

Duration : 3 Hrs

Maximum Marks: 80

- Note: i) Question no 1 is compulsory  
ii) Solve any three out of remaining questions  
iii) Figure to the right indicate full marks

Q1 Answer the following questions (Any four) [20]

- a) What is the difference between switch and hub?
- b) What do we mean IP is best effort delivery service?
- c) What is bit stuffing? Explain with example.
- d) Who decides the senders window size? Justify your answer.
- e) If UDP is so powerless, why would a process want to use it?

Q2 a. What is congestion? Is it necessary to control congestion? Compare open loop and close loop congestion control. [10]

Q2 b. What is an open system? Explain OSI model by drawing sender, receiver and an intermediate node and various communication between them. [10]

Q3 a. What is transmission impairment? Explain in details. [10]

Q3 b. What is classful addressing? Explain various types of IP address classes in details. [10]

Q4 a. What is flow control? Explain GO-Back-N and Selective repeat ARQ. [10]

Q4 b. What is ALOHA? Compare slotted and pure ALOHA. [10]

Q5 a. What are ways to improve QoS? Explain anyone. [10]

Q5 b. Explain TCP header in details. [10]

Q6 write a note on any two. [20]

- a) Subnetting and Super netting
  - b) Network topologies with advantages and disadvantages.
  - c) TCP services
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