Write down the four causes, symptom of multiple sclerosis.

Q.3. Describe the management of diabetes mellitus.

Q.4. Explain the stages of chronic illness.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

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## Section – B

04X04 = 16 Marks

Q.1. Describe the sense of coherence.

The sense of coherence

A term closely related to salutogenesis is the sense of coherence. It was coined by Antonovsky and means a feeling of belonging and a deep inner satisfaction with oneself and others.

Three components are important for the feeling of coherence:

Comprehensibility (ability to analyse the situation for its causes.

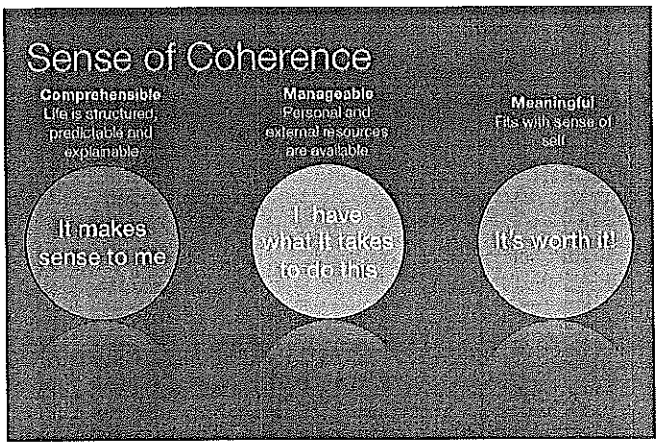
The ability to make connections between the events that life provides. a belief that things happen in an orderly and predictable fashion and a sense that you can understand events in your life and reasonably predict what will happen in the future.)

Manageability

This expresses the degree to which people are convinced that they can overcome challenges and problems with the available resources. Knowledge of your own resources. The ability to deal with events. A belief that you have the skills or ability, the support, the help, or the resources necessary to take care of things, and that things are manageable and within your control.

Meaningfulness

Looking behind the meaningfulness of life processes leads people to believe that their actions have a value regardless of the outcome. Meaningfulness of a coping attempt. The belief that all events have a meaning. This conviction makes it easier to accept what has happened. A belief that things in life are interesting and a source of satisfaction, that things are really worthwhile and that there is good reason or purpose to care about what happens.




Antonovsky postulated that the sense of coherence in adulthood is so developed that it can no longer be changed. More recent views turn against this statement. They assume that a change and thus a positive effect on health is possible.

Q.2. Define diabetes mellitus. Difference between the type of 1st and type 2nd diabetes mellitus.

Diabetes mellitus (DM), commonly known as just diabetes, is a **group of metabolic disorders** characterized by a high blood sugar level over a prolonged period of time. Symptoms often include frequent urination, increased thirst and increased appetite.

**Type 1st diabetes:** Type 1st diabetes accounts for around 10% of all cases of diabetes. It is a progressive autoimmune disease, in which insulin- producing beta cells in the pancreas are gradually destroyed, resulting in insulin deficiency.

**Type 2nd diabetes:** It is the most common form of diabetes and is the result of abnormalities in insulin secretion, together with insulin resistance, when the insulin that is produced by the body is not effective. Previously known as adult-onset diabetes, it is associated with **obesity** and a **sedentary lifestyle**, usually presents over the age of 40 years and does not necessarily require treatment with insulin (World Health Organization, 1999).

**Gestational diabetes:** It is defined as glucose intolerance first diagnosed during pregnancy. Although most women return to normal glucose tolerance after delivery, they are at high risk of developing type 2 diabetes in later life (American Diabetes Association, 2003a).

**Other, less common, forms of diabetes:**

Include various forms of maturity onset diabetes of the young, where there is mutation in a single gene, secondary diabetes associated with conditions such as chronic pancreatitis and cystic fibrosis, diabetes associated with other genetic syndromes, and drug or toxin induced diabetes.

***Impaired glucose tolerance(IGT) and impaired fasting glucose (IFG)*** represent two other stats of intermediate hyperglycaemia that are not normal, but neither are they diagnostic of diabetes. The term ***prediabetes*** is also used to refer to intermediate ***hyperglycaemia***. **IGT** and **IFG** are associated, either alone or in combination, with varying increased risk of diabetes.

**Epidemiology of diabetes:** Incidence and prevalence are commonly used measures of disease frequency in a population. The incidence of a disease is the number of new cases arising in the population during a defined period of time. The prevalence of a disease refers to the total number of existing cases of disease in the population.

**Incidence and prevalence of type 1st diabetes:** Over 70,000 children in the world develop type 1st diabetes every year, with the majority of case arising in young people under the age of 15 years. In the **United Kingdom**, around 2000 children are diagnosed with type 1st diabetes annually. The incidence of type 1st diabetes internationally varies markedly, but the highest incidence appears to occur in Caucasian or European populations. The DIAMOND study used standardised criteria to determine the

age- standardised incidence of type 1st diabetes in 50 countries between 1990 and 1994 and found that it ranged from 0.1/100,000 per year in china and Venezuela to > 36/1000,000 per year in the United Kingdom and Finland (DIMOND project group, 2006).

