3 (Sem–3/CBCS) CSC HC 3

2023

COMPUTER SCIENCE

(Honours Core)

Paper : CSC–HC–3036

(Computer Networks)

Full Marks : 60

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

1. Answer the following questions :   1×7=7

   (a) OSI reference model has _____ layer.

   (b) _____ device forwards packets between networks by processing the routing information included in the packet.

   (c) _____ layer is concerned with packets of data.

(d) _____ topology require a central controller or hub.

(e) A local telephone network is an example of a _____ network.

(f) _____ was the name of the first network.

(g) URL stands for _____.

2. Write short notes on :   2×4=8

(a) DNS protocol

(b) Go-Back-N ARQ protocol

(c) Repeaters and Router

(d) CSMA/CD

3. Answer the following questions : *(any three)*
       5×3=15

(a) What is Shortest Path Routing Algorithm ?

(b) Describe Sliding Window Protocols used in data link layer.

(c) Explain Error Recovery Protocol.

(d) Discuss the important features of FDM and TDM multiplexing technique.

(e) Describe Network Topology. What are the objectives of Network Topology ?

4. Answer the following questions : *(any three)*
       10×3=30

(a) Explain OSI reference model.

(b) Explain the principle of digital transmission. How does delta modulation improve the performance of PCM (Pulse Code Modulation) ?

(c) What is Routing Algorithm ? Explain different types of Routing Algorithm.

(d) What is Multiplexing ? Explain different types of Multiplexing techniques.

(e) Write a brief note on stop and wait protocol.

(f) Explain the different addressing schemes in IPv4.

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