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Printed Pages: 02 **Sub Code: RCA402**

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MCA

(SEM IV) THEORY EXAMINATION 2017-18

COMPUTER NETWORK

Time: 3 Hours ***Total Marks: 70***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a. Define Radio wave

b. Define Protocol. Give the need for Protocol *Layering*

c. Explain Nyquist Bit Rate .

d. Write about CSMA/CD protocol

e. Explain *burst error* .

f. Write about Socket?

g. *Differentiate between* Symmetric Key Encryption and Asymmetric Key Encryption

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SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a. What is switching? Briefly explain different Methods of Switching

b. Define Data Communication .Describe Fundamental characteristics of Data Communication

c. Briefly explain about IP Addressing. *Differentiate between classful addressing and classless addressing*

d. What is congestion? Define congestion control with a suitable Example.

e. Briefly Explain Electronic mail system.
Differentiate between POP3 and IMAP protocol

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a) What is Network topology .Explain different types of topologies

(b) Explain Transmission media .Differentiate guided media from unguided media .

4. Attempt any *one* part of the following: 7 x 1 = 7

(a) Describe hamming code. How it is used for error detection and correction? Illustrate with the help of a suitable example.

(b) A classless address is given as 167.199.170.82/27. Find the

I. The number of addresses in the network

II. First address

III. Last address

5. Attempt any *one* part of the following: 7 x 1 = 7

(a) Explain any two connecting devices: hubs, link-layer switches, and routers

(b) What are the performance measure criteria of a Network? Explain.

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6. Attempt any *one* part of the following: 7 x 1 = 7

(a) *Explain any two* protocol
a. UDP b. TCP c. SCTP

(b) Define Connectionless and Connection-Oriented Protocols

7. Attempt any *one* part of the following: 7 x 1 = 7

(a) Define Cryptography .List four Cryptography Primitives

(b) Define Application-Layer Paradigms

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