There are around 400,000 people with type 1st diabetes in the United Kingdom with approximately 1 in every 700-1000 children affected.

**Incidence and prevalence of type 2nd diabetes:** The global increasing of type 2nd diabetes is now well recognised and has become a major public health concern. It is driven by the obesity epidemic and, coupled with the effects of ageing population, is also causing a worldwide increase in diabetes prevalence.

According to IDF Diabetes Atlas (international diabetes federation, 2013a), 382 million adults now have diabetes, compared with 171 million in 2000 (wild et al., 2004). This equates to over 8% of all adults. Although the prevalence in high-income countries is still higher than in countries with developing economies. Currently 80% people with diabetes live in developing countries.

In 2012, there were approximately 3,400,000 people with type 2nd diabetes in the United Kingdom, giving an overall prevalence of around 5%, but this varies by region and population group. Prevalence increases with age. For example, prevalence in England (including people with type 1st or type 2nd diabetes) ranges from around 2% in people less than 35 years of age to over 15% in men over 65 years, and over 12% in women of this age (Diabetes UK, 2012a).

**Risk factor for type 1st diabetes:** There are several modifiable and nonmodifiable risk factors for type 1st diabetes. The risk of type 1st diabetes increases from birth ad peaks between the ages of 10 and 14 years. On average, there appears to be little difference in risk between males and females however, although no studies have reported a higher incidence among females, some studies have reported a higher incidence for males (DIMOND Project Group, 2006).

All first degree relatives (including parents) of an individual diagnosed with type 1st diabetes are also at increased risk of the disease. For example, their siblings have a risk of developing type 1st diabetes of between 1 in 10 and 1 in 30, their parents of 1 in 34 and their offspring of 1 in 20 (Gregory et al., 2010). This suggests that there is a strong genetic component to type 1st diabetes, with several specific genes identified that increase susceptibility to the disease.

**Risk factors for type 2nd diabetes:** Mayer-Davis et al (2011) argue that an ecologic approach is useful for an understanding of the risk of type 2nd diabetes. Rather than tackling risk factors in isolation, this approach sees risk of disease emerging as a product of individuals interacting with their social, cultural and physical environment. Type 2nd diabetes is a complex disease, and multiple risk factors have been identified, many of which may be overlapping and interrelated.

***Nonmodifiable risk factors for type 2nd diabetes:***

These include:

- age
- family history
- genetic susceptibility
- ethnic origin

**Age:** historically, type 2nd diabetes was regarded as a disease of middle age, with most cases arising in people over the age of 40 years. However, there has been a worrying trend for increasing numbers of diagnosis in people younger than this, and even in children.

**Family history:** this is an important risk factor and reflects both genetic and environmental origins. Having a parent with diabetes may increase the risk of diabetes up to sixfold, with the higher estimates where the parent is the mother.

**Genetic susceptibility:** many gene variants confer susceptibility to type 2nd diabetes but the effect is relatively modest, and genetic screening is not warranted.

**Ethnic origin:** self- identified race and ethnicity also appear to be risk factors for type 2nd diabetes.

**Modifiable risk factors for type 2nd diabetes:**

This include:

- overweight and obesity
- low levels of physical activity

**Overweight and obesity:** The most important modifiable risk factor for type 2nd diabetes is excess body fat. Overall obesity and central obesity (as measured by **waist to hip ratio** or **waist circumference**) are strong, independent predictors of diabetes. With the prevalence of obesity estimated at over one quarter in many high income countries, overweight and obesity are implicated in 60% of all cases of diabetes.

Obesity leads to the development of insulin resistance and to dysfunction of the insulin-secreting beta cells in the pancreas, both of which are strong independent risk factors for type 2nd diabetes.

Weight management plays an essential role in reducing the risk of type 2nd diabetes. In terms of diet, there needs to be an emphasis on reduced total energy intake and also reduced intake of foods with high levels of fats, sugars and alcohol. Other dietary habits may also be important, independent of weight status. Diet characterised by high intake of red and processed meats, sweets, fried foods and refined grains may increase the risk of diabetes compared with diets with higher intake of fruit, vegetables, fish, poultry and whole grain. Similarly, reduced intake of fats (specially saturated fats), increased intake of whole grains and dietary fibre, increased intake of low- fat dairy products, and increased consumption of nuts, have all been associated with a reduced risk of diabetes.

**Low levels of physical activity:** With high proportion of the populations of high-income countries not meeting minimum physical activity recommendation for health, a sedentary lifestyle is another important modifiable risk factor for type 2nd diabetes.

