



Registration No.: .....

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Health Care and Paramedics Skills

Session: 2019-20 Summer

B. Voc. Program, 3<sup>rd</sup> Semester

1<sup>st</sup> In-Sem. Examination

Course Code: SHP1301

Time: 1 Hour

Course Name: Communication and Techniques

Max. Marks: 20

## Instructions:

1. SECTION-A:05 objective type questions, each question carries 01 mark
2. SECTION-B:03 short answer type questions, each question carries 02 marks
3. SECTION-C:03 essay type questions, each question carries 03 marks.

### SECTION-A

[5x1=5 Marks]

1. Both Encoding and Decoding of message are influenced by our emotions?
  - a. True
  - b. False
2. .... Means to impart understanding of the message.
  - a. Encoding
  - b. Receiver
  - c. Decoding
  - d. Feedback
3. .... Is the first enemy of communication.
  - a. Noise
  - b. Clarity
  - c. Sympathy
  - d. Complained
4. The way by which we communicate with each other is called?
  - a. Communication event
  - b. Communication skill
  - c. Communication process
  - d. None of above
5. When a teacher uses the action to let the students understand that is known as?
  - a. Facial expression
  - b. Gestures
  - c. Body language
  - d. None of above

### SECTION-B

[3x2=6 Marks]

- 1) Distinguish between the verbal and non-verbal communication.
- 2) What is the basic element of effective communication technique?
- 3) Why Confrontational is a part of style of communication.

### SECTION-C

[3x3= 9 Marks]

- 1) Define communication. Explain the process of communication.
- 2) Which type of psychological barrier affect communication write in detail?
- 3) What is the role of communication skill play in hospital?

K. Koush





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### SECTION-B

[3x2=6 Marks]

- 1) Distinguish between the verbal and non-verbal communication.

#### Verbal Communication:

When we think of verbal communication it is difficult to separate it from the other means of communication also present and at work, for example, we communicate is through the spoken word (verbal).

Before meeting the patient, it may be useful to think through the following;

- **What:** Is it I want to learn about the patient or for the patient to understand, for example, an aspect of their illness or treatment?
- **Think:** What is the clearest and most concise way i can communicate with this patient, for example, breaking down information into manageable chunks.
- **Need:** What information or resources do i then need to give that will result in this understanding?



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- **Aware:** Are they likely to be stressed or anxious or have other issues that mean they may not be able to take in the information.
- **Repeat:** Therefore, I may have to repeat or rephrase what I said a number of times.
- **Check:** How am I going to check that the patient has grasped clearly the information given when verbally communicating with the patient be aware of.
- **Tone:** The way you say something; the tone you use will influence how your message is received by the patient. If your tone is too aggressive the patient may feel intimidated and less inclined to ask questions or respond. If your tone is too soft, then the patient may not take seriously what you are saying.
- **Speak:** With confidence: if you speak with confidence then you speak with a self-assurance which conveys knowledge and understanding of what you are saying.
- **Be Clear:** You need to be clear about what you want to say. If you are vague or uncertain this may cause confusion.
- **Prior Knowledge:** Ask what they already know about the topic for discussion. 'what do you already understand about.'
- **Be Concise:** Ask yourself: 'is the patient looking confused and getting lost in my words?'
- **Don't Talk Too Much:** If you give the patient too much information in one go, they may not be able to take it all in. Always check that the patient is clear about each aspect of what is being said before moving on.
- **Focus:** On your body language: when speaking face to face with a patient your body language can play a more significant role than you imagine and can communicate far more than the words you use.
- **Listen:** Not only listen to what the patient says to you but also listen for the message the patient may give either through the questions they ask or through any comment they may make. Remember even if the patient says nothing and asks no questions, this is a communication which may be significant and therefore should be checked out. A possible question could be; can you recall what it is I said to you?

### **Non Verbal Communication:**

Nonverbal communication is mediated through the language of our body. Posture, eye contact, facial expressions are examples of nonverbal communication.

Nonverbal communication is complex and is influenced by many factors. It is a powerful means of communication that has the capacity to reinforce what is said.

Nonverbal communication is part and parcel of all communication and in some cases is far more powerful than the words used. A question to ask is; when I am with a patient how sensitive am I and how aware am I of my body language and how is this contributing or interfering with what I want the patient to hear

### **Nonverbal communication is mediated also through the following:**

- ❖ **Place:** Where the communication takes place, for example, a dialysis unit, waiting room, hospital corridor or clinic room
- ❖ **People:** The people involved
- ❖ **Culture:** The culture of the participants, many dialysis units today are staffed by nurses who come from different countries, each with their own individual culture and language. Patients too come from different cultures and the mix of these two is going to heavily influence communication.
- ❖ **Body Movements:** Nodding or shaking of the head, emphasising what is being said using hand gestures.
- ❖ **Posture:** Crossing arms can indicate an unwillingness to ask or answer questions. Standing over someone can be seen to be overbearing. Sitting at the same level allow more 'equal conversation' and indicates you have time to talk and you may appear more relaxed and confident.
- ❖ **Eye Contact:** Maintaining eye contact (without staring) conveys trust and engagement.
- ❖ **Language:** Not only what is said but also the tone and pitch of the voice. Also the speed at which speech occurs.



