Registration No.: .....

School of Computing Skills

Session:2022 (Winter Semester)

B. Voc. Program, 3rd Semester

1st In-Sem. Examination

Course Code: ITN 1302 **Time: 1 Hour**

Course Name: Wireless Networks **Max. Marks: 20**

Section – A

05X01 = 05 Marks

Q1. What is the ISM band?

A) 2.4GHz

B) 5.8 GHz

C) 2.4GHz and 5.8 GHz both

D) None of the above

Q2. What are two type of WLAN?

A) Adhoc and Infrastructure

B) Adhoc and Wired

C) Adhoc and Wireless

D) Wired and Wireless

Q3. Which scheme/ strategy is suitable to establish the communication between the access point (AP) and the infrastructure of LANs?

A) Wired

B) Wireless

C) Both a & b

D) Cannot Predict

Q4. Which among the following represents the building blocks of wireless LANs?

A) BSS

B) ESS

C) Both a & b

D) None of the above

Q5. Which one of the following is the unlicensed frequency in India?

A) 2.4 GHz

B) 8 GHz

C) 3 GHz

D) None of the above

Section – B

03X02 = 06 Marks

Q.1 What is a BSS in WLAN?

Q 2. What is hidden terminal problem in a wireless network?

Q 3. How can we solve the hidden terminal problem?

Section – C

03X03 = 09 Marks

Q1. What do you understand by attenuation of signal?

Q2. How do we allocate channels to different Access Points in a WLAN to avoid interference?

Q3. What is roaming in a WLAN?

Registration No.: .....

School of Computing Skills

Session:2022 (Winter Semester)

B. Voc. Program, 3rd Semester

1st In-Sem. Examination

Answer Key

Course Code: ITN 1302 **Time: 1 Hour**

Course Name: Wireless Networks **Max. Marks: 20**

Section A

1. C
2. A
3. A
4. C
5. A

Section B

Q1. BSS is Basic service set. It is the area covered by one access point in a WLAN.

Q2. When A transmits to B Then C is not aware of this transmission. When C transmits to B Then A is not aware of this transmission. This is called hidden terminal problem. This is solved by applying RTS (Request to send) and CTS (Clear to send) method.

Q3. This is solved by applying RTS (Request to send) and CTS (Clear to send) method. A sends RTS to B and B replies with CTS. When B replies with CTS then C listens to it and comes to know that the channel is busy and it avoids transmission.

Section C

Q1. When the signal travel from point A to point B it degrades. This is called attenuation. That is why we have limited ranges in wireless communications.

Q2. Channels are allocated in such a way so that the interference is avoided. Let us assume there are 12 channels then we can allocate 1, 6 and 11 to adjacent Access Points. The rule is to keep maximum distance between channels.

Q3. When a subscriber moves from one access point to another access point is called roaming. When subscriber moves away from one access point it starts loosing the signal but it comes in range of another access point and gets attached to that access point so that the link is not broken.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: ..... Name - .....

School of Computing Skills

B.Voc Program, III Semester (2022)

I In-Sem. Examination

Course Code : ITN1303

Course Name : Basic of Network Security **Time: 1 hour**

Instruction: Explain in detail for long answer **Max. Marks : 20**

Section-A

1X5 = 5 Marks

Q.1 what is the primary goal of an Ethical Hacker ?

A. Avoiding detection
B. Testing security controls
C. Resolving security vulnerabilities
D. Determining return on investment for security measures

Q.2 Which type of hacker represents the highest risk to your network?

A. Black-hat hackers
B. Grey-hat hackers
C. Script kiddies
D. Disgruntled employees

Q.3 What is the best reason to implement a security policy?

A. It makes security harder to enforce.
B. It removes the employee's responsibility to make judgments.
C. It increases security.
D. It decreases security.

Q.4 **What is the maximum length of an SSID?**

A. Thirty-two characters
B. Sixteen characters
C. Sixty-four characters
D. Eight characters

Q.5 A hacktivist is someone who .....

A. hacks computers or Web sites in an attempt to promote a political ideology
B. attempts to destroy the infrastructure components of governments
C. violates computer or Internet security maliciously or for illegal personal gain
D. attempts to gain financially and/or disrupt a company's information systems and business operations

Section B

03X02= 06 Marks

Q.1 Explain Intrusion Triangle in computer security ?

Q.2 What is CIA ?

