[ 23 HKPD1SNP- 24M ]

**M.Sc.IT 1st Semester (NEP) Exam. 2023 (W)**

**M.Sc.IT (DSC)**

*( Fundamentals of Networking and Web Technology)*

[ CA S1-03 ]

*Full Marks* : 50

*Time* : 2 hours

*The figures in the right-hand margin indicate marks.*

1. Answer any *four* of following questions: $10 \times 4 = 40$

(*a*) Describe the OSI model and discuss the significance of each layer in the context of networking.

(*b*) Specify the use of topology in computer network. Write about the key factors need to be considered during the choice of a proper topology. Explain architecture, advantages and disadvantages of Bus topology and star topology. $1 + 2 + 7 = 10$

(*c*) What is the necessity for the implementation of switching in computer networking ? Explain the concept of circuit switching and packet switching. $2 + 4 + 4 = 10$

(*d*) Discuss the concept of Guided media and unguided media. Describe the three major classes of guided media used in data communication with example.

(*e*) Discuss the functioning of a web server and web browser. Give two examples each for web server and web browser. $7 + 3 = 10$

(*f*) What is CSS and how is it used in web page designing ? What is an embedded style sheet and how is it different from an external style sheet ?

(g) How do you create a hyperlink in a HTML document ? Write HTML code to insert an image a table of two colums and three rows with same data. Describe briefly the three types of HTML list with their tags. 6 + 4 = 10

2. Answer any *two* questions from the following: 5 × 2 = 10

(a) Write a javascript program to calculate the factorial of a given number.

(b) Write the use of XML. Explain the similarities and difference between XML and HTML.

(c) Write an HTML program to insert students information containing the HTML elements checkbox, label, taxtbox, radio button, alert message, button etc.

(d) Explain the concept of IP Address and its different classes.