

END TERM EXAMINATION

FOURTH SEMESTER [MCA] MAY-JUNE 2018

Paper Code: MCA-206

Subject: Advanced Computer Networks

Time: 3 Hours

Maximum Marks: 75

Note: Attempt all questions as directed. Internal choice is indicated.

Q1 Answer the following questions in brief: (10x2.5=25)

- (a) What is the role of SACK in TCP?
- (b) List the trailer fields in the CS layer of AL 5.
- (c) What do you mean by Message Authentication and Entity Authentication?
- (d) Describe the term Home Agent and Foreign Agent in Mobile IP.
- (e) What is Hidden and Exposed terminal problem?
- (f) What is Route Optimization in MIPv6?
- (g) Explain briefly one-way Hash function.
- (h) The AS number in an organization is 36709. Find the range of multicast addresses that the organization can use in Glop block.
- (i) What are the requirements of cluster analysis? Differentiate between Wi-Fi and Wimax.
- (j) Using the RSA public key crypto system with $a = 1$, $b = 2$. If $P = 13$, $q = 31$ and $d = 7$, find how the string 'GGSIP' encrypted.

UNIT-I

- Q2 (a) Discuss the need or lack of need for a network layer (OSI layer 3) in a broadcast network. (4.5)
- (b) How does CSMA/CD differ from CSMA/CA? Draw a flow chart to depict CSMA/CA procedure. (8)

OR

- Q3 (a) What are the common fast Ethernet and Gigabit Ethernet implementations? Explain each in brief. (6)
- (b) What are the three types of frames used by Wireless LAN? Explain the purpose of NAV. (6.5)

UNIT-II

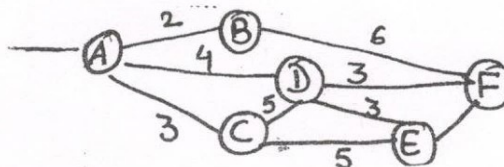
- Q4 (a) What are four different forms of IP addressing? Compare and contrast IGMP protocol with PIM protocol. (8.5)
- (b) What are general problems of mobile IP regarding security and support of quality of service? Explain in detail. (4)

OR

- Q5 (a) Describe UNI cell and NNI cell format. (6)
- (b) Why, AAL5 called SEAL? Discuss the address binding in IP over ATM. (6.5)

UNIT-III

- Q6 (a) Using Dijkstra's algorithm compute shortest path from router A to the remaining nodes in the below network: (6)



P.T.O.

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