INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)

MBA II Semester End Examinations (Regular) - July, 2017

Regulation: IARE–R16

C Programming

(Master of Business Administration)

Time: 3 Hours   **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) Discuss the concept of implicit type conversion with a suitable example.   **[7M]**

   (b) Write a C program that calculates and prints the average of entered integers. Assume the user will enter control-d to end the input.   **[7M]**
   Sample Run:
   Enter an integer (control-d to end): 23
   Enter an integer (control-d to end): 123
   Enter an integer (control-d to end): 45
   Enter an integer (control-d to end): 987
   Enter an integer (control-d to end): 87
   Enter an integer (control-d to end): 098
   Enter an integer (control-d to end):
   The average is : 227.17

2. (a) A palindrome is a number or a text phrase that reads the same backwards as forwards. Write a C program that reads in a five-digit integer and determines whether or not it is a palindrome.
   Hint: Use the division and modulus operators to separate the number into its individual digits.
   Sample Run 1:   **[7M]**
   Enter a five-digit number: 12345
   12345 is not a palindrome
   Sample Run 2:
   Enter a five-digit number: 12321
   12321 is a palindrome

   (b) Discuss the concept of identifiers and data-types in C.   **[7M]**

UNIT – II

3. (a) With a suitable example, discuss the following categories of user defined functions in C **[10M]**
      i. functions with arguments and return values
      ii. function with no argument and return type

   (b) Explain briefly how do you pass a 2D array as a parameter in C?   **[4M]**

4. (a) The factorial of a integer N, denoted by N! is the product of all positive integers less than or equal to N. Factorial does not exist for negative numbers and factorial of 0 is 1. Write a recursive routine to compute factorial of a number. Write a test driver for the same. **[8M]**

(b) What is an array? How is an array declared and initialized? **[6M]**

UNIT – III

5. (a) Bring out the significance of pointers to void with a suitable example. **[8M]**

(b) In C, a string can be referred either using a character pointer or as a character array. Explain it with examples.

[6M]

6. (a) Explain briefly pointer arithmetic in C with suitable examples. **[6M]**

(b) What are the unformatted string input and output functions available in C? Is the input function safe? If yes, why and If no, Justify? **[8M]**

UNIT – IV

7. (a) With a suitable example explain the concept of typedef. **[6M]**

(b) A complex number is a number that can be expressed in the form a + bi, where a and b are real numbers and i is the imaginary unit, satisfying the equation $i^2 = -1$. Write a C Program to add two complex numbers by passing structure to a function. **[8M]**

8. (a) Write a C program using nested structures to read 3 employees details with the following fields; emp-id, name, designation, address, basic, da, hra and calculate gross salary of each employee. (Hint : gross salary = basic + da + hra).

[9M]

(b) Bring out the advantage of using Bit Fields in C with a suitable example. **[5M]**

UNIT – V

9. (a) Why is fseek() preferred over rewind() in C? **[6M]**

(b) Write a C Program to Copy Contents of one file to another file. **[8M]**

10. (a) Discuss how reading and writing w.r.t binary file done in C. **[8M]**

(b) Explain briefly fgets() and fputs() with an example. **[6M]**

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