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Name of Examination : **Summer 2021** - (Preview)

Course Code & Course Name : **CO355UX - Internet And Communication Technology**

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Maximum Marks : **60**   Duration : **3 Hrs**

[Edit] [Print] [View Answer Key] [Close] **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. *All questions are compulsory.*
2. *Solve any two sub questions from Que no 1, 2 and 3*
3. All the sub questions in Que No 4 and 5 are compulsory
4. *Illustrate your answer with suitable figures/sketches wherever necessary.*
5. *Assume suitable additional data; if required.*
6. *Use of logarithmic table, drawing instruments and non programmable calculators is allowed.*
7. *Figures to the right indicate full marks.*

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1) a) **What is multiplexing? Explain various categories of multiplexing?** [6]

b) **Four 1 kbps connections are multiplexed together. A unit is of 1 bit Find** [6]
   (i) the duration of 1 bit before multiplexing
   (ii) the transmission rate of the link
   (iii) the duration of a time slot
   (iv) the duration of a frame.

c) **We have four sources, each creating 250 characters per second. If the interleaved unit is a character and 1 synchronizing bit is added to each frame, find** [6]
   (i) the data rate of each source,
   (ii) the duration of each character in each source,
   (iii) the frame rate

2) a) **State and explain various classes of transmission media** [6]

b) **Draw and explain source to destination delivery by the network layer** [6]

c) **Draw and explain taxonomy of switched networks** [6]

3) a) **What is the maximum effect of a 2-ms burst of noise on data transmitted at the following rates?** [6]
   a. 1500 bps
   b. 12 kbps
   c. 100 kbps
   d. 100 Mbps

b) **Draw and explain bit stuffing and un-stuffing in data link control** [6]

c) **Write sender site and receiver site algorithm for stop and wait protocol** [6]

4) a) **Write a procedure for pure ALOHA protocol** [6]

b) **Draw and explain flow diagram for the CSMA/CD** [6]

5) a) **Draw and explain frequency division multiple access** [6]

b) **Draw and explain time division multiple access** [6]

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