

**MASTER OF LIBRARY AND INFORMATION SCIENCE  
EXAMINATION, 2023**

(1st Year, 1st Semester)

**INFORMATION & COMMUNICATION TECHNOLOGY**

**PAPER – ML-06**

Time : Two hours

Full Marks : 50

Answer *all* the questions.

1. Write C-programs for the following problems (any two):

5×2=10

- a) Calculate Income Tax according to the following logic. Income should be taken during run time.

The tax rates are

0–3 lakh – nil

3–6 lakh – 5%

6–9 lakh – 10%

9–12 lakh – 15%

12 – 15 lakh – 20%

above 15 lakh – 30%

- b) Print the following pattern through nested loop:

5 4 3 2 1

5 4 3 2

5 4 3

5 4

5

[ 2 ]

- c) Check whether a number is Palindrome or not. Take input during run time.

Hints: A palindromic number is a number (such as 16461) that remains the same when its digits are reversed.

- d) Convert given days into Years, Months and Days. Take input from keyboard during runtime.

Hints: 1 Year = 365 days and 1 Month = 30 days

- e) Calculate and print the summation of squares of the first 10 natural numbers.

Clue:  $sum = 1 + 4 + 9 + \dots$

2. a) What is process management and how does an operating system support it?

OR

- b) What are the different types of operating systems, and how do they differ from each other?

3. a) What are entities, attributes, and relationships in the E-R model, and how do they interact with each other?

OR

- b) What are the different types of Database Management System (DBMS) and how do they differ from each other?

[ 3 ]

4. a) Discuss different forms of CSS with proper HTML codes. Write HTML code for the following table with 1 header row and 2 data rows.  $5+5=10$

| First Name | Last Name | Roll No. |
|------------|-----------|----------|
|            |           |          |
|            |           |          |

OR

- b) Explain with example how Javascript can be used with HTML code. Write a Javascript function in an HTML file to show the message "Hello! Everybody" when you call it.  $5+5=10$
5. Write short notes (any *two*):  $5+5=10$
- i) Linux file system
  - ii) Object-oriented databases
  - iii) Javascript objects
  - iv) Comparison between XML and HTML.