



## INSTITUTE OF AERONAUTICAL ENGINEERING (Autonomous)

B.Tech II Semester End Examinations (Supplementary) - May, 2019

**Regulation: IARE – R16**

### COMPUTER PROGRAMMING

**Time: 3 Hours**

**(Common to AE | ME | CE)**

**Max Marks: 70**

**Answer ONE Question from each Unit**

**All Questions Carry Equal Marks**

**All parts of the question must be answered in one place only**

#### **UNIT – I**

1. (a) Explain about bitwise operators in C. [7M]
- (b) The distance between two cities in kilometers is input from the keyboard. Write an algorithm to display that distance in meters and centimeters. [7M]
2. (a) List various increment and decrement operators in C. [7M]
- (b) Draw a flow chart to read a positive number and display message whether it is a even number or odd number. [7M]

#### **UNIT – II**

3. (a) Define Array. Explain different types of Arrays with example. [7M]
- (b) Compare and Contrast while and do while loop? Write a C program to print the odd numbers from X to Y using do while loop? [7M]
4. (a) Define String and list any four string handling functions with examples. [7M]
- (b) Write a C Program to input a matrix of size N X N and display it's transpose. [7M]

#### **UNIT – III**

5. (a) A function can pass any number of arguments and return values. Yes or No? Justify it. [7M]
- (b) Define function prototype and comment which of following prototypes are valid/invalid. i) Int (f101) void; ii)double f101(void); iii) int f101(int a, b); iv) void fun(int a, int &b); [7M]
6. (a) Explain call by value & call by reference, actual arguments & formal arguments. [7M]
- (b) Write a C program to find sum of given array elements using pointers. [7M]

## **UNIT – IV**

7. (a) Define a structure and state how the members of a structure are accessed with example? [7M]
  - (b) Write a program to define a structure that store details of 10 railway passengers as name, PNR number, Source, Destination and class(SL/1A/2A/3A). Display details of sleeper class passengers. [7M]
  8. (a) Explain in brief about dynamic memory allocation and functions used for it. [7M]
  - (b) Write a C program to maintain a book structure containing name, author and pages as structure members and display details of book.
- [7M]

## **UNIT – V**

9. (a) Explain about file handling functions. Describe various modes of file opening. [7M]
  - (b) Write a C program that illustrates different file status functions. [7M]
  10. (a) Write the syntax of the following file I/O functions and explain every option in each function with suitable example :
    - i. fopen()
    - ii. fclose()
    - iii. fread()
    - iv. fwrite()
- [7M]
- (b) Write a C Program to read a file “marks.dat” with rollno, name and marks in 3 subjects. Calculate total marks, percentage of marks and store details of students above 70 percent into a file ”Dist.dat”. [7M]

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