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# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech II Semester End Examinations (Regular) - May, 2017

Regulation: IARE – R16

Computer Programming  
(Common for AE/CE/ME)

Time: 3 Hours

Max Marks: 70

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Answer ONE Question from each Unit

All Questions Carry Equal Marks

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

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## UNIT – I

- (a) What are the rules for naming an identifier and list some valid identifiers. [7M]  
(b) Write a C program to find whether a given year is leap year or not using ternary operator. [7M]
- (a) Explain with examples any 4 data type to store numeric' s in C programming language? [4M]  
(b) Write a C program to evaluate the polynomial shown below: [6M]  
$$4x^4 + 9x^3 + 7x - 28$$
  
(c) What is type casting? Explain with example. [4M]

## UNIT – II

- (a) Explain about dangling else problem with an example. [6M]  
(b) Write a program to reverse a given string without using string library functions. [8M]
- (a) Describe multi branching statement in C using its syntax and flow chart. [5M]  
(b) Write a C program to remove duplicate elements in an integer array. [9M]

## UNIT – III

- (a) Using an example compare the declarations `char a[ ]` and `char *a`. [5M]  
(b) Write a C program to demonstrate the Call By Value and Call By Reference functions by taking an example of swapping the values of two variables. [9M]
- (a) Explain the following pre-processor directives briefly. `#define`, `#include`, `#undef`, `#ifndef`. [8M]  
(b) Write a C program to find largest element in an array using pointers. [6M]

## UNIT – IV

- (a) What is dynamic memory allocation? What are the functions used for it? Explain. [8M]  
(b) Write a C Program to add two complex numbers by passing structure to a function. [6M]

8. (a) What is Structure in C ? Create a Structure to store DATE and write a function to add 2 dates. [8M]
- (b) Explain following with example: [6M]
- i. malloc()
  - ii. calloc()
  - iii. realloc()

**UNIT – V**

9. (a) Give the syntax for opening a file. Explain various modes of opening a file. [7M]
- (b) Write a C program to count no of lines, words and characters in a file. [7M]
10. (a) Give the syntax and description of the following. [8M]
- i. fgets()
  - ii. fgetc()
  - iii. fputs()
  - iv. fputc()
- (b) Write a C program to add two numbers using command line arguments. [6M]

