বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

B.Sc. General Examination 2021

(CBCS)

1st Semester

COMPUTER SCIENCE

PAPER—DSC1AT & DSC1AP / DSC2AT & DSC2AP / DSC3AT & DSC3AP

PROBLEM SOLVING USING COMPUTERS

Full Marks : 60

Time : 3 Hours

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

Candidates are required to give their answers in their own words as far as practicable.

THEORY : DSC1AT

Group – A

Answer any *three* questions. 3×12

1. Describe fourth generation computer? Difference between testing and debugging? What is documentation? Why it is needed? 4+3+2+3

2. What is error ? Describe different types of errors. What is cache memory ? Difference between SRAM and DRAM. What is the function of ALU and CU ? 1+3+2+3+3

3. What is None literal in python ? What is the difference between a keyword and an identifier ? What is token in python ? How many types of token allowed in python ? How many types of sequence are supported in python ? 2+3+1+3+3

4. What is difference between an expression and a statement ? What factors guide the choice of identifier in programs ? How many types of string are supported in python ? How can we create multi-line strings in python ? 3+3+3+3

5. Write a program to obtain temperature in Celsius and convert it into Fahrenheit ? Difference between lists and tuples ? What are negative indices ? What is pass statement in python ? What is slicing ? 4+3+2+2+1

6. Write a program on a number is prime or not. What are decorators in python ? What are Dict and List comprehensions ? What are common built-in-data types in python ? 4+2+3+3

Group – B

Answer any *two* questions. 2×2

7. Python are interpreted language. Explain.

8. What is Blackbox and Whitebox testing ?

9. What is function of Program Counter ?

10. Difference between break and continue.

PRACTICAL : DSC1AP

Answer any *one* question. 1×20

1. Write a program to calculate total marks, percentage and grade of a student. Marks obtained in each of the three subjects are to be input by the user. Assign grades according to the following criteria :

Grade A : Percentage ≥ 90

Grade B : Percentage ≥ 80 and < 90

Grade C : Percentage ≥ 70 and < 80

Grade D : Percentage ≥ 60 and < 70

Grade E : Percentage ≥ 50 and < 60

Grade F : Percentage < 50

2. Write a menu driven program using user-defined functions to find the area of rectangle, square, circle and triangle by accepting suitable input parameters from user.

3. Write a program to read n integers and display them as a histogram.

———