2403061

UG (CBCS) (First Year) Annual EXAMINATION, 2024

B. Sc. COMPUTER SCIENCE

Problem Solving Using Computer

COMP101 TH

Time : 3 Hours]   [*Maximum Marks : 50*

The candidates shall limit their answer precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *Five* questions in all, selecting *one* question each from Section B to Section E. Section A is compulsory. All questions carry equal marks.

Section A

(Compulsory Question)

1. Attempt the following :   10×1=10

   (i)   In flow chart, diamond shaped symbol is used to represent :

      (a) Decision box

      (b) Statement box

      (c) Error box

      (d) If-statement box

   (ii) Part of algorithm which is repeated for the fixed number of times is classified as :

      (a) Iteration

      (b) Selection

      (c) Sequence

      (d) Reverse action

(iii) Final step in producing a program is :

    (a) Implementation and documentation

    (b) Storing the data

    (c) Getting the output

    (d) Searching the input

(iv) Set of diagrams and notes that accompany program implementation is known as :

    (a) Program execution

    (b) Program planning

    (c) Program documentation

    (d) Program existence

(v) The smallest unit of data in computer is :

    (a) Byte

    (b) Nibble

    (c) Bit

    (d) KB

(vi) The last on the hierarchy scale of memory devices is :

(a) Main memory

(b) Secondary memory

(c) TLB

(d) Flash drives

(vii) Which of the following IC was used in the third generation of computers ?

(a) SSI

(b) MSI

(c) LSI

(d) Both (a) and (b)

(viii) ....is used to create an object.

(a) Class

(b) Constructor

(c) User-defined functions

(d) In-built functions

(ix) What is the type of programming language supported by Python ?

    (a) Object-oriented

    (b) Functional programming

    (c) Structured programming

    (d) All of the above

(x) Which of the following is an arithmetic operator in Python ?

    (a) > =

    (b) = =

    (c) ! =

    (d) //

Section B

Unit I

2. Discuss in detail the types and generations of computers.   10

3. Define Computer. Discuss various units of a computer with its working and diagram. 10

Section C

Unit II

4. Discuss the concept of problem solving. Explain the types of errors in programming. 10

5. Explain in detail the various programming methodologies. 10

Section D

Unit III

6. Explain structure of a Python program. List and explain Bitwise operators. 10

7. Explain the various loop control statements in Python programming. Write a program to find average of three numbers. 10

Section E

Unit IV

8. Discuss Lists, Tuples and Dictionary in Python programming with syntax and suitable example.

    10

9. Explain Event Driven Programming. What are objects and how are they created in Python ?

    10