**Jyothy Institute of Technology**

**Tataguni, Bangalore – 560 082**

**Mid Term Exam**

**SECTION-‘A’**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Program** | **:** | **BE (Civil Engineering)** | **Date** | **:** |  | **Time** | **:** | **1Hour30 Minutes** |
| **Course Name** | **:** | **Programming in C & Data Structures** | **Course Code** | **:** | **15PCD13** | **Maximum Marks** | **:** | **40** |

**Answer the following questions.**

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| --- | --- | --- | --- |
| **Q No** | **Question** | **COs** | **Marks** |
| Q1a)  Q1b) | i) List all conditional control statements used in C. Write a C program to find if the number is even or odd.  ii)Write a C program to find the reverse of an integer number NUM and check whether it is PALINDROME or NOT.  OR  i) Explain switch statement with syntax and example.  ii)List the differences between the while loop and do while loop. | CO2  CO2  CO2  CO2 | 5  5  5  5 |
| Q2a)  Q2b) | i) Write a C program to find sum of natural numbers from 1 to N using for loop.  ii)What is array? Write a program to find largest of n numbers.  OR  i) Write a program to find factorial of a number.  ii)Define array. Write a program to find smallest of n numbers. | CO2  CO2  CO2  CO2 | 5  5  5  5 |
| Q3a)  Q3b) | i) List all conditional control statements used in C. Write a C program to find if the number is even or odd.  ii)Write a C program to find the reverse of an integer number NUM and check whether it is PALINDROME or NOT.  OR  i) Explain switch statement with syntax and example.  ii)List the differences between the while loop and do while loop. | CO2  CO2  CO2  CO2 | 5  5  5  5 |
| Q4a)  Q4b) | i) Write a C program to find sum of natural numbers from 1 to N using for loop.  ii)What is array? Write a program to find largest of n numbers.  OR  i) Write a program to find factorial of a number.  ii)Define array. Write a program to find smallest of n numbers. | CO2  CO2  CO2  CO2 | 5  5  5  5 |

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| **Program** | **:** | **BE (Civil Engineering)** | **Date** | **:** |  | **Time** | **:** | **1Hour30 Minutes** |
| **Course Name** | **:** | **Programming in C & Data Structures** | **Course Code** | **:** | **15PCD13** | **Maximum Marks** | **:** | **40** |

**Answer the following questions.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q No** | **Question** | **COs** | **Marks** | **RBT Level** |
| Q 1a  Q 1b | i) What is pseudo code? Write a pseudo code for finding sum and average of three numbers.  ii) How operators can classified. List all the operators with their precedence and associativity.  OR  i) What is data type? How it can be classified? List all primitive data types with format specifiers and memory occupied by them. ii) What are printf() and scanf() functions. Explain with one example. | CO 1  CO 1  CO 1  CO 1 | 5  5  5  5 | 1,2  1,2  1,2  1,2 |
| Q 2a  Q 2b | i) Write the output for the following code:  void main()  {  int a = 5, b=2, res1;  float f1=5.0, f2=2.0, res2;  res1=5/2.0+a/2+a/b;  res2=f1/2\*f1-f2;  printf(“ res1=%d res2=%f ”, res1, res2);  }  ii) Write a program to find area and perimeter of a rectangle. Write test cases and output.  OR  i) Write the output for the following code:  void main()  {  int i=5, j=6, m,n;  m=++i+j++;  n=--i+j--;  printf(“ m=%d n=%d ”, m, n);  }  ii) Write a program to swap two numbers using third variable. Write test cases and output. | CO 1  CO 1  CO 1  CO 1 | 5  5  5  5 | 4  5  4  5 |
| Q3a)  Q3b) | i) List all conditional control statements used in C. Write a C program to find if the number is even or odd.  ii)Write a C program to find the reverse of an integer number NUM and check whether it is PALINDROME or NOT.  OR  i) Explain switch statement with syntax and example.  ii)List the differences between the while loop and do while loop. | CO2  CO2  CO2  CO2 | 5  5  5  5 | 1,2  4  1,2  4 |
| Q4a)  Q4b) | i) Write a C program to find sum of natural numbers from 1 to N using for loop.  ii)What is array? Write a program to find largest of n numbers.  OR  i) Write a program to find factorial of a number.  ii)Define array. Write a program to find smallest of n numbers. | CO2  CO2  CO2  CO2 | 5  5  5  5 | 4  4  4  4 |

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|  | **CO 1** | **CO 2** | **CO 3** | **CO 4** | **CO5** | **CO6** |
| **Q1 a (i)** | X |  |  |  |  |  |
| **Q1 a (ii)** | X |  |  |  |  |  |
| **Q1 b (i)** | X |  |  |  |  |  |
| **Q1 b (ii)** | X |  |  |  |  |  |
| **Q2 a (i)** | X |  |  |  |  |  |
| **Q2 a (ii)** | X |  |  |  |  |  |
| **Q2 b (i)** | X |  |  |  |  |  |
| **Q2 b (ii)** | X |  |  |  |  |  |
| **Q3 a (i)** |  | X |  |  |  |  |
| **Q3 a (ii)** |  | X |  |  |  |  |
| **Q3 b (i)** |  | X |  |  |  |  |
| **Q3 b (ii)** |  | X |  |  |  |  |
| **Q4 a (i)** |  | X |  |  |  |  |
| **Q4 a (ii)** |  | X |  |  |  |  |
| **Q4 b (i)** |  | X |  |  |  |  |
| **Q4 b (ii)** |  | X |  |  |  |  |