Reg. No.															

B.Tech. DEGREE EXAMINATION, MAY 2024

Sixth Semester

18CSC363J – COMPUTER NETWORKS

(For the candidates admitted during the academic year 2018-2019 to 2021-2022)

Note:

(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.

(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours | Max. Marks: 100

PART – A (20 × 1 = 20 Marks)

Answer **ALL** Questions

	Marks	BL	CO	PO
1. Which of the following is an example of Bluetooth? (A) Wide Area Network (B) Virtual Private Network (C) Local Area Network (D) Personal Area Network	1	1	1	1
2. Which topology requires a multipoint connection? (A) Ring (B) Bus (C) Star (D) Mesh	1	1	1	1
3. Which address is used to identify a process on a host by the transport layer? (A) Physical address (B) Logical address (C) Port address (D) Specific address	1	2	1	1
4. Which multiplexing technique is used to transmit digital signals? (A) FDM (B) TDM (C) WDM (D) CDM	1	1	1	1
5. Which is more efficient? (A) Parity check (B) Cyclic redundancy check (C) Block code (D) Random code	1	1	2	2
6. Sliding windows protocols works on _____ in which there is a two way communication simultaneously. (A) No duplex (B) Half duplex (C) Full duplex (D) Single duplex	1	2	2	2
7. Sliding window protocol keeps record of frame sequences sent and acknowledged when communication takes place between _____. (A) One user (B) Two users (C) Three users (D) Multi users	1	2	2	2
8. Which multiple access technique is used by IEEE 802.11 standard for wireless LAN? (A) CDMA (B) CSMA/CA (C) Aloha (D) Sloha	1	1	2	2

9. Which of the following is not an application layer service? 1 1 3 3

(A) Network virtual terminal (B) File transfer, access and management
(C) Mail service (D) Error control

10. The TTL field has value 10. How many routers (max) can process this datagram. 1 1 3 3

(A) 11 (B) 5
(C) 10 (D) 1

11. DHCP provides _____ to the client. 1 1 3 3

(A) IP address (B) MAC address
(C) URL (D) Server

12. The PDU stands for _____. 1 1 3 3

(A) Protocol Data Unit (B) Packet Data Unit
(C) Packet Deliver Unit (D) Packet Data Uniqueness

13. Transport layer aggregates data from different applications into a single stream before passing it to _____. 1 2 4 4

(A) Network layer (B) Data link layer
(C) Application layer (D) Physical layer

14. User datagram protocol is called connectionless because _____. 1 1 4 4

(A) All UDP packets are treated independently by transport layer (B) It sends data as a stream of related packets
(C) It is received in the same order as sent order (D) It sends data very quickly

15. What is the header size of a UDP packet? 1 1 4 4

(A) 8 bytes (B) 8 bits
(C) 16 bytes (D) 124 bytes

16. Which one of the following allows client to update their DNS entry as their IP address change? 1 2 4 4

(A) Dynamic DNS (B) Mail transfer agent
(C) Authoritative name server (D) POP

17. Which protocol provide E-mail facility among different hosts? 1 1 5 5

(A) SMTP (B) FTP
(C) SNMP (D) TELENET

18. TELNET is a _____. 1 1 5 5

(A) Search engine (B) Browser
(C) Protocol (D) Gateway

19. Which of the following is used by the browser to connect to the location of the internet resources? 1 2 5 5

(A) Linker (B) Protocol
(C) Cable (D) URL

20.	In asymmetric key cryptography, the private key is kept by _____. (A) Sender (B) Receiver (C) Send and receiver (D) All the connected devices to the network	1	1	5	5

PART – B (5 × 4 = 20 Marks)
Answer **ANY FIVE** Questions

		Marks	BL	CO	PO
21.	Discuss about the classification of computer networks.	4	2	1	1
22.	Elaborate multiplexing and its advantages.	4	2	1	1
23.	Compare pure ALOHA and slotted ALOHA.	4	2	2	2
24.	Discuss about error detection and error correction.	4	2	2	2
25.	Describe about logical addressing.	4	2	3	3
26.	Discuss about process to process communication.	4	2	4	4
27.	Describe about TELNET and its features.	4	2	5	5

PART – C (5 × 12 = 60 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO
28. a.	Describe in detail about the OSI model and its layers along with functionalities.	12	3	1	1
	(OR)				
b.	Compare and contrast the features of FDM and TDM in detail.	12	3	1	1
29. a.	Elaborate the concept of CRC with an working example of your choice.	12	3	2	2
	(OR)				
b.	Differentiate between CSMA/CD and CSMA/CA/	12	3	2	2
30. a.	Examine the fundamental principles and functionalities of IPv4 in networking.	12	3	3	3
	(OR)				
b.	Explore the DHCP, its role and functions in Network management.	12	3	3	3
31. a.	Examine the features and applications of the UDP in computer networking.	12	4	4	4
	(OR)				
b.	Investigate the stream control transmission (SCTP) and its role in modern networking.	12	4	4	4

32. a.	Examine the architecture, protocols and security considerations in E-mail communication.	12	4	5	5
	(OR)				
b.	Explore the multifaceted aspects of network security and address its key concepts, strategies and challenges.	12	4	5	5

* * * * *