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Reg. No.:_____   Name: _____

FIRST SEMESTER B.TECH DEGREE EXAMINATION, JUNE 2016

Course Code: BE101-05

Course Name: INTRODUCTION TO COMPUTING AND PROBLEM SOLVING

Max. Marks: 100   Duration: 3 Hours

<u>PART A</u>

Answer all questions

1. Differentiate features of RAM and ROM   (3)

2. Describe Instruction cycle and its steps.   (3)

3. Write the algorithm for finding largest among set of N numbers   (2)

4. What is the purpose of flow charts in problem solving? Describe symbols used in flow chart (2)

5. Draw the flow chart for finding whether the given number is odd or even (2)

6.   for count in range(100):
        print count
        Convert the above code to equivalent while loop   (3)

7.   Write a python code to print the following pattern
        1
        2   3

        4 5 6   (3)

8. Write a function to find the sum of numbers between a lower bound and upper bound (2)

9. Illustrate with suitable example Type conversion and Type coercion   (2)

10. List the advantages of using functions in program   (2)

11. Write a Python code to check whether two strings are equal or not   (2)

12. Describe the Dictionary methods with example   (3)

13. Write a Python code to search an element in a list   (3)

14. Why exception handling is required in programming?   (2)

15. Differentiate Shallow equality and Deep equality   (3)

16. List the advantage of using pickling in python. Also state the usage of dump method with
    suitable examples   (3)

<u>PART B</u>

Answer any 4 complete questions each having 8 marks

17. a)Describe the memory hierarchy in terms of cost, speed and storage   (5)

b) What are the translator softwares used for converting a program written in a high-level language to object code? How are they different from each other? (3)

18. Write the algorithm and flow chart to find the sum of digits of a number (8)

19. Explain the difference between definite Iteration and indefinite(infinite) iteration. Give example programs for illustrating each type (8)

20. a) Write a program to generate Fibonacci series upto a limit (4)

b) What is recursion? Write a recursive function to find the factorial of a number. (4)

21. Write a Python program using function to check the type of a triangle (Scalene, Isosceles, Equilateral) by getting the vertices from the user. (8)

Answer any 2 complete questions each having 14 marks

22. a)Write a Python code to add two matrices using list (8)

b)Write a Python program to reverse a string and print whether its palindrome or not. (6)

23. a) A book shop details contains the Title of book and Number of copies of each title. As books are added to shop the number of copies in each should increase and as books are sold the number of copies in each should decrease. Implement this scenario using Dictionary data type in Python (7)

b) Describe the use of try-except method in Python with suitable illustration. (7)

24. a) Write a python code to read a text file ,copy the contents to another file after removing the blank lines (8)

b) Write notes on Class, Attributes and Instances with suitable examples for each. (6)