Tribhuvan University
Institute of Science and Technology
2080
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Bachelor Level / Second Year/ Forth Semester/ Science   Full Marks: 60
Computer Science and Information Technology (CSC 258)   Pass Marks: 24
(Computer Network)   Time: 3 hours.
(NEW COURSE)

Candidates are required to give their answers in their own words as for as practicable.
All figures in the margin indicate full marks.

Section A

Long Answer Questions.
Attempt any TWO questions.   (2×10=20)

1. What is classless addressing? Explain distance vector routing with a suitable example.
   (3+7)

2. What is flow control? How does stop-and-wait ARQ protocol handle error? Where does this protocol reside in OSI layer?   (2+6+2)

3. Explain TCP header with a neat diagram. Highlight on its uses.   (7+3)

Section B

Short Answer Questions.
Attempt any EIGHT questions.   (8×5=40)

4. What do you understand by packet switching? Explain. What are its advantages and disadvantages?   (3+2)

5. Explain different types of network types.   (5)

6. Suppose you are given an IP address 172.16.0.0, perform subnetting and divide the given network into 2 subnets. Calculate total number of hosts that can be configured, range of the IP addresses.   (5)

7. Differentiate between link state and distance vector routing.   (5)

8. What is socket programming? Explain token bucket algorithm with an example. (1+4)

9. Differentiate between IMAP and POP3. Explain SNMP.   (3+2)

10. Explain the architecture of NGN.   (5)

11. Highlight on the use of PPP. What are the functions of Media Access Control?   (2+3)

12. Write short notes on: (2×2.5=5)
    a. IPv6
    b. Microwave