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5 SEM TDC DSE CAP (CBCS)
1 (A/B) (NH)

2025

(Nov/Dec)

COMPUTER APPLICATION

(Discipline Specific Elective)

(For Non-Honours)

Paper : DSE–1

Full Marks : 80
Pass Marks : 32

Time : 3 hours

The figures in the margin indicate full marks for the questions.

Paper : DSE–1 (A)

(Programming with Python)

1. Answer the following as directed : 1×8=8

(a) What is Python shell?

(b) What is syntax error?

(c) What is string literal?

(d) What is the output of the following statement?

```
>>> letters = "Computer Application"
>>> len(letters)
```

(e) Python is completely free to use and distribute.

(State True or False)

(f) The operator used for floor division in Python is _____.

(Fill in the blank)

(g) Which keyword is used to define a function in Python?

(h) Which function is used to read input from the user in Python program?

2. Answer the following (any *eight*) : 3×8=24

(a) How to write a comment in Python? Give example.

(b) Why is indentation important in Python? Explain with an example.

(c) Differentiate among syntax error, logical error and runtime error with one example each.

(d) Define an algorithm. Write any three characteristics of a good algorithm.

(e) Explain the role of the Python interpreter in program execution.

(f) Explain any three operations that can be performed on lists in Python.

(g) Describe logical operators in Python with examples.

(h) Explain the general structure of a Python program with an example.

(i) Differentiate among break, continue and pass with examples.

3. Answer the following (any *six*) : 8×6=48

(a) What are the advantages of using decision tables over flowcharts?

(b) Explain different types of operators in Python with suitable examples.

(c) Explain atoms in Python. Discuss different atomic elements like identifiers, literals and strings with examples.

(d) Explain branching in Python with examples of if, if-else and if-elif-else statements.

(e) Write a Python program to find factorial of a number.

(f) Write a Python program to find the largest of three numbers.

(g) Write a Python program to count vowels in a string.

Paper : DSE–1 (B)

(Visual Programming)

1. Answer the following : 2×8=16

(a) What are the two primary activities required when creating a visual basic program?

(b) What are reserved words? Can a reserved word be used as a variable name?

(c) What is the purpose of a comment statement within a visual basic program? How are comments written?

(d) Explain the concepts of compiling and running a program.

(e) How is a pop-up menu created? How is it activated?

(f) Write the difference between msgbox( ) and inputbox( ).

(g) What is MySQL? How to create a database in MySQL?

(h) What is the purpose of the DIM statement? How is a DIM statement written?

2. Write short notes on (any *six*) : 4×6=24

(a) Modular Programming

(b) Graphical User Interface Environment

(c) Forms

(d) Arrays

(e) Object-oriented Programming

(f) Data Types in Visual Programming

(g) Sub-procedure and Sub-function

3. Answer the following : 8×5=40

(a) What is event-driven programming in visual basic? Write few events of a visual basic form.

(b) What are the decision structures in visual basic? Describe do-while loop structure with an example.

(c) The numbers in sequence 1 1 2 3 5 8 are called Fibonacci numbers. Write a visual basic program using do-while loop to calculate and print the first 10 Fibonacci numbers.

(d) Write a visual basic program to read *N* numbers in a single-dimension array. Find the sum and average of these numbers and print the array in reverse order.

(e) Discuss database connectivity of forms with back end tool like MySQL.

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