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- ❖ **Closeness:** It is important to respect personal space and how close you sit may depend on what the communication is all about. Touch can be useful and reassuring or can be prohibiting so consider carefully the value of touching the patient when communicating with them.
- ❖ **Facial Expressions:** Being aware of both yours and their facial expression is really important when you speak or listen to a patient.
- ❖ **Reflective Positioning:** Two people in tune with each other will often reflect each other's body positions, turn towards each other, mimic arm positions. You can use this consciously, or you should at least be aware of whether this is happening or not with your patient.

### 2) What is the basic element of effective communication technique?

#### **Effective Communication Technique: -**

For any communication to be effective the nurse should be 'familiar with the patient's needs, pick up the cues from the patient, give the right information at the right kind of pace'. To achieve this, the following skills should be developed:

- a) **Respecting The Person:** Always remember that patients feel vulnerable. Acknowledging this goes a long way towards helping the patient deal healthily with their condition and treatment.
- b) **Listening:** Patients should not be stereotyped or interrupted when they speak. If the patient is stereotyped, then the information is not tailored to the patient as a unique individual. If there are frequent interruptions, then the patient may feel they are not being listened to.
- c) **Teaching New Information:** Giving information should always be given in terms the patient can understand. If medical terminology is used its meaning should always be explained to the patient. Never assume that the patient understands the medical terminology used. A picture, or an analogy can prove very effective in helping the patient understand what is being communicated.
- d) **Managing Expectations:** Patients will have many expectations about their diagnosis and treatment. It is important to recognise these and encourage the patient to talk about their expectations, some of which may be unreal, so that the patient is enabled to understand what is happening and why.
- e) **Remain Focused:** What is the objective of the communication? It is to; provide information, clarify something not understood or modification of the patient's behaviour?
- f) **Building Trust:** Establishing a relationship of trust will allow for clearer and more open lines of communication.

### 3) Why Confrontational is a part of style of communication.

Good communication is the basis of a good relationship'. Communication between health care personal and patient can be very varied depending on what is to be communicated. What also has to be added in to the mix is what is described as 'patient's different histories and cultural backgrounds'. This will also dictate to a degree what style of communication is to be employed.

#### **Confrontational:**

Careful thought should be given if the intention is to challenge the attitude or behaviour that impacts on the patient's wellbeing. It should only be done in a way that is helpful to the patient.

When would you consider this particular style of communication?

- ❖ When what is being said is at variance to the other cues; tone of voice, body language.



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- ❖ It is obvious that the patient does not understand or is misinformed.
- ❖ There is a significant change in the patient's behaviour that is of concern. If this style is decided upon the following steps should be considered;
- ❖ Comment on what you have noticed, for example a comment like 'I notice recently that your behaviour is different, is there something the matter that I can help you with?'
- ❖ Ask direct questions.
- ❖ Use a tone of voice that conveys the importance of what you are saying.

### SECTION-C

[3x3= 9 Marks]

- 1) Define communication. Explain the process of communication.

**Definition: -**

According to "Oxford dictionary "The Imparting or exchanging of Information by Speaking, writing, or using some other medium...The Successful conveying or sharing of ideas and feeling.

Thus we can say that communication is the process of transmitting the information or ideas from one person to another person in such a way that the other person, who receives the information can understand it easily.

**Keith Davis:** Communication is a process of passing information and understanding from one person to another.

**John Adair:** Communication is essentially the ability of one person to make contact with another and make himself or herself understood.

**William Newman and Charles Summer:** Communication is an exchange of ideas, facts, opinions or emotions of two or more persons.

**Louis Allen:** Communication is a bridge of meaning. It involves a systematic and continuous process of telling, listening and understanding.

**Peter Little:** Communication is a process by which information is transmitted between individuals and / or organizations so that an understanding response results.

**Murphy, Hildebrandt, Thomas:** Communication is a process of transmitting and receiving verbal and non-verbal messages. It is considered effective when it achieves the desired response or reaction from the receiver.

**Communications Process:**

Communications is a continuous process which mainly involves three elements viz. sender, message, and receiver. The elements involved in the communication process are explained below in detail

**1. Sender**

The sender or the communicator generates the message and conveys it to the receiver. He is the source and the one who starts the communication.

**2. Message**

It is the idea, information, view, fact, feeling, etc. that is generated by the sender and is then intended to be communicated further.

**3. Encoding**

The message generated by the sender is encoded symbolically such as in the form of words, pictures, gestures, etc. before it is being conveyed.

**4. Media**

It is the manner in which the encoded message is transmitted. The message may be transmitted orally or in writing. The medium of communication includes telephone, internet, post, fax, e-mail, etc. The choice of medium is decided by the sender.

**5. Decoding**

It is the process of converting the symbols encoded by the sender. After decoding the message is received by the receiver.

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### 6. Receiver

He is the person who is last in the chain and for whom the message was sent by the sender. Once the receiver receives the message and understands it in proper perspective and acts according to the message, only then the purpose of communication is successful.

### 7. Feedback

Once the receiver confirms to the sender that he has received the message and understood it, the process of communication is complete.

### 8. Noise

It refers to any obstruction that is caused by the sender, message or receiver during the process of communication. For example, bad telephone connection, faulty encoding, faulty decoding, inattentive receiver, poor understanding of message due to prejudice or inappropriate gestures, etc.

