Reg. No. | | | | | | | | | |

CSH 403

First Semester M.Sc. Degree Examination, December 2018/January 2019
COMPUTER SCIENCE
Data Communications and Computer Networks

Time : 3 Hours Max. Marks : 70

Note : *Answer **any five full** questions. **All** questions carry **equal** marks.*

1. a) What are the functions of protocol in any data communication system ?
   b) Discuss the principle characteristics of data Communication systems.
   c) Express the clock period in terms of all units system having frequency ranges from 900 Hz to 10 KHZ. **(4+6+4)**

2. a) Compare and contrast wrapping and unwrapping data transmissions.
   b) Why the standards are very essential in communication system ? Explain any five important standards of communication and network system.
   c) Calculate the channel capacity of the cable TV data transmission system, channel having bandwidth ranges from 800 KHz to 10 GHz, SNR value is 20 dB and signal levels are 32 to 64. **(4+6+4)**

3. a) Mention the various computer network criteria.
   b) Generate an asynchronous transmission signals for a string, “SIMPLE”.
   c) Describe briefly, analog to analog encoding techniques. **(4+6+4)**

4. a) Describe the classification of computer networks with various parameters.
   b) Discuss the importance of various POLAR coding systems in communication system.
   c) Explain the bit rate and baud rate in communication systems with suitable examples. **(4+6+4)**

5. a) Describe the architecture of ISO-OSI reference model and TCP/IP reference model.
   b) Discuss the design issues of physical layer and data link layer. **(7+7)**

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6. a) Explain the various services of network layer.
   b) Describe the importance of multiplexing in communication system. **(7+7)**

7. a) Explain the significant features of switching techniques in commutation system.
   b) What are the design issues of network layer ? **(7+7)**

8. a) Discuss the services of transport layer and session layer.
   b) Explain the importance of SNMP, ICMP, ARP and TELNET services. **(7+7)**

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