

B.E. (Computer Engineering) Fifth Semester (C.B.S.)

TCP / IP and Internet

P. Pages : 2

Time : Three Hours

**NRT/KS/19/3446**

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Differentiate between OSI and TCP/IP model. **4**
- b) Discuss about Internetworking concepts. **5**
- c) What is RFC? How it is allocated to Internet standards. **4**

OR

2. a) What are the different Internet standards. State its list and functions. **7**
- b) What is mean by underlying technologies. Discuss about wireless LAN's in detail. **6**
3. a) What is subnet and supernet addressing schemes in IPv4. Explain IPv4 datagram format. **6**
- b) Given IP address 201.14.78.65 & the subnet mask 255.255.255.224.
 - i) What is class of IP address? **1**
 - ii) What is subnet address? **2**
 - iii) How many no. of hosts attached? **2**
 - iv) What is first & last hosts address? **2**

OR

4. a) Differentiate between IPv4 to IPv6. **4**
- b) State different Network layer protocols & Explain process of mapping of Internet protocol address to physical address and vice versa with the help of diagram. **6**
- c) Write note on Fragmentation. **3**
5. a) Explain ICMPv4 in details. How it is useful in TCP/IP? **6**
- b) State the different functions of Routing protocols. Explain RIP protocol in details. **8**

OR

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| 6. | a) | Explain ICMPv6 in details, & How it is useful in TCP/IP. | 6 |
| | b) | What is OSPF? Explain with the help of example of OSPF. | 8 |
| 7. | a) | What is mobile IP? State its phases & problems in details. | 7 |
| | b) | Discuss about multicast routing protocols specially IGMP. | 6 |

OR

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| 8. | a) | Write short notes on :- | 13 |
| | i) | MOSPF | |
| | ii) | DVMRP | |
| | iii) | CBT | |
| 9. | a) | Explain congestion control in details Discuss about control connection and data connection in detail. | 7 |
| | b) | What are the different TCP services & features explain in details. | 7 |

OR

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| 10. | a) | Explain process of TCP connection state transition diagram with the help of diagram. | 6 |
| | b) | What is socket in transport layer? Explain client socket and server socket responsibilities in details with the help of diagram. | 8 |
| 11. | a) | Explain DHCP protocol in details. & what are the different types of DHCP configurations. | 6 |
| | b) | Discuss difference between Telnet and R Login. | 4 |
| | c) | How TFTP is more useful then FTP. Discuss. | 3 |

OR

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| 12. | | Write short notes on any three . | |
| | i) | SSH | 4 |
| | ii) | POP3 | 4 |
| | iii) | MIME | 5 |
| | iv) | IMAP | 4 |