## 2) Which type of psychological barrier affect communication write in detail?

Definition:

The **Psychological or Emotional Barriers** refers to the psychological state i.e. Opinions, attitudes, status consciousness, emotions, etc. of a person that deeply affects the ability to communicate. The communication largely depends on the mental condition of a person, if the person is not mentally or emotionally sound, then he cannot communicate effectively either as a sender or a receiver

The main kinds of Psychological or Emotional Barriers are

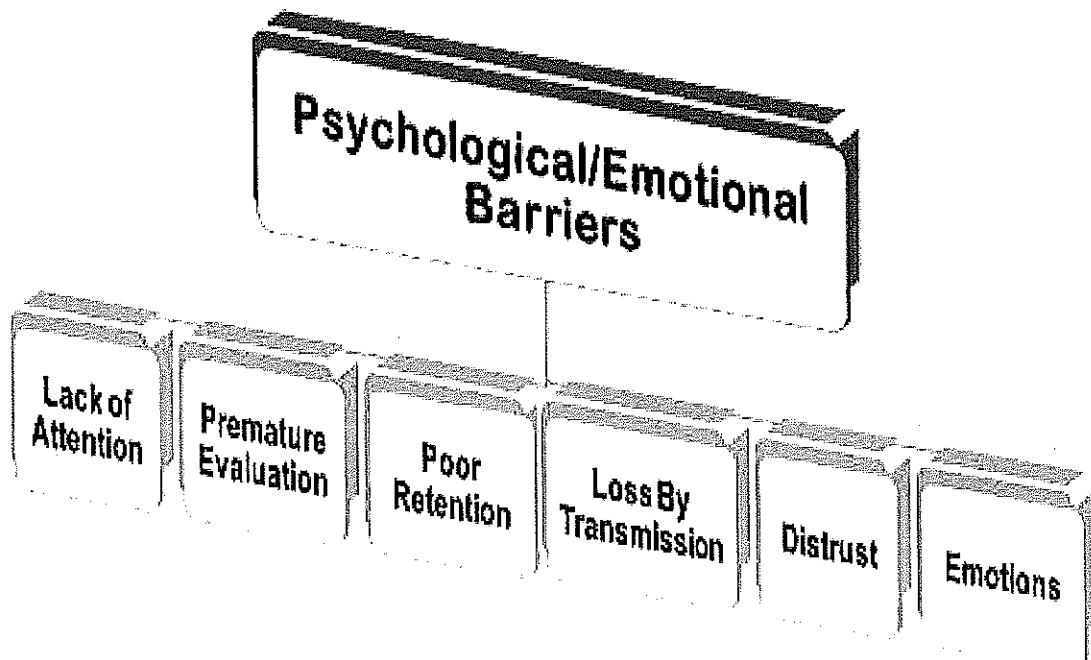


Fig-4 Psychological Barriers

#### a. Lack of Attention:

When the person is pre-occupied by some other things and do not listen carefully what the other person is speaking, then arises the psychological barrier in the communication. When the person does not listen to others, then he won't be able to comprehend the message as it was intended and will not be able to give proper feedback.



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### b. Premature Evaluation:

Many people have a tendency to jump to the conclusions directly and form judgments without considering all the aspects of information. This is generally done by the people who are impatient and resort to a selective listening. This premature evaluation of the information acts as a barrier to the effective communication and lowers the morale of the sender.

### c. Poor Retention:

The retention refers to the capacity of a brain to retain or store things in the memory. The brain does not store all the information came across but in fact, retain only those which deems to be helpful in the future. Therefore, much of the information gets lost during the retention process, and this acts as a barrier to the effective communication.

### d. Loss by Transmission:

The loss by transmission means, whenever the information exchanges hand its credibility reduces. It is most often observed in the case of an oral communication where people handle information carelessly and transmits the information which has lost some of its truth. Thus, the improper and lack of information being transmitted to others acts as a hindrance in the communication process.

### e. Distrust:

To have an effective communication, it is must that both the communicators (sender and receiver) trust each other. In case there is a lack of trust between both the parties, then they will tend to derive negative meaning out of the message and often ignore what has been communicated. If the receiver has no trust, then he will not listen to whatever is being said by the sender, and this will result in a meaningless communication.

### f. Emotions:

The communication is greatly influenced by the emotions of a person. If a person is not in a good temperament, then he would not listen properly to whatever is said and might say things offending the sender. Several other emotions such as anger, nervousness, confusion, restlessness, etc. affects the communication process.

g. Thus, every human being has a unique mind which is composed of varied emotions, beliefs, perceptions, opinions, and thoughts that facilitate different forms of communication.

### 3) What is the role of communication skill play in hospital?

Expectations: Providing an opportunity for the patient to tell their story.

Communication: patient satisfaction increased when members of the healthcare team took the problem seriously, explained information clearly, and tried to understand the patient's experience, and provided viable options.

Control: Patient satisfaction is improved when patients are encouraged to express their ideas, concerns and expectations.

Decision-making: Patient satisfaction increased when the importance of their social and mental functioning as much as their physical functioning was acknowledged.

Time spent: Patient satisfaction rates improved as the length of the healthcare visit increases.



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**Clinical team:** Although it is clear that the patient first concern is their clinician, they also value the team for which the clinician works.

**Referrals:** Patient satisfaction increases when their healthcare team initiates referrals relieving the patient of this responsibility.

**Continuity of care:** Patient satisfaction increases when they receive continuing care from the same healthcare provider(s).