Q.3. Difference between DOS and DDOS ?

Section C

03X03=09 Marks

Q.1 Explain Type of Hackers ?

Q.2 Explain Steps of Ethical Hacking ?

Q.3 Explain Security Services in networking ?

School of Computing Skills

Session: 2022

B.Voc Program, III Semester

I In-Sem. Examination

ANSWER SHEET

Course Code : ITN1303

Course Name : Basic of Network Security **Time: 1 hour**

Instruction: Explain in detail for long answer **Max. Marks : 20**

Section A

Q.1 C

Q.2 D

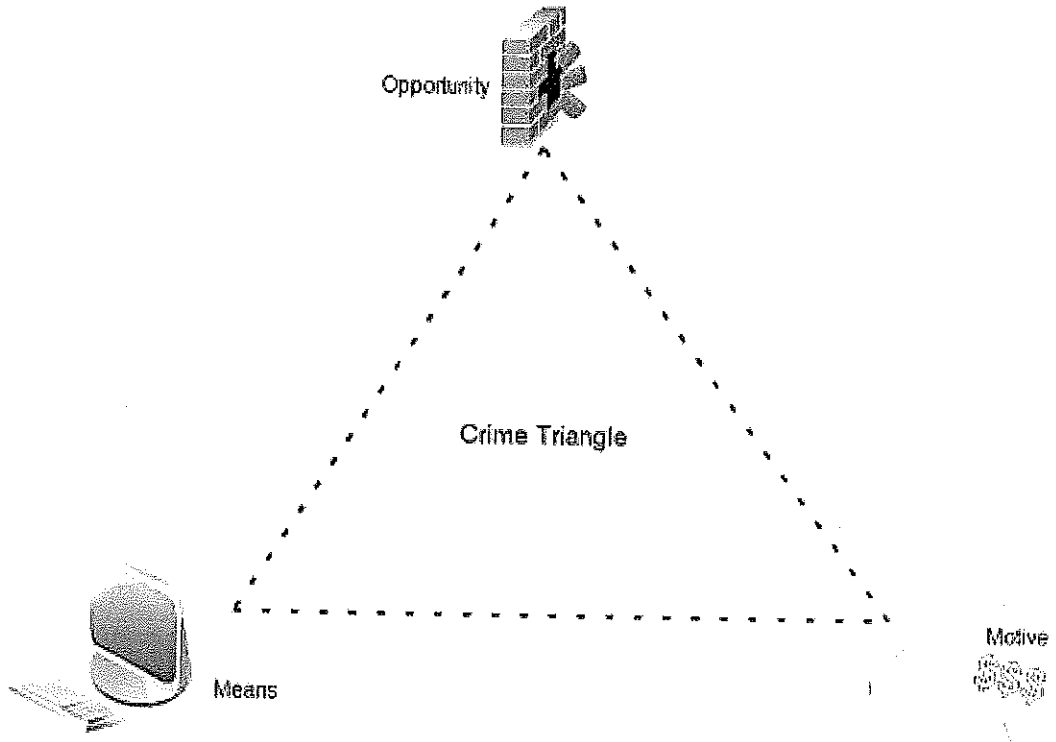
Q.3 B

Q.4 A

Q.5 A

Section B

Q.1



Answer 2

Computer Security is the ability of a computer system to protect information with respect to confidentiality and integrity.

- Computer security is often associated with three cores areas, summarized with the CIA acronyms.
- Confidentiality :ensuring that information is not accessed by unauthorized individuals .
- Integrity : ensuring that information is not altered by unauthorized individuals.
- Availability : ensuring that information concerned is readily accessible to the authorized individuals at the time .

