BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Computing Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 3rd Semester,

1st In-Sem. Examination

Course Code: ITN1302 **Time: 1 Hour**

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

Section – A

05X01 = 05 Marks

Q1. What is the frequency range of the IEEE 802.11b standard?

A) 2.4Gbps

B) 5Gbps

C) 2.4GHz

D) 5GHz

Q2. What is the maximum data rate for the 802.11g standard?

A) 6Mbps

B) 11Mbps

C) 22Mbps

D) 54Mbps

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

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. The terminal is under observation from the network for the possible problems. Under which list will this belong in EIR

A) White List

B) Grey List

C) Black List

D) None of the above

Section – B

03X02 = 06 Marks

Q 1. What are IBSS and BSS?

Q 2. What are the three types of wireless Internet connectivity?

Q 3. Explain the functions of MSC and GMSC in GSM network.

Section – C

03X03 = 09 Marks

Q1. What do you understand by the term "Hand Over" in GSM networks?

Q2. What are the functions of BSC in GSM network?

Q3. What is roaming in mobile networks?

BSDU

School of Computing Skills

Session: 2021-22 (Summer Semester)

B. Voc. Program, III Semester,

I In-Sem. Examination

Course Code: ITN1303 **Time: 1 Hour**

Course Name: Basics of Network Security **Max. Marks: 20**

Instruction: Explain in detail for long answer

Section – A

05X01 = 05 Marks

Q1. What is the full form of CIA?

a). Confidentiality, Interest and Availability

b). Confidentiality, Integrity and Availability

c). Confidence, Interest and Available

d) Confidence, Integrity and Availability

Q2. Security means?

a). Freedom from risk or danger; safety

b)Freedom from doubt, anxiety, or fear; confidence.

c). Something that gives or assures safety

d) All of above

Q3. The process of identifying and classifying security holes in an organization's system, network, or its communication infrastructure is known as:

a) Vulnerability classification

b) Vulnerable system

c) Vulnerability Assessment

d) Vulnerable tool

Q4. Example of tool for vulnerability test are:

a) Antivirus

b) Nmap

c) Firewall

d) Dos attack

Q5. A self replicating program similar to computer virus are called as:

a) Malware

b) Threat

c) Worm

d) Counterattack

Section – B

03X02 = 06 Marks

Q1. What do you mean by security? Why do we need security?

Q2: Who is most vulnerable area in term of network security in different field?

Q3: What do you mean by virus? What typical things that current personal computer virus do?

Section – C

03X03 = 09 Marks

Q1: What do you mean by CIA triad?

Q2. Define:

a) Attack b) Hacker c) Countermeasure d) Denial of service attack?

Q3: What are the all three legs of triangle must exist for network intrusion to occur?

BSDU

School of Computing Skills

Session: 2021-22 (Summer Semester)

B. Voc. Program, III Semester,

I In-Sem. Examination

Course Code: ITN1303 **Time: 1 Hour**

Course Name: Basics of Network Security **Max. Marks: 20**

Instruction: Explain in detail for long answer

Section – A

05X01 = 05 Marks

Q1. What is the full form of CIA?

a). Confidentiality, Interest and Availability

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c). Confidence, Interest and Available

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Q5. A self replicating program similar to computer virus are called as:

a) Malware

b) Threat

c) Worm

d) Counterattack

Section – B

03X02 = 06 Marks

Q1. What do you mean by security? Why do we need security?

Ans: Security can be defined as:

1. Freedom from risk or danger; safety.
2. Freedom from doubt, anxiety, or fear; confidence.
3. Something that gives or assures safety, as:

We need security because:

- Protect vital information while still allowing access to those who need it

Ex: Trade secrets, medical records, etc.

- Provide authentication and access control for resources

Ex: AFS

- Guarantee availability of resources

Ex: 5 9's (99.999% reliability)

Q2: Who is most vulnerable area in term of network security in different field?

Ans: The most vulnerable area are:

- Financial institutions and banks:
- Internet service providers
- Pharmaceutical companies
- Government and defense agencies
- Contractors to various government agencies
- Multinational corporations
- Anyone on the network

Q3: What do you mean by virus? What typical things that current personal computer virus do?

Ans: A virus is a small piece of that piggybacks on small programs in order to get executed. Once it's running, it spreads by inserting copies of itself into other executable code or documents.

Typical things that some current personal computer viruses do:

- Display a message

- Erase files
- Scramble data on a hard disk
- Cause eratic screen behavior
- Halt the PC
- Many viruses do nothing obviuos at all except spread.

Section – C

03X03 = 09 Marks

Q1: What do you mean by CIA triad?

Ans: The CIA triad is described as shown below:

1. Data confidentiality

- Assures that private or confidential information is not made available or disclosed to unauthorized individuals
- Privacy
- Assures that individuals control or influence what information related to them may be collected and stored and by whom and to whom that information may be disclosed

2. Data integrity

- Assures that information changed only in a specified and authorized manner
- System integrity
- Assures that a system performs its intended function in an unimpaired manner, free from deliberate or inadvertent unauthorized manipulation of the system

3. Availability

- Assures that systems work promptly and service is not denied to authorized users

Q2. Define:

a) Attack

b) Hacker

c) Countermeasure

d) Denial of service attack?

Ans:

a) Attack: In the context of computer/network security, an attack is an attempt to access resources on a computer or a network without authorization, or to bypass security measures that are in place.

b)Hacker: A person who spends time learning the details of computer programming and operating systems, how to test the limits of their capabilities, and where their vulnerabilities lie.

c) Countermeasures: Steps taken to prevent or respond to an attack or malicious code.

d) Denial of Service attack: A deliberate action that keeps a computer or network from functioning as intended (for example, preventing users from being able to log onto the network).