**Dignity:** As expected, patients who are treated with respect and who are invited to partner in their healthcare decisions report greater satisfaction.





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Course Code: SHP1302

Time: 1 Hour

Course Name: Communicable Disease, Isolation Measure and STD

Max. Marks: 20

## Instructions:

1. SECTION-A:05 objective type questions, each question carries 01 mark
2. SECTION-B:03 short answer type questions, each question carries 02 marks
3. SECTION-C:03 essay type questions, each question carries 03 marks.

### SECTION-A

[5x1=5 Marks]

1. .... is a disease that can be passed to a person from another person.
  - a. Non communicable disease
  - b. Communicable disease
  - c. Both a and b
  - d. Pathogen
2. In which situation would you not be required to wear disposable gloves in health care.
  - a. Preparing food
  - b. Changing a catheter bag
  - c. Cleaning up a urine bottle
  - d. Washing a bedpan
3. The correct order to remove PPE...
  - a. Apron-gloves-mask-goggles
  - b. Goggles-mask-apron-gloves
  - c. Gloves-apron-mask-eye goggles
  - d. It doesn't matter in what order they are removed
4. Cancer, Hypertension, Asthma are example of which type of disease.
  - a. Non communicable
  - b. Communicable
  - c. Mixed diseased
  - d. None of above
5. As long as a person has no symptom of STD he or she...
  - a. Cannot pass STD
  - b. Does not have STD
  - c. Bothe a and b
  - d. None of above

### SECTION-B

[3x2=6 Marks]

- 1) Why does having an STD put more risk of HIV?
- 2) Write down the properties of virus and advantage of virus.
- 3) Define swine flu. Write down the four risk factor and symptom of swine flu.



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### SECTION-C

[3x3= 9 Marks]

- 1) Define STD. Write the detail about trichomoniasis.
- 2) Define isolation. Explain the forms of isolation measures.
- 3) Describe the poliomyelitis and which vaccine we use to prevention polio. Write down the dose of vaccine which month?

*K. Kaur*



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### SECTION-B

[3x2=6 Marks]

- 1) Why does having an STD put more risk of HIV?

HIV-infected persons are more likely to shed HIV when they have urethritis or a genital ulcer. When HIV-infected persons get another STD such as gonorrhea or syphilis, it suggests that they were having sex without using condoms.



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Some activities can put people at increased risk for both STDs and HIV.

- Having anal, vaginal, or oral sex without a condom;
- Having multiple sex partners;
- Having anonymous sex partners;
- Having sex while under the influence of drugs or alcohol can lower inhibitions and result in greater sexual risk taking.

### 2) Write down the properties of virus and advantage of virus.

Properties of viruses

- Viruses are not cells, do not have nuclei or mitochondria or ribosomes or other cellular components.
- Viruses replicate or multiply. Viruses do not grow.
- Viruses replicate or multiply only within living cells.

Advantages of Virus

Viruses like the bacteriophages have an important function in marine ecology and carbon cycling. Viruses are important in the field of molecular and cell biology. Viruses provide simple system that can be used to manipulate and investigate the functions of cells. Viruses have provided valuable information about the aspects of cell biology. For example: viruses have been useful in the study in the genetics and molecular genetics like DNA replication, RNA processing, transcription, translation protein transport and immunology. Virotherapy is another use of virus where they are used as vectors to treat various diseases. They are used in the treatment of cancer and in gene therapy. As viruses can cause devastating epidemics they can be weaponised for biological warfare. Viruses are used in gene therapy, they are used to genetically manipulate somatic cells of individuals and they are used in production of transgenic plants and animals.

### 3) Define swine flu. Write down the four risk factor and symptom of swine flu.

Swine origin influenza was first recognized in the border area of Mexico and United States in April 2009 and during a short span of two months became the first pandemic. The currently circulating strain of swine origin influenza virus of the H1N1 strain has undergone triple reassortment and contains genes from the avian, swine and human viruses. It is transmitted by droplets or fomites. Incubation period is 2 to 7 days. Common clinical symptoms are indistinguishable by any viral respiratory illness, and include fever, cough, sore throat and myalgia. A feature seen more frequently with swine origin influenza is GI upset. Less than 10% of patients require hospitalization. Patients at risk of developing severe disease are – younger than five years, elderly, pregnant women, with chronic systemic illnesses, adolescents on aspirin. Of the severe manifestations of swine origin influenza, pneumonia and respiratory failure are the most common. Unusual symptoms reported are conjunctivitis, parotitis, hemophagocytic syndrome. Infants may present with fever and lethargy with no respiratory symptoms. Diagnosis is based on RT PCR, Viral culture or increasing neutralizing antibodies. Principle of treatment consist of isolation, universal precautions, good infection control practices, supportive care and use of antiviral drugs. Antiviral drugs effective against H1N1 virus include: oseltamivir and zanamivir. With good supportive care case fatality is less than 1%. Preventive measures include: social distancing, practicing respiratory etiquette, hand hygiene and use of chemoprophylaxis with antiviral drugs.

