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# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech I/II Semester Supplementary Examinations - July, 2017

Regulation: IARE – R16

## COMPUTER PROGRAMMING

[Common for : I Semester (CSE, IT, ECE and EEE) | II Semester (AE, CE and 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) Draw and explain the structure of C program. [7M]  
(b) List the basic data types used in C and give their sizes. [7M]
- (a) Draw a flow chart to find the GCD of two numbers. (Don't use division and mod operations). [7M]  
(b) List all the operators in C along with their precedence and associativity. [7M]

### UNIT – II

- (a) Develop a C program to read two matrices A and B and perform matrix multiplication on the given matrices. [7M]  
(b) Sorting an Array of Integers into Ascending Order. [7M]
- (a) Write a C program that calculates the sum of the digits of an integer. [7M]  
(b) Write a C program to find Power of a Number (i.e.  $X^Y$  – where x and y are inputs) without using built in functions. [7M]

### UNIT – III

- (a) Using an example compare the declarations `char a[ ]` and `char *a`. [5M]  
(b) Write a single 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) List the four categories of functions and explain them briefly. [8M]  
(b) Write a C program to read a text and print the number of characters and words in it (Use pointers). [6M]

### UNIT – IV

- (a) Write short notes on enumerated data type in C. [4M]  
(b) Write a program in C to store and display the information of 10 students using structure. [10M]

8. (a) Explain the usage of typedef with an example. [6M]  
(b) Differentiate between structure and union. [8M]

**UNIT – V**

9. (a) Explain command line arguments with an example. [5M]  
(b) Write a C Program to Compare two text/data files. [9M]
10. (a) Narrate the reasons for a file cannot be opened? [6M]  
(b) Write a C Program to Reverse the Contents of a File and Print it. [8M]