



WEST BENGAL STATE UNIVERSITY
B.Sc. Programme 6th Semester Examination, 2021

CMSGDSE04T-COMPUTER SCIENCE (DSE2)

COMPUTER NETWORKS

Time Allotted: 2 Hours

Full Marks: 50

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.*

1. Answer any **five** questions from the following: 2×5 = 10
- (a) What do you mean by data communication?
 - (b) Differentiate between Hub and Switch.
 - (c) What is a Network Topology?
 - (d) For n devices in a network, what is the number of cable links required for a mesh, ring, bus and star topology?
 - (e) Assume six devices are arranged in a mesh topology. How many cables are needed? How many ports are needed for each device?
 - (f) What is NOS?
 - (g) How do guided media differ from unguided media?
 - (h) What do you mean by subnetting?

Answer any five questions from the following 8×5 = 40

2. (a) Explain Mesh and Star Topology with the help of an example. 4
(b) How do the layers of the Internet model correlate to the layers of the OSI model? 4
3. (a) Explain circuit switching and packet switching. 3+3
(b) What do you mean by modulation? 2
4. (a) What is a Network? 2
(b) Briefly describe different types of networks based on their sizes. 4
(c) Differentiate between the terms 'Internet' and 'Intranet'. 2
5. (a) Which layers in the Internet model are the network support layers and user support layers? 2
(b) What are the responsibilities of the presentation layer in the OSI model? 3

- (c) What is the difference between a port address, a logical address and a physical address? 3
6. (a) Compare between UDP and TCP. 3
- (b) What is the significance of the twisting in twisted-pair cable? 2
- (c) Mention the advantages and disadvantages of optical fiber cable over twisted-pair and coaxial cable. 3
7. (a) Discuss the concept of sliding window protocol. 2
- (b) Compare and contrast flow control and error control. 3
- (c) Briefly discuss Stop and Wait protocol with the help of an example. 3
8. Write short notes on any *two* of the following: 4+4
- (a) HTTP
- (b) DNS
- (c) Gateway
- (d) Repeater.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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