**Risk factors**

Risk factors for severe disease from pandemic (H1N1) 2009 virus infection reported to date are considered like those risk factors identified for complications from seasonal influenza. These include the following groups:

- Infants and young children, <2 years
- Pregnant women
- Persons of any age with chronic pulmonary disease (e.g. asthma, COPD)
- Persons of any age with chronic cardiac disease (e.g. congestive cardiac failure)
- Persons with metabolic disorders (e.g. diabetes)
- Persons with chronic renal disease, chronic hepatic disease, certain neurological conditions (including neuromuscular, neurocognitive, and seizure disorders), hemoglobinopathies, or immunosuppression, whether due to primary immunosuppressive conditions, such as HIV infection, or secondary conditions, such as immunosuppressive medication or malignancy.
- Children receiving chronic aspirin therapy
- Persons aged 65 years and older



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### SECTION-C

[3x3= 9 Marks]

1) Define STD. Write the detail about trichomoniasis.

STDs are sexually transmitted diseases. This means they are most often -- but not exclusively -- spread by sexual intercourse. HIV, chlamydia, genital herpes, genital warts, gonorrhoea, some forms of hepatitis, syphilis, and trichomoniasis are STDs. STDs used to be called venereal diseases

#### Trichomoniasis

What is trichomoniasis?

Trichomoniasis is a sexually transmitted infection (STI) caused by a parasite called *Trichomonas vaginalis*. It is commonly called 'trich' (sounds like "trick"). The infection may occur in the vagina or in the urethra (the tube that carries urine from the bladder). To find out if you have trichomoniasis, you need to see a health care provider and have lab tests done. Currently, lab tests can only find trichomoniasis in women; testing for men is not routinely available or recommended.

How is it spread?

Trichomoniasis is spread by having vaginal sex with a person who is infected with the parasite.

What are the symptoms?

It is possible to have trichomoniasis and not have any symptoms.

For women symptoms can include:

- Change in amount and/or colour (often whitish- yellow, frothy) fluid from the vagina
- Itching, burning, redness and/or soreness of the genitals
- Pain or a burning feeling when urinating or during sex

For men symptoms can include:

- Unusual fluid from the penis
- Pain or burning feeling when urinating
- Itching or irritation in the urethra – the tube that passes urine

What are the potential complications?

If treated in time, trichomoniasis causes no lasting concerns. In men, it may be linked with infertility or

Trichomoniasis lower sperm count. If you are pregnant and have trichomoniasis, your baby may be born early (premature) and/or with a low birth weight. It is also associated with a higher chance of getting and passing HIV, other STIs and an increased risk for pelvic inflammatory disease (PID).

What is the treatment?

Trichomoniasis is usually treated with antibiotic pills called metronidazole. Nausea and vomiting and other serious side effects commonly occur if you drink alcohol within 12 hours before, during and 24 to 72 hours after taking metronidazole. To effectively treat the infection, it is important to follow the instructions for taking the treatment carefully and finish all the pills. Sexual partners from the last 2 months also need treatment. If you have not had a sexual partner in the last 2 months, then your last sexual partner will need treatment. It takes time for the infection to clear from the body, so it is important that you do not have any oral, vaginal or anal sex for 7 days after you and your partner(s) start the antibiotic treatment. If you or your partner(s) do not finish the treatment, miss pills or have unprotected sex before finishing all the medication, the infection could stay in your body or may be passed back to you or your partner(s) and cause health problems later. If this happens, talk with your health care provider who will help you to decide if you or your partners need more treatment. Re-testing after treatment is not necessary unless symptoms persist.



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2) Define isolation. Explain the forms of isolation measures.

### Isolation measures

Communicable diseases refer to diseases that can be transmitted and make people ill. They are caused by infective agents (pathogens), e.g. bacteria and viruses, which invade the body and multiply or release toxins to cause damages to normal body cells and their functions. In severe cases, they may lead to death. These infective agents can spread from a source of infection (e.g. patients, sick animals) to a person through various routes of transmission. Providing care and necessities to individuals in their homes through community volunteers and health and human service agencies. Educating residents in advance on how to prepare for an extended in-home isolation or quarantine by stockpiling food and preparing for periods without utilities and other services.

Precaution	Contact	Droplet	Airborne
Patient room	◀	Private	▶
			Specific ventilation requirements
Gloves	◀ Before entering the room, as in Standard Precautions ▶		
Hand hygiene	◀ Hand antiseptics, as in Standard Precautions ▶		
Gown	If direct contact with patient or environment	◀ As in Standard Precautions ▶	
Mask	Standard	< 1 meter of patient	Before entering room Special requirements
Other	◀ Limit patient transport ▶		

### Contact Precautions

Contact precautions are essential whenever transmission may occur by skin-to-skin contact and the direct physical transfer of microorganisms. Provide a private room, otherwise, cohort patients infected with the same microorganism but with no other infection. Nonsterile gloves should be worn before entering the room. Apply hand washing and hand antiseptics as in standard precautions. Do not touch potentially contaminated surfaces or equipment. Wear a clean, nonsterile gown when entering, and remove it before leaving the room. Limit transport of patients to medically necessary purposes, and maintain isolation precautions during transport. When possible, limit the use of patient-care equipment to a single patient.

### Droplet Precautions

Droplet precautions are applied for patients infected with pathogens that spread by respiratory droplets larger than 5 µm, produced during coughing, sneezing, talking, or during invasive procedures, such as bronchoscopy and intubation. Provide a private room or maintain spatial separation of at least 1 m between the infected patient



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and other patients and visitors. Patients with excessive cough and sputum production should receive a single room first. Special ventilation is unnecessary and the door may remain open. Masks are worn within 1 meter (3 feet) of the patient. Limit transport of patients to medically necessary purposes, and maintain isolation precautions during transport. When possible, limit the use of patient-care equipment to a single patient.