The effect of physical activity on reducing the risk of type 2nd diabetes arises not only through weight management, but also through the favourable effect that physical activity confers on insulin sensitivity, glycaemic control, blood pressure, lipid profile, fibrinolysis, endothelial function and inflammatory defence systems.

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With increasing interest in a life course approach to risk, and drawing on baker's (1999) fetal origins hypothesis, there are several risk factors from early life that increase the risk of type 2nd diabetes. These include either small or large birth weight, exposure to diabetes in utero (with the mother having diabetes or gestational diabetes during pregnancy) and not be breastfed in early life.

Q.3. Write down the pathophysiology of multiple sclerosis.

Pathogenesis

In multiple sclerosis, the protective coating on nerve fibers (myelin) in the central nervous system is damaged. This creates a lesion that, depending on the location in the central nervous system, may cause symptoms such as numbness, pain or tingling in parts of the body.

The main feature of the disease is inflammation scattered in the brain and sometimes also in the spinal cord, caused by the body's own defence cells attacking the myelin sheaths of the nerves. The destruction of these myelin sheaths and the swelling caused by the inflammation reduces the conductivity of the nerve cells.

Q.4. What do you understand by moderate dementia?

*Moderate dementia*

The limitations of memory, thinking ability and orientation ability gradually increase and reach a degree that no longer allows independent living. Those affected increasingly need help with simple tasks of daily life such as shopping, preparing meals, operating household appliances or personal hygiene. Many sufferers can no longer form complete sentences and are therefore difficult to understand. Memories of events long ago also fade. They no longer remember who they married or what profession they had, what their children's names are or how old they are.

The perception of their own illness is also largely lost. It can happen that the ill person feels as if he or she were in the best of adulthood, looking for their long dead parents or wanting to go to work. Furthermore, pronounced changes in behaviour can also occur. They are particularly stressful for the relatives. The most frequent is a high degree of restlessness. People with dementia walk restlessly up and down the street, running after their caregivers, constantly asking the same questions or wanting to leave the apartment all the time. Many patients also show irritable and aggressive behaviour. Delusional fears or convictions, such as being robbed, cheated or deported, are not uncommon.

Symptoms, which vary from person to person, may include:

- Being forgetful of events or personal history.
- Feeling moody or withdrawn, especially in socially or mentally challenging situations.
- Being unable to recall information about themselves like their address or telephone number, and the high school or college they attended.
- Experiencing confusion about where they are or what day it is.
- Requiring help choosing proper clothing for the season or the occasion.
- Having trouble controlling their bladder and bowels.
- Experiencing changes in sleep patterns, such as sleeping during the day and becoming restless at night.
- Showing an increased tendency to wander and become lost.
- Demonstrating personality and behavioural changes, including suspiciousness and delusions or compulsive, repetitive behaviour like hand-wringing or tissue shredding.

## Section – C

04X06 = 24 Marks

Q.1. Define multiple sclerosis. Explain the eight sign and symptom of sclerosis.

Definition

Multiple sclerosis (MS) is a potentially disabling disease of the brain and spinal cord (central nervous system).

In MS, the immune system attacks the protective sheath (myelin) that covers nerve fibers and causes communication problems between the brain and the rest of the body. Eventually, the disease can cause permanent damage or deterioration of the nerves.

Signs and symptoms of MS vary widely and depend on the amount of nerve damage and which nerves are affected. Some people with severe MS may lose the ability to walk independently or at all, while others may experience long periods of remission without any new symptoms.

***Invisible symptoms and effects of multiple sclerosis***

Fatigue, bladder and bowel problems, heat sensitivity, depression, memory problems, pain, sexual problems and sensitivity disorders are among the most common invisible symptoms and effects of multiple sclerosis.


a. ***Fatigue (chronic tiredness)***

The often greatly reduced physical performance with abnormally rapid fatigue and exhaustion has an extremely stressful effect on everyday life. Nevertheless, it is possible that the environment does not perceive this burden at all or only insufficiently. A circumstance that can lead to a lack of understanding of the environment and increase the subjective burden.

b. ***Bladder and bowel disorders***

Bladder emptying disorders are a common symptom of multiple sclerosis. It can lead to particularly frequent or very sudden urge to urinate and to urinary incontinence. In many cases, the bladder cannot be emptied completely. Urinary retention in the bladder can lead to urinary tract infections.

Constipation, which can also be a problem in healthy people of advanced age, is one of the most common symptoms of long-term illness. In rare cases, similar to bladder dysfunction, urge incontinence and complete faecal incontinence can occur.

c. ***Heat Sensitivity***

Around 80 percent of people with multiple sclerosis are affected by the so-called "Uhthoff syndrome". This is mainly due to the fact that dysfunctions of pre-damaged nerves caused by external heat or increased body temperature occur more frequently than under normal temperature conditions. The symptoms can worsen fatigue and, in the worst case, manifest themselves as temporary, complete paralysis, but always regress. The Uhthoff phenomenon can be controlled mainly with cooling measures and sport.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

**The Uhthoff Phenomenon**[1]

The Uhthoff phenomenon - a temporary worsening of typical symptoms of multiple sclerosis or general performance under the influence of heat or elevated body temperature - can be controlled mainly with cooling measures and sport.

