R1909

Final Scheme/ Answer Key for Valuation
Scheme of evaluation (marks in brackets) and answers of problems/key

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

Course Code: BE101-05

Course Name: INTRODUCTION TO COMPUTING AND PROBLEM SOLVING

Max. Marks: 100   Duration: 3 Hours

Marks may be awarded for outputs based on any version of Python
PART A

Answer all questions, each carries 2 or 3 marks.   Marks

1	Differentiate 1.5 marks + 1.5 marks	(3)
2	Explanation (1) + eg. (0.5 marks each)	(3)
3	Concept of top down design + Figure/ Example (2+1 marks).	(3)
4	Algorithm (3 marks).	(3)
5	difference between int () and round() (1.5 marks + 1.5 marks)	(3)
6	compute the sum 1+1/2+1/3+…+1/n. (2 marks) Display the result in float with 2 decimal positions.(1 marks)	(3)
7	output of this program is 0 or 0.5 (Dep on the Python version) (2 marks)	(2)
8	type coercion (1 mark) example (1 mark)	(2)
9	function in python (2 marks)	(2)
10	Output: hello * world	(2)
11	i. Any method for adding the key value pair ('mango':8) (1 mark) ii. displaying the number of items in the dictionary (1 mark) iii. Any method to remove the key value pair ('orange':2) (1 mark)	(3)
12	justification (2 marks) example (1 mark)	(3)
13	Apples (For first print statement) ['Mangoes\n', 'Grapes'] - For second print statement (1 mark each) (OR) *File name is* not specified in quotes- If the answer is as syntax error also, **full** marks can be given	(2)
14	dump () and load() methods in python. (1.5 marks each)	(3)
15	Output: print A error (1.5 mark) Obj.fun() 5 (1.5 mark)	(3)

16   memory hierarchy (2 marks)

        Explanation with a neat diagram.(3 marks)   (8)

        Comparison in terms of speed, cost and storage. (3 marks)

17   algorithm (4 marks)   flow chart (4 marks)   (8)

18   Checking odd (3 marks)
                                                                                      (8)
        Composite (5 marks)

19 a) menu driven Python program (1 mark)

            i.   check whether the number is odd or even (2 marks)

            ii. check whether the number is positive, negative or zero (2 marks)   (8)

            iii. generate factors of the number (3 marks)

20 a) Recursion (2 marks)

        Factorial using recursion (3 marks)   (8)

        Computing nP_r (3 marks)

PART C

21 a)   i.   Reverse the string without using reverse() function. (2 marks)

         ii.   Check for a substring in the string (2 marks)

         iii. Find all the occurrences of a particular character in the string and print the

               indices at which the character appears. (3 marks)   (7)

    b) program to store a string to a file. (3 marks)
                                                                                      (7)
        Read the string and display only the palindrome words in the string. (4 marks)

22 a) What is a dictionary? (2 marks)

        With an example explain any five dictionary operations in python.   (7)

        (5 X 1=5 marks)

    b) Define a class   (5 marks):
        Create an object of the class and invoke the methods.   (2 marks)   (7)

23 a) Write a Python program to read two matrices (1.5 marks)

        Check order of matrices (1.5 marks)   (7)

        matrix addition. (4 marks)

    b) file operations in Python (4 marks)
                                                                                      (7)
        modes (3 marks)

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