

Reg. No.

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**B.E. / B.TECH. DEGREE EXAMINATION, MAY 2023**

Third Semester

**AD18401 – INTELLIGENT COMPUTER NETWORKS***(Artificial Intelligence and Data Science)***(Regulation 2018A)****TIME: 3 HOURS****MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	To understand the concepts of computer networks and Internet.	2
CO 2	To categorize different application layer level protocols based on user's request.	4
CO 3	To apply the knowledge of addressing scheme and various routing protocols in data.	3
CO 4	To distinguish the link, physical layers and error detection-correction of data.	4
CO 5	To apply the intelligent awareness of network traffic.	3

**PART- A (10x2=20Marks)**

(Answer all Questions)

	CO	RBT LEVEL
1. What are the three criteria necessary for an effective and efficient network?	1	2
2. How to improve the throughput when sending a packet from one network to another network?	1	2
3. Justify the importance of inverse domain.	2	3
4. Write the importance of using socket().	2	3
5. Analyze how about congestion control and in which layer it is implemented.	3	4
6. Examine the use of Hyper Text Transport Protocol (HTTP).	3	4
7. Apply Bit stuffing for 11111110 10001000 10111111 01111011.	4	4
8. Difference between IPV4 and IPV6.	4	4
9. Compare supervised and Unsupervised learning.	5	4
10. Define HMLD.	5	2

**PART- B (5x 14=70Marks)**

	Marks	CO	RBT LEVEL
11. (a) Discuss in detail about the various methodologies by which you can retrieve data from Internet.	(14)	1	4

(OR)

(b) Illustrate in detail about OSI model and its service. (14) 1 4

12. (a) Demonstrate in detail about Domain Name System. (14) 2 4

(OR)

(b) Illustrate in detail about services and functions of application layer. (14) 2 4

13. (a) Discuss and analyze in detail about UDP. (14) 3 2

(OR)

(b) Explain about different congestion control algorithm. (14) 3 2

14. (a) Elaborate the error detection and error correction techniques with example. (14) 4 4

(OR)

(b) The message 11001001 is to be transmitted using CRC error detection algorithm. Assuming the CRC polynomial to be  $x^3 + 1$ , determine the message that should be transmitted. If the second left most bit is corrupted, show that it is detected by the receiver. (14) 4 4

15. (a) Construct your own network, develop the datagram for forwarding table for all the nodes. The links are labeled with relative costs. The tables should forward each packet via the least cost path to destination. (14) 1 4

(OR)

(b) Discuss in detail about Intrusion detection system. (14) 1 4

**PART- C (1x 10=10Marks)**

(Q.No.16 is compulsory)

		Marks	CO	RBT LEVEL
16.	Examine the Transmission Control Protocol. Discuss in detail about TCP header formats and TCP Connections with neat sketch.	(10)	3	5