WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 3rd Semester Supplementary Examination, 2021

CMSACOR07T-COMPUTER SCIENCE (CC7)

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

GROUP-A

1.   Answer any *four* questions from the following: 2×4 = 8

(a) How is HTTP related to www?

(b) Why are the conducting wires in a twisted pair cable twisted?

(c) Define framing and the reason for its need.

(d) What do you mean by transmission impairment?

(e) What is a signal element and a data element?

(f) What is the difference between omnidirectional waves and unidirectional waves?

(g) What is DNS?

GROUP-B

Answer any *four* questions from the following   8×4 = 32

2. (a) How does FDM combine multiple signals into one?   4+2+2

(b) What are bit rate and baud rate?

(c) What is the difference between multimode and single mode optical fiber?

3. (a) What are the drawbacks of mesh topology?   3+3+2

(b) With suitable diagram, explain the Manchester and differential Manchester encoding techniques.

(c) Define blocking in a switched Network.

4. (a) What are the disadvantages of STOP and WAIT Protocol?   2+2+4

   (b) Define piggybacking and its usefulness.

   (c) Describe the CSMA method without collision Detection.

5.   Write short notes on: (any ***two***)   4+4

   (i)   E-mail system

   (ii)   WWW

   (iii) CRC.

6. (a) What is the role of ARP for mapping Logical to Physical address?   6+2

   (b) Write down the difference between Hub and switch.

7. (a) Compare and contrast a circuit-switched network and a packet-switched network.   6+2

   (b) What is the difference between a router and a gateway?

8. (a) A complex low-pass signal has a bandwidth of 200 kHz. What is the minimum sampling rate for this signal?   2+2+4

   (b) What is interleaving process?

   (c) Briefly describe radio waves technology and its application.

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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