About 80 percent of people with multiple sclerosis are affected by the so-called "Uhthoff syndrome". This is mainly due to the fact that dysfunctions of pre-damaged nerves caused by external heat or increased body temperature occur more frequently than under normal temperature conditions.

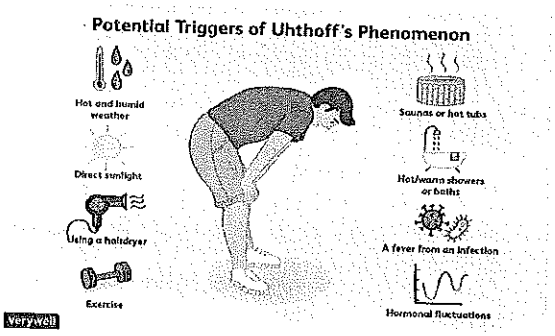
What helps?

Active cooling and avoiding triggers of the Uhthoff phenomenon can help to alleviate symptoms. It is also advisable to stay in cooled rooms. It is advisable to drink a lot - especially cool drinks or small sips of an ice-cold drink. Fruit such as apples, pineapple and melon also have a cooling effect.

If you are physically fit, you can cheat Uhthoff syndrome. Regular physical activity with sports like swimming is particularly recommended.

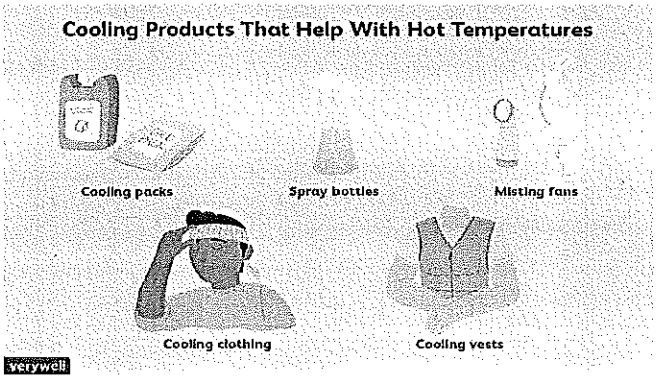
Cooling clothing such as cooling wristbands, cooling waistcoats or a functional shirt cooled in the freezer can also supplement other symptomatic and disease-modifying treatment approaches.

If the symptoms persist for more than 24 hours, it may be a relapse.




Some examples of cooling strategies that may be helpful include:

- To drink cold water throughout the day, especially during the hot summer months.
- To carry a portable fan in the purse or backpack in case of getting into a situation where you're too hot.
- To apply a cold washcloth to the wrists or neck when you feel like the body is getting warm.
- To wear a hat and stay in the shade on warm, sunny days, or stay in an air-conditioned area.
- To wear loose, breathable clothing, like cotton.
- To sit by an open window or fan.
- To suck on ice cubes or a popsicle.
- To mist the face and clothes with water periodically.
- To take cool showers or baths.
- To try a cooling pillow for sleeping.




### *d. Depression*

Depression can have very different individual causes and its manifestations are also varied. It is a common side effect of the constantly challenging confrontation with the MS disease and is usually easily treatable. Psychotherapy and specialist medical treatment are particularly helpful, often a combination of both.

### *e. Thinking and memory problems*

Problems with thinking and memory are called cognitive problems. They might include forgetfulness, finding it hard to focus or concentrate, or a general sense of being too tired to think, known as cognitive fatigue. Also included in this category might be impulsiveness, trouble making decisions, or visuospatial problems where you find you are bumping into things or having trouble finding your way around.

Up to two-thirds of people with MS complain of memory problems as the disease progresses.

Neuropsychological testing can help determine whether the cognitive problems caused by MS are actually cognitive or whether depression is the cause of the concentration and memory problems. If the memory deficits can be objectified, tailor-made exercise programmes can help to train memory and attention and compensate for deficits in this way.

### *f. Pain*

There are several fairly common MS symptoms that might involve pain of some kind. Most are temporary, but some can be more persistent. Some pain or altered skin sensations in MS are caused by nerve damage, but some might be due to poor posture or muscle spasms which put pressure on the body in some way. Nerve pain might take the form of trigeminal neuralgia, which is pain in the face that you might think is a sore tooth or earache. It might also be experienced as an uncomfortable squeezing sensation known as "the MS Hug", or shooting pains in the neck and back called Lhermitte's sign or Lhermitte phenomenon [2].

a. You'll find further information for the "MS Hug" in chapter 3.2.7. The MS Hug - girdle-band sensation

The symptoms of MS usually correspond to the damaged areas of the brain and spinal cord, although this is not the case for all symptoms.