Q3: What are the all three legs of triangle must exist for network intrusion to occur?

Ans: All three legs of triangle must exist for network intrusion to occur are given as:

- **Motive**: An intruder must have a reason to want to breach the security of your network (even if the reason is "just for fun"); otherwise, he/she won't bother.
- **Means**: An intruder must have the ability (either the programming knowledge, or, in the case of "script kiddies," the intrusion software written by others), or he/she won't be able to breach your security.
- **Opportunity**: An intruder must have the chance to enter the network, either because of flaws in your security plan, holes in a software program that open an avenue of access, or physical proximity to network components; if there is no opportunity to intrude, and the would-be hacker will go elsewhere.

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School of Computing Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, III Semester,

1st In-Sem. Examination

Course Code: ITN 1305 **Time: 1 Hour**

Course Name: Optical Fiber Communication **Max. Marks: 20**

Section – A

05X01 = 05 Marks

1. In optical fiber communications, the signal source is _____ waves.

A) Light B) Infrared

C) Radio D) Very low-frequency

2. An operating environment has many high-voltage devices. What would be the best medium of transmission?

A) The atmosphere B) Twisted-pair cable

C) Optical fiber D) Coaxial cable

3. In optical fiber, the outer layer is ___ and the inner layer is _____.

A) core, cladding B) cladding, core

C) transmit, reflect D) reflect, transmit

4. Optical fiber cables are highly immune to EMI because information is carried by:

A) light B) electrical means

C) magnetic means D) acoustic means

5. Multimode step index fiber has a large core diameter of range is _____.

A) 100 to 300 μm B) 100 to 300 nm

C) 200 to 500 μm D) 200 to 500 nm

Section – B

03X02 = 06 Marks

1. What is optical fiber?

2. What is single mode fiber?

3. **What is multimode fiber?**

Section – C

03X03 = 09 Marks

1. What is the tool used in splicing fiber optic cables?
2. What is optical fiber cable used for?
3. What is an optical Fiber cable connector?

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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School of Computing Skills

Session: 2020-21 (~~Winter~~ Summer Semester)

B. Voc. Program, III Semester,

1st In-Sem. Examination

Answer key

Course Code: ITN 1305 **Time: 1 Hour**

Course Name: Optical Fiber Communication **Max. Marks: 20**

Section – A

05X01 = 05 Marks

1. In optical fiber communications, the signal source is _____ waves.

A) Light B) Infrared

C) Radio D) Very low-frequency

ANS: (A)

2. An operating environment has many high-voltage devices. What would be the best medium of transmission?

A) The atmosphere B) Twisted-pair cable

C) Optical fiber D) Coaxial cable

ANS: (C)

3. In optical fiber, the outer layer is ___ and inner layer is _____.

A) core, cladding B) cladding, core

C) transmit, reflect D) reflect, transmit

ANS: (B)

4. Optical fiber cables are highly immune to EMI because information is carried by:

A) light B) electrical means

C) magnetic means D) acoustic means

ANS: (A)

5. Multimode step index fiber has a large core diameter of range is _____.

A) 100 to 300 μm B) 100 to 300 nm

C) 200 to 500 μm D) 200 to 500 nm

ANS: (A)

Section – B

03X02 = 06 Marks

1. What is optical fiber?

ANS: An optical fiber is a **thin fiber of glass or plastic that can carry light from one end to the other**. Optical fibers are mainly used in telecommunications, but they are also used for lighting, sensors, toys, and special cameras for seeing inside small spaces.

2. What is single mode fiber?

ANS: Single mode fiber is optical fiber that allows light to travel down a single path known as the fundamental mode. It features a core diameter of 8 to 9 microns. Single mode fiber can be used to transmit AV signals over extreme distances up to many miles or kilometers.

3. **What is multimode fiber?**

ANS: Multimode fiber is optical fiber that allows light to travel down multiple paths, also referred to as modes. It features a core diameter of 50 to 62.5 microns. Multimode fiber can be used to transmit AV signals in short to intermediate-distance applications, such as within a building.

Section – C

03X03 = 09 Marks

1. What is the tool used in splicing fiber optic cables?
Ans: Fiber Optic Tool Kits

Splicing fiber optic tool is used in the fiber optic splicing which is to melt the bare optical fiber together. Typical splicing fiber optic tools include **fiber optic cleaver, fusion splice, fiber splice protection sleeves**, heat oven etc.

2. What is optical fiber cable used for?
Ans: Fiber optic cables can carry enormous volumes of data at very high speeds. For this reason, fiber optic technology serves various purposes.
High-speed Internet: Fiber optic cables are less bulky, lighter, more flexible, and carry more data as compared to copper cables

Networking: Whether it is between computers within a building or across the buildings, fiber optic cable is always a preferred mode for faster networking.

Data centers: It is used for connecting edge data centers or for structured cabling within the data centers as well.

Defense application: Very high level of data security is required within military and aerospace applications. Fiber optic cables offer the ideal solution for data transmission in the defense sector.

3. **What is optical Fiber cable connector?**

An optical fiber connector is **a flexible device that connects fiber cables requiring a quick connection and disconnection**. Optical fibers terminate fiber-optic connections to fiber equipment or join two fiber connections without splicing. ... An optical fiber connector is also known as a fiber optic connector.