### Airborne Precautions

Airborne precautions are applied for patients infected with pathogens spread by respiratory droplets 5 µm and smaller, produced during coughing, sneezing, talking, or during invasive procedures, such as bronchoscopy. Therefore, susceptible healthcare personnel are restricted from entering the rooms of patients known or suspected to have measles, varicella, disseminated zoster, or smallpox. As for the other infections requiring airborne precautions, patients with suspected or known infection by *Mycobacterium tuberculosis* should be nursed in a private room where the air flows in the direction from the hall into the room (negative air pressure), with 6 to 12 (optimal) air changes per hour, and appropriate discharge of air outdoors.

High-efficiency filtration is necessary if the air is circulated in other areas of the hospital. Keep the door closed. Cohorting can be done in rare circumstances for patients infected with strains presenting with an identical antimicrobial susceptibility. Respiratory protection must be worn both by HCPs and visitors when entering the room. The technical requirements for respiratory protection devices remain controversial: CDC guidelines advocate masks with face-seal leakage of 10% or less and filter 1 µm particles for 95% efficiency or higher. However, a moulded surgical mask may be as effective in dealing with healthcare associated outbreaks and better complied with because of cost. Patient transport through other areas of the facility should be avoided. However, if transport is unavoidable, the patient should wear a surgical mask that covers both mouth and nose.

### 3) Describe the poliomyelitis and which vaccine we use to prevention polio. Write down the dose of vaccine which month?

#### Poliomyelitis

Poliomyelitis (polio) is a highly infectious disease that is caused when a person is infected by the polio virus that invades the nervous system. Poliomyelitis can cause paralysis and even death. There are 3 types of the polio virus – type 1, type 2, and type 3. The polio virus usually affects children under 5 years of age who are not fully vaccinated. It can also affect adolescents and adults. The polio virus enters the body through the mouth when one eats food or drinks water that is contaminated with faecal matter from a person who carries the polio virus. The virus multiplies in the intestines and is passed through faeces. The symptoms of polio are fever, fatigue, headache, vomiting, stiffness in the neck, pain in the limbs, and weakness in the limbs. If a child under 15 years of age suddenly shows signs of a floppy or weak arm or leg, then health authorities should be informed immediately. There is no cure for polio.

#### OPV and IPV

There are two vaccines for polio: the Oral Polio Vaccine (OPV) and the Inactivated Polio Vaccine (IPV). OPV is taken orally as drops and can be easily administered. It does not require a trained health worker. OPV is still the main preventive measure against polio. Trivalent OPV (t OPV) and IPV protect against all three types of polio viruses (types 1, 2 and 3). Bivalent OPV (b OPV) targets type 1 and type 3, but not type 2. IPV is given through an injection by a trained health worker. In countries still using OPV, IPV does not replace the OPV vaccine, but is used with OPV to strengthen a child's immune system and protect them from polio. Each country has its own immunization schedules. Countries might have OPV or IPV alone or a combined schedule. By 2016, all countries will have introduced at least one dose of IPV.

Oral Polio Vaccine (OPV)	Inactivated Polio Vaccine (IPV)
Taken orally as drops	Given through injection
Easily administered and does not require a trained health worker	Requires a trained health worker
Main preventive measure against polio	In countries still using OPV, it is given in addition to OPV
	Strengthens the immune system and provides further protection from polio



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### How to address common questions from caregivers

Why does my child need two different vaccines for polio?	Using both vaccines together provides the best form of protection from polio. The additional dose of IPV will help protect your child against polio disease even more – and will give your child the benefits of both vaccines.
What is the benefit of IPV?	IPV provides important additional protection against polio, protecting both your child and children in our community.
How is IPV different than OPV?	IPV and OPV each cause a different kind of immune reaction, and together strengthen your child's protection.
Is IPV safe?	IPV is one of the safest vaccines in humans.
Does IPV have any side effects?	After the vaccine, there might be a little bit of redness and the skin may feel tender.
Do I still need OPV?	Until polio is eradicated globally, OPV is still the main preventative measure against polio. IPV is recommended in addition to OPV and does not replace OPV.
I only want my child to receive one polio vaccine, IPV or OPV, but not both.	It is important – and best – for your child to receive both IPV and OPV. Together, these two vaccines provide safe and strong protection against polio. If your child only receives one of the vaccines they will not be as well protected.
Why does my child need three injections on one visit?	Giving a child several vaccinations during the same visit allows your child to be immunized as soon as possible. This provides protection during the vulnerable early months of your child's life. In addition, giving multiple vaccinations at one time means fewer vaccination visits for parents and caregivers.
Is it safe to give three injections at one visit?	It is safe for your child to receive three (or more) injections at once. Many countries have immunization schedules where children receive multiple vaccine injections at one visit.
Is there any evidence that multiple injections of vaccines may increase the risk for adverse events?	No. Numerous studies have shown that giving multiple vaccinations during the same visit does not result in higher incidence of adverse events.
Aren't multiple injections painful for the child?	While receiving multiple injections at once is painful, having to return for additional vaccines forces the child to experience pain on two visits. It is better for the child to experience one, brief moment of discomfort than pain on two separate days.
Wouldn't it be safer to separate vaccine injections and spread them out?	No, it is safer for your child to receive all of his vaccinations at once. Spreading out vaccinations leaves babies unprotected for a longer time.
If my child receives multiple injections at the same visit, will the vaccines be as effective if given alone?	Yes. IPV does not interfere with other vaccines and IPV is equally effective when given alone or with other vaccines.
Can multiple vaccines given at once "overwhelm" a child's immune system?	No. Children are exposed to numerous bacteria and viruses on a daily basis through eating and playing. Vaccines do not add a significant burden to the immune system.



