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Roll No. :

333452(33)

B. E. (Fourth Semester) Examination 2020

APR - MAY 2022

(New Scheme)

(IT Branch)

**TELECOM SWITCHING & COMPUTER
NETWORKS**

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory and carries 2 marks. Attempt any two from (b), (c) and (d) which carry 7 marks each.

Unit-I

1. (a) Define multiplexing and name its types. 2
- (b) Explain the major components of telephony system. 7

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- (c) Explain PSTN. What are the services provided by ISDN? 7
- (d) Differentiate circuit switching, packet switching and message switching with different parameters. 7

Unit-II

- 2. (a) Differentiate Service point, Logical and Physical address. 2
- (b) Explain the function of each layer of OSI model. 7
- (c) What do you mean by Redundancy? Also explain cyclic redundancy check with an example. 7
- (d) What are the parameters to be considered in flow control? In stop and wait flow control, define and discuss the handling of : 7
 - (i) A damaged frame
 - (ii) Lost frame

Unit-III

- 3. (a) What is needed to develop CSMA? 2

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- (b) What is ALOHA? Compare Slotted-ALOHA and Pure-ALOHA. 7
- (c) Compare Access method, addressing, Frame format and data rates for Standard Ethernet, Fast Ethernet and Gigabit Ethernet. 7
- (d) Write short notes on : (any two) 7
 - (i) Token Ring
 - (ii) FDDI
 - (iii) TCP header format

Unit-IV

- 4. (a) Define the term Traffic Engineering. 2
- (b) Explain frame relay with the help of a diagram. 7
- (c) Name the X.25 frame types and write their functions. 7
- (d) Describe ATM architecture with suitable diagram. 7

Unit-V

- 5. (a) What do you mean by cryptology and cryptanalysis? 2

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- (b) Explain the following traditional cryptography : 7
- (i) Substitution
 - (ii) Transposition
- (c) Explain RSA algorithm with suitable example. 7
- (d) Write short note on the following : (any one) 7
- (i) Digital Signature
 - (ii) Diffie-Hellman public key method