

BACHELOR OF SCIENCE (COMPUTER SCIENCE) (CBCS - 2018 COURSE)
T.Y.B.Sc.(Computer Science) Sem-VI :SUMMER- 2022
SUBJECT : DATA COMMUNICATION & NETWORKING-II

Day : Thursday
Date : 14-07-2022

S-20136-2022

Time : 11:00 AM-02:00 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
 - 3) Draw neat and labeled diagram wherever necessary.
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Q.1 Attempt **ANY TWO** of the following : **(12)**

- a) Explain design issues and functionality of physical layer.
- b) What is dynamic routing? State its features.
- c) Describe the characteristics of unrestricted simplex protocol.

Q.2 Attempt **ANY TWO** of the following : **(12)**

- a) Compare and contrast - near and far terminals.
- b) Write a note on J₂ME.
- c) Explain shortest path algorithm in detail.

Q.3 Attempt **ANY TWO** of the following : **(12)**

- a) Define Cryptography. Explain asymmetric cryptography in detail.
- b) Differentiate between FDMA and TDMA.
- c) Describe the frame structure with help of appropriate diagram.

Q.4 Attempt **ANY THREE** of the following: **(12)**

- a) Write a note on internet protocol.
- b) Differentiate between connection oriented and connectionless services.
- c) Explain MAC in brief.
- d) List any four functions performed by network layer.

Q.5 Attempt **ANY FOUR** of the following : **(12)**

- a) Describe the structure of data link layer.
- b) What is ISDN? Explain narrow-band ISDN.
- c) Discuss selective repeat technique used for avoiding congestion.
- d) What is hamming code?
- e) Write a note on firewall.
- f) Explain packet switching in detail.