Symptoms like muscle stiffness and bladder problems are related to nerve damage in the spinal cord, while loss of balance or dizziness is caused by damage to an area in the back of the brain, the cerebellum, which controls movement, balance and posture.

Other symptoms, such as fatigue, are not associated with a specific area of damage in the brain or spine. Instead, fatigue is thought to be caused by nerve messages from the brain and spinal cord having to cope with and avoid the areas of damage caused by MS. As a result, the body needs more energy to send and transmit these messages to other parts of the body, such as the muscles in the arms and legs, which leads to increased fatigue.

Pain associated with multiple sclerosis can be divided into the following categories:

- Pain as a direct consequence of MS

for example, pain in eye movement due to inflammation of the optic nerve, trigeminal neuralgia or painful sensations in the skin

- Pain as an indirect consequence of MS

for example, bladder pain in the case of frequent urinary tract infections or joint pain in the case of long bad posture due to spasticity

- Pain as a result of injection of interferon-beta and glatiramer acetate

For example, muscle pain after interferon administration or pain at the injection site

Pain can also occur independently of multiple sclerosis and should be clarified accordingly.

*g. Mood and emotions issues*

People with MS often find that their mood or emotions are affected, and they notice symptoms of anxiety or depression. This may be partly due to stress about having a long term condition like MS, but it might also be caused directly by damage in the brain. Less commonly, some people with MS find that they are expressing emotion in an unusual way, perhaps by laughing or crying at inappropriate times. This is called pseudobulbar affect, and is a rarer symptom of MS.

*h. Sexual problems*

Multiple sclerosis can affect your sex life. For example, changes in the nervous system can affect sexual response and/or sexual sensation. Physical changes during the course of the disease can also indirectly affect sexual sensation and sexual functions. In addition, effects caused by the disease can have an impact on the psyche and social life, which in turn can have a negative impact on sexuality.

Both men and women can sometimes find that MS can affect their participation in and enjoyment of sex. Nerve damage associated with the genital area can affect skin sensations and erectile tissue. Muscle spasms or pain can also interfere with sex.

***i. Sensitivity disorders***

Numbness and tingling are among the most common symptoms of MS. The sensations (paresthesias) can manifest themselves in many different ways - for example as formication, "like cotton wool between the fingers", or as burning sensations. There is also a sensation of cold or a feeling "as if a belt were placed around the chest" (the MS Hug).

***Common MS symptoms***

The symptoms experienced by people with MS can be grouped according to how they affect you. Some people develop lesions (nerve damage) without noticing symptoms, because the damage happens to be in a part of the brain or spinal cord which can re-route nerve signals around the damage.

Sometimes, symptoms can be caused by nerve damage within the part of the brain that deals with that part of the body. Alternatively, the nerve damage could have occurred in a nerve carrying information from the brain to the body. Damage at either of these places might result in a similar symptom. For example, a lesion in the spinal cord leading to the leg muscles or a lesion in the cerebellum part of the brain (which organises co-ordination and balance) could both result in you finding yourself stumbling or falling over.

### *j. Balance and coordination*

Movement disorders occur in about 90% of those affected. They mainly originate in the spinal cord and can affect the leg and (less frequently) arm muscles. If the nerves are more severely damaged, feelings of heaviness and weakness in the limbs or paralysis occur.

Balance and coordination problems are common in MS because the brain regions that organise these abilities are often affected by nerve damage. People can experience this as dizziness, tremors or shaking, or have difficulty holding themselves or a part of their body in certain positions. The medical term for coordination problems is **ataxia**.

- *Spasticity*

A change in muscle tension and stiffness, especially in the leg muscles, is called spasticity and is a common symptom of multiple sclerosis, although it occurs less at the beginning than in the later course of the disease. Severe spasticity can lead to spasmodic, painful muscle contractions and greatly affects the quality of life.

- *Tremor*

Tremor is the technical term for rhythmic involuntary trembling or muscle twitching of the limbs. This is often accompanied by balance and coordination problems. As with ataxia (a movement coordination disorder), this is usually caused by inflammation in the cerebellum. In many cases, a combination of the various movement disorders occurs.

### *k. Hearing issues*

Occasionally, people with MS develop hearing problems when there is nothing wrong with their ears. The problem is with the part of the brain that interprets the sound we hear.

### *l. Sleep issues*

Problems with sleep are fairly common in MS. People might have trouble dropping off or staying asleep, or feel that their sleep is not refreshing. Some sleep issues might be directly caused by nerve damage, but other MS symptoms, like spasms, pain or nocturia (needing to urinate in the night) can also interfere with the sleep. Poor sleep can impact on other symptoms, particularly fatigue and problems with thinking and memory.