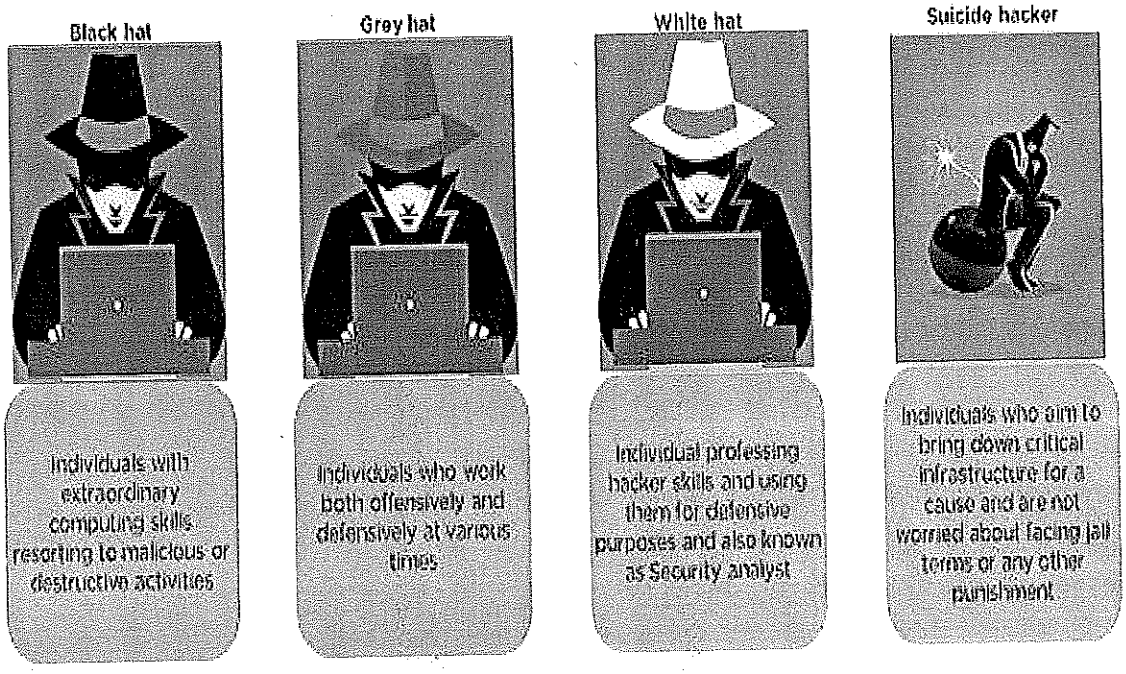
Answer 3 :

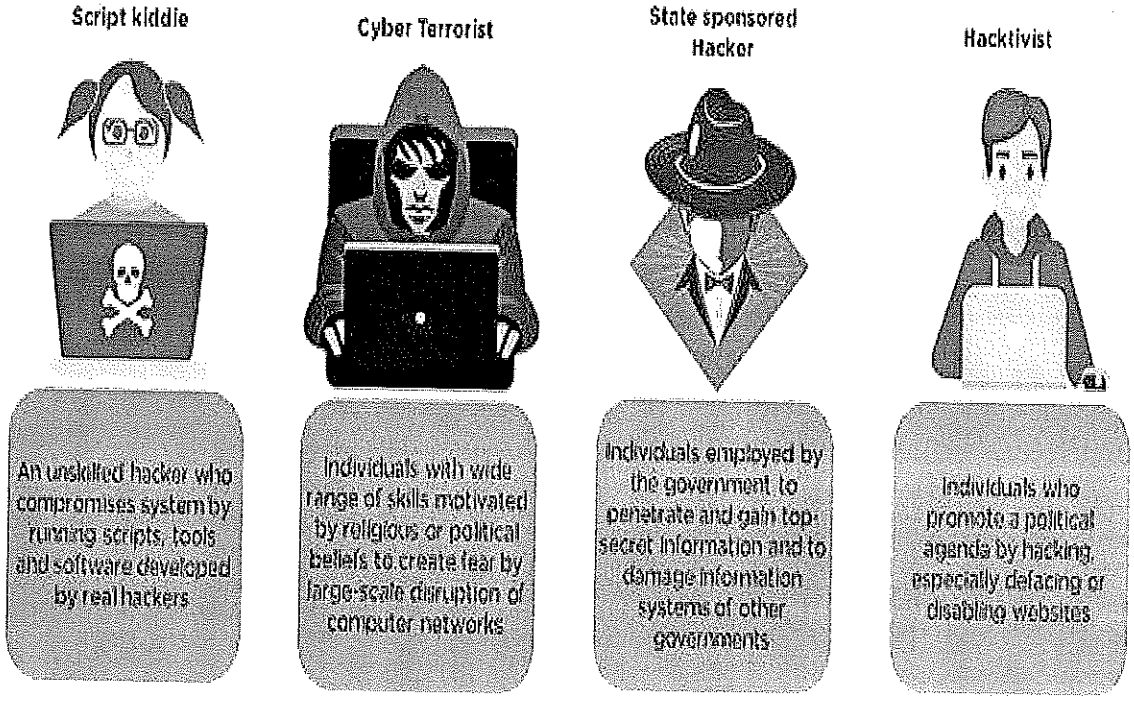
DOS	DDOS
DOS Stands for Denial of service attack.	DDOS Stands for Distributed Denial of service attack.
In Dos attack single system targets the victims system.	In DDos multiple system attacks the victims system..

