2C8122
MCA II - Sem. (Main / Back) Exam., - 2023
MCA – 202 Computer Networks

Time: 3 Hours

Maximum Marks: 70

Instructions to Candidates:

Attempt all ten questions from Part A. All five questions from Part B and three questions out of five questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1.   NIL

2.   NIL

[10×2=20]

PART – A

(Answer should be given up to 25 words only)

All questions are compulsory

Q.1   State the key components of data communication system.

Q.2   What do you mean by a network protocol?

Q.3   What is PSTN?

Q.4   What is PPP?

Q.5   What is the role of gateway in a network?

Q.6   What do you understand by a switched ethernet?

Q.7   What does OSPF stands for?

Q 8 State any two difference between IPV4 & IPV6.

Q 9 What is telnet?

Q 10 What do you mean by an unauthorized access in a network? [5×4=20]

PART – B

(Analytical/Problem solving questions)

Attempt all five questions

Q.1 What is OSI model? State the key functions of every layer of this model.

Q.2 What is FM modulation? Explain.

Q.3 State and explain the features of Virtual LAN.

Q.4 Differentiate between link state routing and distance vector routing mechanisms.

Q.5 What is DNS server? Explain its working. [3×10=30

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions)

Attempt any three questions

Q.1 Explain the TCP/IP model. Why it is a preferred model in networking?

Q.2 What do you mean by error detection and correction in network? Explain the Hamming code algorithm used for error correction.

Q.3 State and explain any two MAC protocols.

Q.4 Write notes on –

(a) RIP   (b) UDP

Q.5 What is Cryptography? Explain the encryption and decryption mechanism and the role of digital signature, public and private keys in security maintenance.