### *m. Speech and swallowing issues*

Nerve damage in the parts of the brain responsible for language or co-ordinating the muscles of the mouth and throat can both lead to problems with speaking. People might stumble over words, or have trouble remembering the right word at the right time. Weakness and lack of co-ordination in the mouth, tongue and throat muscles can make swallowing difficult or less effective, leading to a risk of choking

### *n. Vision issues*

Vision problems are often the first sign of MS.

They can be caused by inflammation of the optic nerve (optic neuritis). If the inflammation is behind the eyeball, it is called retrobulbar neuritis. Sudden blurred vision, veils, up to and including acute vision loss can be the consequences of the inflammation. However, optic neuritis does not necessarily mean that MS is diagnosed; in about 30% of all cases there is no further relapse.

Optic neuritis is a common early symptom, and can also occur during a relapse. It might involve feeling pain when moving the eyes, or having blurred vision, or double vision. Some people with MS might experience eye tremors, known as nystagmus, or problems interpreting the visual information from their eyes.

### *o. Walking difficulties*

Many MS symptoms can eventually affect the walking and mobility. General weakness and fatigue can make walking harder, but muscle spasticity or foot drop can also lead to stumbling or unsteadiness. If the balance and co-ordination are affected by MS, people might notice it particularly when they walk.

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Q.2. Define Alzheimer dementia. Write down the four causes, symptom and intervention of Alzheimer dementia.

A progressive disease that destroys memory and other important mental functions.

Brain cell connections and the cells themselves degenerate and die, eventually destroying memory and other important mental functions.

Memory loss and confusion are the main symptoms.

No cure exists, but medication and management strategies may temporarily improve symptoms.

Typical features of Alzheimer's dementia

most frequent form of dementia

gradual loss of cognitive abilities over the years

without untimely onset

without much variation in course

without indication of stroke victims

neurological examinations are initially normal

only in the late stage of stiffening posture, epileptic seizures, swallowing disorders

Risk factors for Alzheimer's dementia

advanced age

Inheritance

vascular risk factors (diabetes, high blood pressure, poor blood lipid levels, smoking, etc.)

Gender (not confirmed)

severe head injury

**Use of stimulants (alcohol, nicotine, illegal substances)**

**History of depression**

chronic stress

dapting the living situation to the needs of a person with Alzheimer's disease is an important part of any treatment plan. For someone with Alzheimer's, establishing and strengthening routine habits and minimizing memory-demanding tasks can make life much easier.

You can take these steps to support a person's sense of well-being and continued ability to function:

Always keep keys, wallets, mobile phones and other valuables in the same place at home, so they don't become lost.

Keep medications in a secure location. Use a daily checklist to keep track of dosages.

Arrange for finances to be on automatic payment and automatic deposit.

Have the person with Alzheimer's carry a mobile phone with location capability so that a caregiver can track its location. Program important phone numbers into the phone.

Install alarm sensors on doors and windows.

Make sure regular appointments are on the same day at the same time as much as possible.

Use a calendar or whiteboard in the home to track daily schedules. Build the habit of checking off completed items.

Remove excess furniture, clutter and throw rugs.

Install sturdy handrails on stairways and in bathrooms.

Ensure that shoes and slippers are comfortable and provide good traction.

Reduce the number of mirrors. People with Alzheimer's may find images in mirrors confusing or frightening.

Make sure that the person with Alzheimer's carries identification or wears a medical alert bracelet.

Keep photographs and other meaningful objects around the house.

Q.3. Describe the management of diabetes mellitus.

**Management of diabetes and prevention of diabetic complications:**

Treatment of diabetes hinges on helping people with the condition to control their blood glucose levels and minimising their risk of developing complications over time. People with type 1st diabetes require treatment with insulin to control their glucose levels, whereas those with type 2nd diabetes may be able to manage their condition through lifestyle management (diet and exercise) or by using oral blood glucose control therapies.

Care and management of diabetes of children and young people:

Most people diagnosed with type 1st diabetes are under the age of 18 years. At diagnosis, children and young people should be offered a package of care from a multidisciplinary paediatric diabetes care team that includes expertise in clinical, educational, dietetic, lifestyle, mental health and foot care aspects of diabetes. They may be offered home based or inpatient care depending on their particular circumstances. A structured programme of education should be offered at diagnosis that covers insulin therapy end delivery of insulin; self-monitoring of blood glucose; the effects of diet, physical activity and illness on glycaemic control; and the detection and management of hypoglycaemia.

Type 1 Diabetes

Type I Diabetes is found mostly in children and young adults. People with Type I Diabetes do not make enough insulin in their bodies and must have insulin shots every day to make sure they have enough insulin so that the food they eat can turn into energy.