DOS	DDOS
Victim PC is loaded from the packet of data sent from a single location.	Victim PC is loaded from the packet of data sent from Multiple location.
Dos attack is slower as compared to ddos.	DDos attack is faster than Dos Attack.
Can be blocked easily as only one system is used.	It is difficult to block this attack as multiple devices are sending packets and attacking from multiple locations.
In DOS Attack only single device is used with DOS Attack tools.	In DDos attack Bots are used to attack at the same time.
DOS Attcaks are Easy to trace.	DDOS Attacks are Difficult to trace.
Volume of traffic in Dos attack is less as compared to DDos.	DDoS attacks allow the attacker to send massive volumes of traffic to the victim network.
Types of DOS Attacks are: 1. Buffer overflow attacks 2. Ping of Death or ICMP flood 3. Teardrop Attack	Types of DDOS Attacks are: 1. Volumetric Attacks 2. Fragmentation Attacks 3. Application Layer Attacks

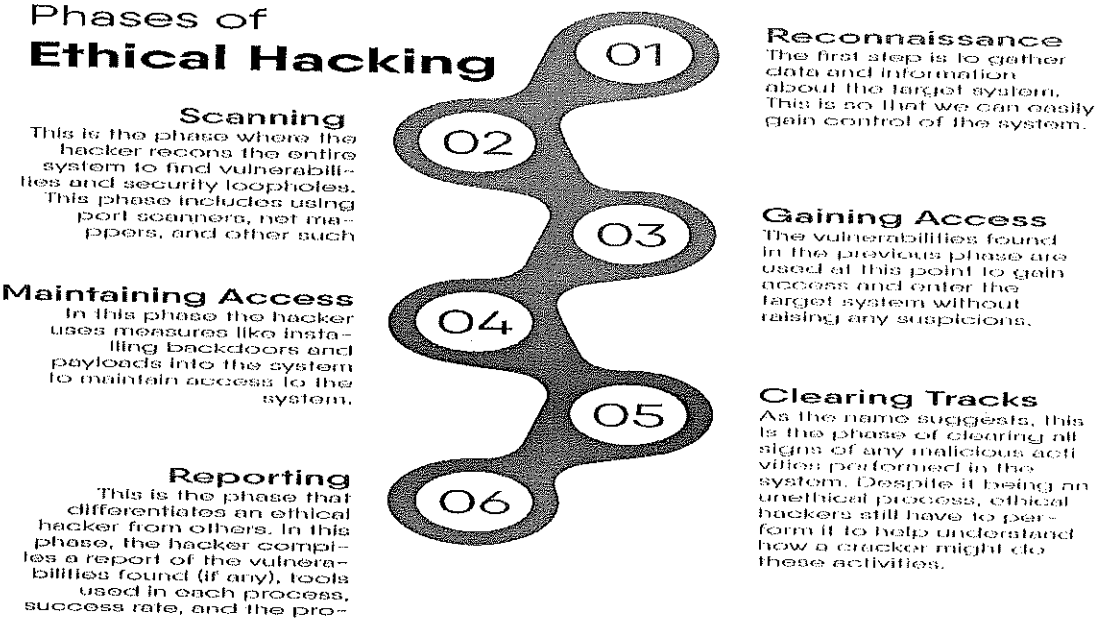
Section C

Answer 1 :





Answer 2 :



Answer 3 :

- **Authentication:** assures recipient that the **message is from the source** that it **claims to** be from.

- **Access Control:** controls who can have **access to resource** under what **condition**
- **Availability:** available to authorized entities for 24/7.
- **Confidentiality:** information is not made available to unauthorized individual
- **Integrity:** assurance that the message is unaltered
- **Non-Repudiation:** protection against denial of sending or receiving in the communication

School of Computing Skills

Session: 2022- (Winter Semester)

B. Voc. Program, 3rd Semester

1st In-Sem. Examination

Course Code: ITN1305 **Time: 1 Hour**

Course Name: Optical fiber communication (Cables, Connectors) **Marks: 20**

Instruction: Attempt all questions

Section – A (Theory)

01X01 = 01 Marks

Q.1 Fiber optics was invented by?

