

**M.C.A. SEM - III (CHOICE BASED CREDIT SYSTEM 2011 &
2012 COURSE) : WINTER - 2017
SUBJECT: COMPUTER NETWORKS**

Day : **Monday**
Date : **13/11/2017**

Time: **02.00 PM TO 05.00 PM**
Max. Marks: 100

W-2017-1696

N.B.:

- 1) Attempt **ANY FOUR** questions from Section – I and **ANY TWO** questions from Section – II.
 - 2) Answers to both the sections should be written in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION – I

- Q.1** Explain OSI Reference model with neat diagram. [15]
- Q.2** What is Multiplexing? With neat diagram explain different types of Multiplexing. [15]
- Q.3** What is Switching? Explain with diagram Packet Switching and Message Switching. [15]
- Q.4** What is Routing? Explain working mechanism of Hierarchical and Multicast Routing. [15]
- Q.5** Write short notes on **ANY THREE** of the following: [15]
- a) Concept of 4G Networks
 - b) Data Encryption
 - c) MANET
 - d) IMAP

SECTION – II

- Q.6** An organization is granted the block with an IP address 211.17.180.124. The administrator want to create 32 subnets [20]
- a) Find subnet mask.
 - b) Find the number of address in each subnet.
 - c) Find the number of valid host in each subnet.
 - d) Find the first and last address in subnet number 1.
- Q.7** An university wants ERP implementation for 32 constituent units split over various cities in India. Being network analyst, suggest proper network topologies and security measures for the same. [20]
- Q.8** a) Identify the class of IP addresses: [10]
- i) 7.9.11.13
 - ii) 128.127.128.129
 - iii) 221.240.0.224
 - iv) 193.223.245.127
- b) Explain Shortest Path Routing algorithm in detail. [10]

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