Symptoms of Type 1 Diabetes

Someone may have Type 1 Diabetes if they have any of these symptoms and are a child or young adult:

Urinate often

Very thirsty or very hungry

loss of weight

Very tired or weak

Blurred vision

Trouble sleeping

Type 2 Diabetes

Type 2 Diabetes is found mostly in people over 45, but is showing up in younger patients because of unhealthy diets and lack of regular exercise. People with Type 2 Diabetes either cannot make enough insulin or cannot use the insulin they do make very well.

You are at risk for Type 2 Diabetes if you:

Are older than 45 years of age

Are overweight and/or do not exercise regularly

Are related to someone with diabetes, such as a parent, brother or sister

Gave birth to a baby that weighed 9 pounds or more or had gestational diabetes while pregnant

Are African American, Hispanic/Latino, Native American, Asian American or Pacific Islander

Symptoms of Type 2 Diabetes

Any of the symptoms of Type 1 Diabetes (listed above)

Dry mouth

Cuts or bruises that heal slowly

Tingling or numbness in hands or feet

Skin, gum or bladder infections that keep coming back

Gestational Diabetes

Gestational Diabetes is when a pregnant woman, who has never had diabetes before, has high blood sugar levels during pregnancy. Gestational Diabetes can sometimes turn into Type 2 Diabetes.

Pre-Diabetes

Before developing Type 2 Diabetes, most people have blood sugar levels that are higher than the normal range. This is called pre-diabetes because these higher blood sugar levels are a sign that you will develop Type 2 Diabetes if your blood sugar levels remain high.

It is possible to prevent Type 2 Diabetes from developing by lowering your blood sugar levels. Health care providers usually recommend getting to a healthy weight through a healthy diet and a moderate exercise program, like walking.

How can I treat my Diabetes?

The most important thing you can do to treat your Diabetes is to check your blood sugar every day, and to keep your blood sugar in the normal range.

How can I keep my blood sugar in the normal range?

Eat a healthy diet

Do eat 3 meals a day, at about the same time every day.

Do eat a variety of healthy foods, including foods like whole grains, vegetables and fruits.

Don't skip a meal.

Take your medicine

Oral medicines (taken by mouth) can make your body produce more insulin or help your body use the insulin it makes.

Some people need to add insulin to their bodies. Insulin is injected with a needle.

Avoid Low Blood Sugar

Low blood sugar is from your blood having too much insulin, which won't happen if you are eating regular healthy meals, taking your medicine, and staying at a healthy weight with regular exercise.

What lifestyle changes should I make?

Quit smoking

Smoking increases the risk of complications such as heart disease, stroke, and circulation issues.

Maintain a healthy weight with exercise

Keep a healthy weight. Your health care provider can tell you what a healthy weight is for your height and body type.

Choose any activity you enjoy, and try to exercise 4 to 6 days a week for 30 minutes or longer.

See your health care provider

See your health care provider as scheduled and get an eye exam once a year..

Call your health care provider right away if you have any of these warning signs:

You start feeling very thirsty and are urinating more than usual

You feel sick to your stomach or vomit more than once

Your breathing becomes deeper and faster than usual

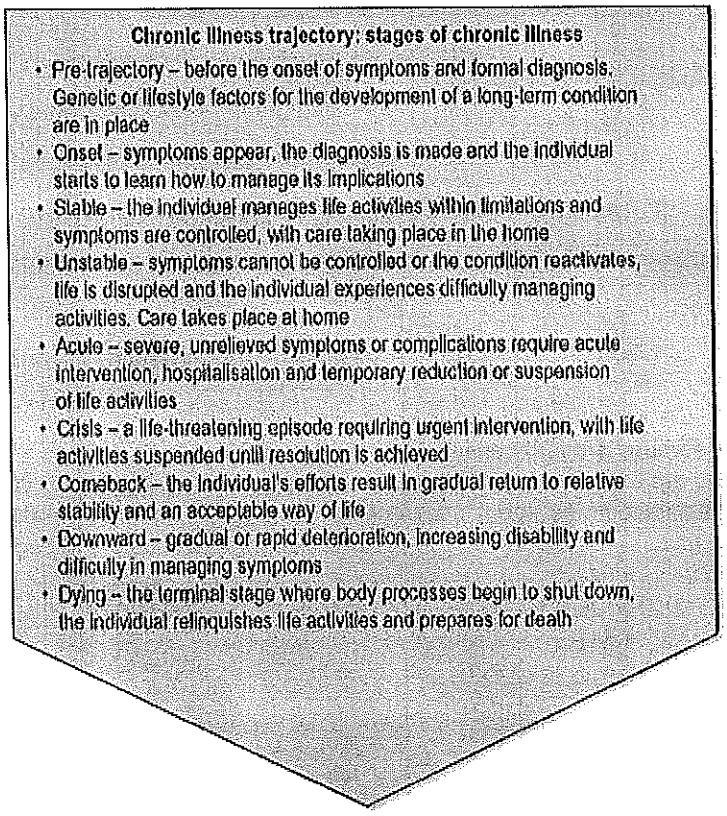
Your breath smells sweet and/or you experience tingling around the mouth

You feel uncoordinated, shaky, weak, drowsy, confused, dizzy, start to tremble, or see blurry or double.

