U.S.N

P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Sixth Semester, B.E. - Computer Science and Engineering
Semester End Examination; May/June - 2019
Computer Networks

Time: 3 hrs   *Max. Marks: 100*

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1 a.	List and explain various services of network layer.	10
b.	Summarize and brief the terms that measure network layer performance.	10
2 a.	Describe the techniques of congestion control with necessary sketch.	10
b.	Solve the following for given classless address 192**.**168**.**1**.**64/26. Find;	10
	i) Network address ii) Broadcast address iii) Host addresses	

UNIT - II

3 a.	Explain in detail ICMPv4 general message formats.	10
b.	Address any two agents found in Mobile IP. Briefly explain its involvement in three phase communication.	10
4 a.	Address any two properties of least cost trees. Also describe an algorithm that runs by its node independently and asynchronously with an example.	10
b.	Summarize the following concepts with an example :	10
	i) Two node loop ii) Split horizon iii) Poison reverse	

UNIT - III

5 a.	Demonstrate the process of Encapsulation and Decapsulation that takes part in transport layer.	6
b.	Define push and pull operation with a neat sketch.	6
c.	Explain the process of stop and wait protocol with necessary sketch.	8
6 a.	Estimate the required transmissions for the following scenario.	10
	If GB3, where every 5th packet is lost, total number of packect to be transmitted from sender to reciever is 10.	
b.	Distinguish between stop and wait, GBN and selective repeat.	10

UNIT - IV

7 a.	Explain the different phases of TCP with suitable sketches.	12
b.	Explain the mechanism of congestion detection with reference to slow start and additive increase.	8
8 a.	Explain the process of UDP communication in standard client server.	10
b.	Design and brief the TCP server for each client communication.	10

UNIT - V

9 a.   Design the architecture of E-mail with necessary explanation.   10

   b.   Summarize the following with an example for each :

     i) Priority queue   10

     ii) Weighted fair

10 a.   Explain the taxonomy of attacks with relation to security goals.   10

   b.   Design a general idea briefing symmetric key cipher.   10

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