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# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Health Care and Paramedics Skills

Session: 2019-20 Summer

B. Voc. Program, 3<sup>rd</sup> Semester

1<sup>st</sup> In-Sem. Examination

Course Code: SHP1303

Time: 1 Hour

Course Name: Blood Collection / Drug Administration / Observation

Max. Marks: 20

## Instructions:

1. SECTION-A:05 objective type questions, each question carries 01 mark
2. SECTION-B:03 short answer type questions, each question carries 02 marks
3. SECTION-C:03 essay type questions, each question carries 03 marks.

### SECTION-A

[5x1=5 Marks]

1. A complete blood count (CBC) is collected in an evacuated tube with what colour stopper?
  - a. Red
  - b. Blue
  - c. Black
  - d. Green
2. The body system that filters blood to eliminate waste help maintain blood Ph and regulates water balance is the system...
  - a. Respiratory
  - b. Urinary
  - c. Nervous
  - d. Cardiovascular
3. To collect blood for a prothrombin time test, use an evacuated tube with a ..... coloured stopper...
  - a. Light blue
  - b. Red
  - c. Blue
  - d. Black
4. After drawing blood from a patient, the staff should dispose of the needle by...
  - a. Breaking it so it cannot be reused by anyone
  - b. Depositing it in an approved "Sharp container"
  - c. Tossing it into waste cans in the laboratory
  - d. Recapping it carefully and bringing it back to the lab
5. Which is not an infection control method?
  - a. Protective clothing
  - b. Biohazard container
  - c. Sphygmomanometer
  - d. Hand washing

### SECTION-B

[3x2=6 Marks]

- 1) What is the mean of intrathecal route?
- 2) How to preparation of blood sample equipment's?
- 3) Draw the diagram of syringe with label.



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## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

### SECTION-C

[3x3= 9 Marks]

- 1) Explain the local routes of drug administration.
- 2) Explain the various type of blood container with their uses.
- 3) Define capillary blood collection. Write down the advantage and disadvantage of capillary blood collection.

*K. Kowri*



Registration No.: .....

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

School of Health Care and Paramedics Skills

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3. To collect blood for a prothrombin time test, use an evacuated tube with a coloured stopper
  - a. Light blue
  - b. Red
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  - d. Black
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5. Which is not an infection control method?
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  - b. Biohazard container
  - c. Sphygmomanometer
  - d. Hand washing

### SECTION-B

[3x2=6 Marks]

- 1) What is the mean of intrathecal route?

#### Intrathecal Route

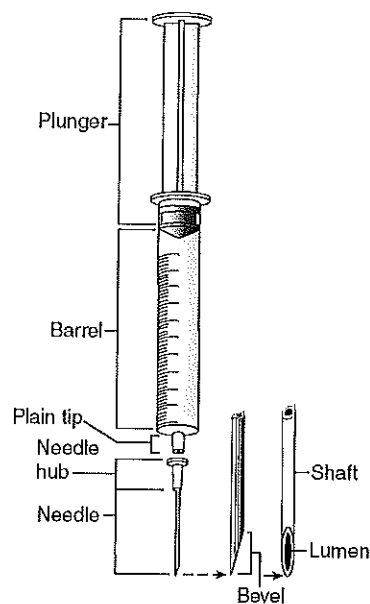
Intrathecal administration is a route of administration for drugs via an injection into the spinal canal, or into the subarachnoid space so that it reaches the cerebrospinal fluid (CSF) and is useful in spinal anaesthesia, chemotherapy, or pain management applications.

## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

2) How to preparation of blood sample equipment's.

- A syringe with needle (gauge 21 or 23), one per patient
- A vacuum tube containing an anticoagulant such as EDTA, 4–5-mL capacity, one per patient;
- 70% ethyl alcohol or alcohol swabs
- Dry cotton (cotton ball, swab or gauze)
- Protective latex gloves (powder-free)
- A tourniquet
- A biohazard container or any puncture-resistance sharps container
- An infectious wastes container
- A smear preparation template
- A drying rack
- Record forms (i.e. malaria register) and
- A lead pencil or permanent marker pen.

3) Draw the diagram of syringe with label.



### SECTION-C

[3x3= 9 Marks]

1) Explain the local routes of drug administration?

**Local Routes**

It is the simplest mode of administration of a drug at the site where the desired action is required. Systemic side effects are minimal.

<b>Topical</b>	Drug is applied to the skin or mucous membrane at various sites for local action.
<b>Oral cavity</b>	As a suspension, e.g. nystatin; as a troche, e.g. clotrimazole (for oral candidiasis); as a cream, e.g. acyclovir (for herpes labialis); as ointment and jelly, e.g. 5% lignocaine hydrochloride (for topical anaesthesia); as a spray, e.g. 10% lignocaine hydrochloride (for topical anaesthesia).
<b>GI tract</b>	As tablet that is not absorbed, e.g. neomycin (for sterilization of gut before surgery).

