University of Mumbai
Examination May 2022
Program: Electronics and Telecommunications Engineering
Curriculum Scheme: Rev2019 Examination: TE Semester V
Course Code: ECCDLO5013 and Course Name: IT Infra & security
Time: 2 hours 30 minutes   Max. Marks: 80

Q1.	Choose the correct option for the following questions. All the questions are compulsory and carry equal marks
1	Which of the following services use TCP? 1.DHCP 2.SMTP 3.HTTP 4. TFTP 5. FTP
Option A:	1 and 2
Option B:	3 and 5
Option C:	1, 2 and 4
Option D:	1, 3, and 4
2.	You want to implement a mechanism that automates the IP configuration, including IP address, subnet mask, default gateway, and DNS information. Which protocol will you use to accomplish this?
Option A:	SMTP
Option B:	SNMP
Option C:	DHCP
Option D:	ARP
3.	Which of the following is private IP address?
Option A:	12.0.0.1
Option B:	168.172.19.39
Option C:	172.15.14.36
Option D:	192.168.24.43
4.	If you use either Telnet or FTP, which is the highest layer you are using to transmit data?
Option A:	Application
Option B:	Presentation
Option C:	Session
Option D:	Transport
5.	Which of the following is/are NOT an IT infrastructure component?
Option A:	IT Department
Option B:	Computer Hardware
Option C:	Operating System
Option D:	Data Management and storage
6.	The full form of Malware is
Option A:	Malfunctioned Software
Option B:	Multipurpose Software
Option C:	Malicious Software

Option D:	Malfunctioning of Security
7.	These are a collective term for malicious spying programs used for secretly monitoring someone's activity and actions over a digital medium.
Option A:	Malware
Option B:	Remote Access Trojans
Option C:	Key logger
Option D:	Spyware
8.	An attempt to harm, damage, or cause a threat to a system or network is broadly termed as
Option A:	Cyber-crime
Option B:	Cyber Attack
Option C:	System hijacking
Option D:	Digital crime
9.	Which form of access control enables data owners to extend access rights to other logons?
Option A:	MAC
Option B:	DAC
Option C:	Role Based (RBAC)
Option D:	Rule Based (RBAC)
10.	Your organization has become worried about recent attempts to gain unauthorized access to the R&D facility. Therefore, you are asked to implement a system that will require individuals to present a password and enter a PIN at the security gate before gaining access. What is this type of system called?
Option A:	Authorization
Option B:	Two-factor authentication
Option C:	Authentication
Option D:	Three-factor authentication

Q2	Solve any Two	10 marks each
A	Differentiate OSI & TCP/IP model. Explain different networking components	
B	Write a short note on challenges in the IT security plan.	
C	Compare RADIUS, TACACS, and TACACS+.	

Q3	Solve any Two	10 marks each
A	Define Malware. Write short notes on Trojans, Logic Bomb, Bots, Rootkits and write down the differences between them.	
B	What are the Database security requirements and how multilevel database security is implemented?	
C	Elaborate on the operating system security planning process.	

Q4	Solve any Two	10 marks each
A	Explain the authenticated sessions.	
B	What are the different possible attacks on a wireless network? How the wireless network is secured from various attacks?	
C	Elaborate in short 1. Cookie Stealing, 2. Cross-Site Request Forgery, 3. JavaScript Hijacking	