Q.4. Explain the stages of chronic illness.

**Stages of chronic illness**

In the course of their studies, Corbin & Strauss have established that the courses of chronic diseases are very individual and different depending on the respective experiences of the persons affected, but have certain aspects in common. They have summarised these commonalities in the form of the description of 8 stages of the course of the disease.




Stages of chronic illness, as featured in the trajectory model. (After Corbin & Strauss 1991 and Ballard 2007.)

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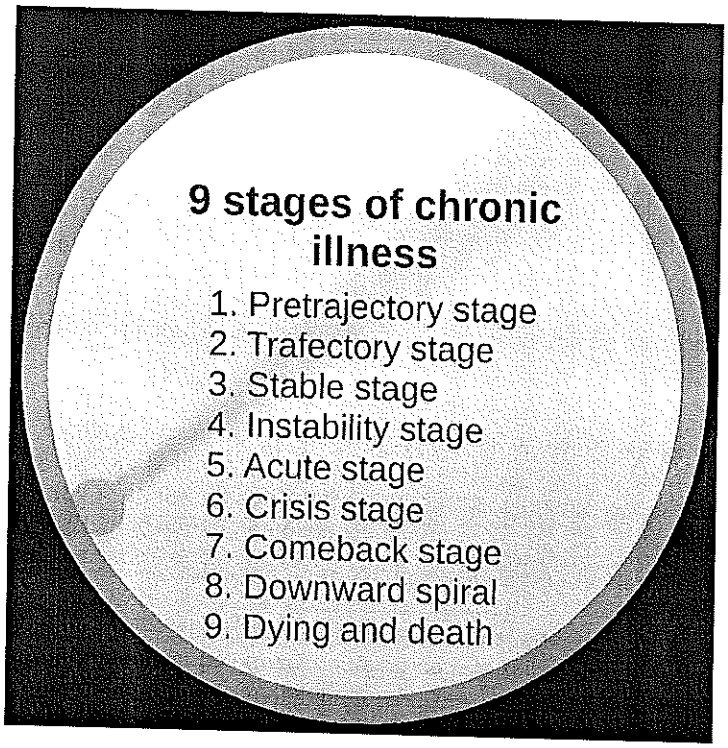


The pre-trajectory stage

The pre-trajectory phase describes the stage at which the person is at risk for developing a chronic condition because of genetic factors or lifestyle behaviours that increase susceptibility to chronic illness.

The trajectory stage

The trajectory phase is characterized by the onset of symptoms or disability associated with a chronic condition. Since symptoms are being evaluated and diagnostic tests are performed, this phase is often accompanied by uncertainty as the person awaits a diagnosis. Nursing care often involves preparing patients for diagnostic tests and offering emotional support.

The stable stage

The stable phase of the trajectory indicates that symptoms and disability are being managed adequately. Although the patient is doing well, nursing care is still important at this time to reinforce positive behaviours and to offer ongoing monitoring.

The unstable stage

The unstable phase is characterized by an exacerbation of illness symptoms, development of complications, or re-activation of an illness in remission. During this phase, a per-son's everyday activities may be temporarily disrupted because symptoms are not well controlled. There may also be more diagnostic tests and a trial of new regimens until some degree of control over symptoms is achieved. During this time of uncertainty, patients look to nurses for guidance and support.

The acute stage

The acute phase is characterized by sudden onset of severe or unrelieved symptoms or complications that require hospitalization for their management. This phase may require major modification of the person's usual activities for a period of time. Nurses are intensely involved in the care of the chronically ill patient during this period, providing direct care and emotional support to the patient and family members.

The crisis stage

The crisis phase is characterized by a critical or life-threatening situation that requires emergency treatment or care. During this phase patients and their families depend upon the skill, knowledge, and support of nurses and other professionals to stabilize their conditions.

The comeback stage

The comeback phase is the period in the trajectory marked by recovery after an acute period. It includes learning to live with or to overcome disabilities and a return to an acceptable way of life within the limitations imposed by the chronic condition. Although aspects of care may shift to other health care providers during the rehabilitative phase, the role of nurses as organizers of care and collaborators in the recovery of patients is essential.

The downward stage

The downward phase marks the worsening of a condition. Symptoms and disability continue to progress despite attempts to gain some control through treatment and management regimens. A downward turn does not necessarily mean imminent death; the downward trend can be arrested and an illness restabilized. Nurses working in clinics and physicians' offices can play an important role in helping patients understand and come to terms with what is happening to them.

The dying stage

The dying phase is characterized by the gradual or rapid decline in the trajectory despite efforts to halt the disorder or slow the decline through illness management; it is characterized by failure of life-maintaining body functions.