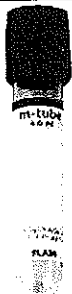
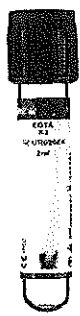
## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

<b>Rectum and anal canal</b>	As an enema (administration of drug into the rectum in liquid form): <ul style="list-style-type: none"> <li>• Evacuant enema (for evacuation of bowel): For example, soap water enema—soap acts as a lubricant and water stimulates the rectum.</li> <li>• Retention enema: For example, methylprednisolone in ulcerative colitis.</li> <li>• As a suppository (administration of the drug in a solid form into the rectum), e.g. bisacodyl— for evacuation of bowels.</li> </ul>
<b>Eye, ear and nose</b>	As drops, ointments and sprays (for infection, allergic conditions, etc.), e.g. gentamicin eye/ear drops.
<b>Bronchi</b>	As inhalation, e.g. salbutamol, ipratropium bromide, etc. (for bronchial asthma and chronic obstructive pulmonary disease).
<b>Skin</b>	As ointment, cream, lotion or powder, e.g. clotrimazole (antifungal) for cutaneous candidiasis.
<b>Intra-arterial route</b>	This route is rarely employed. It is mainly used during diagnostic studies such as coronary angiography and for the administration of some anticancer drugs, e.g. for treatment of malignancy involving limbs.


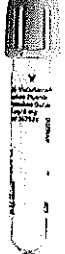
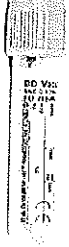


### 2) Explain the various type of blood container with their uses?

#### Blood Container

A Vacutainer blood collection tube is a sterile glass or plastic test tube with a coloured rubber stopper creating a vacuum seal inside of the tube, facilitating the drawing of a predetermined volume of liquid. Vacutainer tubes may contain additives designed to stabilize and preserve the specimen prior to analytical testing. Tubes are available with a safety-engineered stopper, with a variety of labelling options and draw volumes. The colour of the top indicates the additives in the vial.

	<p><b>Red Vial (Plain vial)</b></p> <p>It is Plastic Serum Tubes have spray-coated silica and are used for serum determinations in chemistry, serology, and immunohematology. Does not contain any anticoagulant.</p>
	<p><b>EDTA Vial (Ethylenediaminetetraacetic Acid)</b></p> <p>It is spray-coated K2EDTA Tubes are used for whole blood hematology determinations and immunohematology testing.</p>

## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

	<p><b>Heparin Vial</b></p> <p>Heparin Tubes are spray-coated with either lithium heparin or sodium heparin and are used for plasma determinations in chemistry.</p>
	<p><b>Glucose Vial</b></p> <p>Fluoride Tubes contain a glycolytic inhibitor and are used for glucose determinations on plasma.</p>
	<p><b>Citrate Vial/PT-INR</b></p> <p>The PT test are prothrombin time and pro time. INR stands for international normalized ratio. The PT/INR test is usually done when you are taking a blood thinner (anticoagulant) medicine, such as warfarin (Coumadin), to prevent blood clots.</p>
	<p><b>ESR Vial</b></p> <p>ESR test measures how quickly red blood cells settle to the bottom of a test tube. Inflammation or infection can lead to extra proteins in the blood, which can make the red blood cells settle faster.</p>
	<p><b>Blood Culture Vial</b></p> <p>Blood culture is a microbiological culture of blood. It is employed to detect infections that are spreading through the bloodstream (such as bacteremia, sepsis amongst others). This is possible because the bloodstream is usually a sterile environment.</p>



## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

3) Define capillary blood collection. Write down the advantage and disadvantage of capillary blood collection.

Capillary blood sampling, which refers to sampling blood from a puncture on the finger, heel or an earlobe, is increasingly common in medicine. It enjoys several advantages over venous blood sampling: it is less invasive, it requires smaller amounts of blood volume and it can be performed quickly and easily. Capillary blood is obtained by pricking a finger in adults and a heel in infants and small children. The specimen is then collected with a pipette, placed on a glass slide or a piece of filter paper, or is absorbed by the tip of a microsampling device. Capillary blood is used for glucose measurements by transferring the blood to a test strip.

### Advantages of Capillary Blood Collection

- Only a very small amount of blood is needed. ICU patients can lose up to two percent of their total blood volume every day when venous blood sampling is done.
- Collection is simple and relatively painless. Finding a vein in an elderly patient or a child can be a nightmare and traumatic for both the lab tech and the patient.
- Patients can be taught to do capillary blood collections at home. Diabetics routinely check their blood sugars this way.
- Collection sites can be changed so that the risk of scarring and pain is lessened.
- Increasing adoption and implementation in hospital labs and patient-centric clinical testing and clinical research labs.

### Disadvantages of Capillary Blood Collection

- Not all tests can be run on capillary samples.
- Capillary blood collection can sometimes rupture the blood cells, producing results that are inaccurate.
- Problems with bleeding and infection can occur with either method.
- Patients may feel faint after any type of blood drawing.
- Overuse of the same area for collection can cause scarring.
- Calcified nodules can develop at the site of collection, especially in infants. The nodules usually resolve by themselves.