1) Thomas Mensah
2) Thomas Edison
3) John Henry Holmes
4) Narinder Singh Kapany

Q.2 Which of the following is described by the concept of numerical aperture in an optical fibre?

1) Light scattering
2) Light collection
3) Light dispersion
4) Light polarisation

Q.3 Which component provides additional strength and prevents the fiber from any damage?

1) Core
2) Cladding
3) Buffer Coating
4) None of the above

Q.4 In the structure of fiber, the light is guided through the core due to total internal _____

1) Reflection
2) Refraction
3) Diffraction
4) Dispersion

Q.5. When a beam of light enters one medium from another, ... will not change?

1) Speed

2) Direction

3) Frequency

4) Wavelength

2X03 = 06 Marks

Section – B

Q.1 What Is Optical Fiber?

Q.2 What does LIU stand for?

Q.3. What is fiber optic splicing?

Section – C

3X03 = 09 Marks

Q.1 What are Advantages of optical fibers.

Q. 2. What are the Advantages of Single Mode Fiber.

Q.3 What is the basic construction of a fiber optic cable?

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: ..... Name - .....

School of Computing Skills

Session: 2022 (Winter Semester)

B. Voc. Program, 3rd Semester

1st In-Sem. Examination

Course Code: ITN1305 **Time: 1 Hour**

Course Name: Optical fiber communication (Cables, Connectors) **Marks: 20**

Instruction: Attempt all questions

Section – A (Theory)

01X01 = 01 Marks

Q.1 Fiber optics was invented by?

1) Thomas Mensah
2) Thomas Edison
3) John Henry Holmes
4) Narinder Singh Kapany

Ans. Narinder Singh Kapany

Q.2 Which of the following is described by the concept of numerical aperture in an optical fibre?

1) Light scattering
2) Light collection
3) Light dispersion
4) Light polarisation Ans.

Light collection

Q.3 Which component provides additional strength and prevents the fiber from any damage?

1) Core
2) Cladding
3) Buffer Coating
4) None of the above

Ans. Buffer Coating

Q.4 In the structure of fiber, the light is guided through the core due to total internal _____

1) Reflection
2) Refraction
3) Diffraction

4) Dispersion

Ans. (1) Reflectio

Q.5. When a beam of light enters one medium from another,.will not change?

1) Speed

2) Direction

3) Frequency

4) Wavelength

Ans.

Frequency

02X03 = 06 Marks

Section – B

Q.1 What IsOptical Fiber?

Ans. Optical fiber uses light pulses instead of electrical pulses to transmit information, thus delivers hundreds of times higher bandwidth than traditional electrical systems. Fiber optic cable can be protected by sheathing and armor to make it resistant to harsh environmental conditions. Hence it is widely adopted in commercial business, governments, military and many other industries for voice, video and data transmission.

Q.2 What does LIU stand for?

Ans. The LIU (light interface unit) is modular and suitable for optical cable installation, bare fibers splicing & protection, pigtails storage & management. The number of fibers determines which LIU is appropriate for the application

Q.3. What is fiber optic splicing?

Ans. In field installations, splicing is a faster and more efficient method and is used to restore fiber optic cables when a buried cable is accidentally severed. There are 2 methods of splicing, mechanical or fusion.

Section – C

Q.1 What are Advantages of optical fibers.

Ans.

i. Can carry much more information
ii. Much higher data rates
iii. Much longer distances than co-axial cables
iv. Immune to electromagnetic noise
v. Light in weight
vi. Unaffected by atmospheric agents

Q. 2. What are the Advantages of Single Mode Fiber.

Ans.

Single mode fiber distance: single mode fiber supports a greater distance than multimode fiber because of its lower attenuation. For example, multimode fiber generally has a reach of several hundred meters, whereas SM fiber has the potential to reach 200 km.

Bandwidth capacity: A single mode optical fiber cable offers a higher bandwidth than a multimode fiber optic cable.

Data dispersion: single mode fiber only transmits light of one mode, causing no modal dispersion.

Single mode fiber speed: Single mode fiber doesn't have modal dispersion, modal noise, and other effects that come with multimode transmission. So it can carry signals at much higher speeds and up to 50 times more distance than multimode fiber.

Q.3 What is the basic construction of a fiber optic cable?