Code: 21A050302

R21

P.B.R. VISVODAYA INSTITUTE OF TECHNOLOGY & SCIENCE
(Autonomous)

B. Tech I Year I Semester (R 21) Regular Examinations

Model Question Paper

C-PROGRAMMING & DATA STRUCTURES

Time: 3 hours Max. Marks: 70 M

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks.
Answer all questions in Part A.
Part B consists of 5 Units. Answer any one question from each unit.
Each question carries 12 marks and may have a, b, c as sub questions.

PART – A
(Compulsory Question)
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1 Answer the following: (05 X 02 = 10 Marks)

(a) Differentiate between variable and constant? [CO1, K1] [02 Marks]
(b) What are string I/O functions? Mention it syntax. [CO2, K1] [02 Marks]
(c) What is the difference between getchar() & gets() and putchar() & puts()? [CO3, K1] [02 Marks]
(d) Let int K[4]={2,12,45,23} and int *P, P=K. What is the value of *(K+2). [CO4, K1] [02 Marks]
(e) Define prefix and postfix notations of the given infix form (A+B) * C – (D-E). [CO5, K1] [02 Marks]

PART – B
(Answer all five units, 5 X 12 = 60 Marks)

UNIT – I

2. What is a flowchart? Explain different symbols used for flowchart with examples. [CO1 , K2] [12 Marks]

OR

3. a) Explain switch case statement with an example program. [CO1 , K2] [07 Marks]
b) Design a C program to check whether a given number is palindrome or not. [CO1 , K3] [05 Marks]

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UNIT – II

4. a) Explain the process of defining a double dimensional array.[CO2 , K2] [06 Marks]
   b) Write a C program to find maximum and minimum values of a given array elements.
   [CO2 , K3] [06 Marks]

OR

5. Define string? Explain in detail any five string handling functions with examples.
   [CO2 , K2] [12 Marks]

UNIT – III

6. List out different storage classes in C and explain each one of them.
   [CO3 , K4] [12 Marks]

OR

7. Explain non-formatted input and output statements in C with suitable examples.
   [CO3 , K2] [12 Marks]

UNIT – IV

8. a) Explain in detail valid arithmetic operations on pointers. [CO4 , K2] [06 Marks]
   b) Write a C program to exchange the value of two integers using call by address.
   [CO4 , K3] [06 Marks]

OR

9. What is a structure? Explain how to declare and access structure elements with an example.
   [CO4 , K2] [12 Marks]

UNIT – V

10. Write a procedure to convert the given infix expression into postfix expression. Convert the expression **(A+B)^C-(D*E)/F** into postfix notation. [CO5 , K3] [12 Marks]

OR

11. Explain the process of deleting a node from the double linked list.
    [CO5 , K2] [12 Marks]

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