Total No. of Questions :5] *[Total No. of Printed Pages :3*

Roll No .....

BE - 205

B.E. I & II Semester

Examination, June 2015

Basic Computer Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What is the purpose of main memory? Define the non-volatile memory.

   b) What are the different types of buses? Explain the differences between address bus and the data bus.

   c) What is the importance of input and output devices? Describe any two Input Output devices.

   d) Describe the structure of UNIX operating system in detail.

   OR

   Explain the various file operations performed by the operating system.

2. a) Compare the procedure oriented and object oriented paradigms.

   b) How is structure different from an array?

   c) Write a C++ program to convert binary number into decimal number.

   d) Explain the different types of Parameter Passing? Write a program in C++ to swap two values using different parameter passing methods.

OR

Write a program in C++ to find the sum of square of natural number.

$Sum = 1^2 + 2^2 + 3^2 + ... + n^2$

3. a) What are the differences between a class and an object?

   b) What is a constructor? How do we invoke a constructor function?

   c) Define stack and describe different operations that can be performed on the stack.

   d) Explain the advantages and disadvantages of linked list over array.

OR

What is function overloading? What are the scope rules for governing the functions overloading?

4. a) Why data communication through circuit switching is not efficient?

   b) What is the need of a firewall? What are its different types?

   c) Explain the different topologies and mention the key advantages and disadvantages of star topology.

   d) Compare the OSI and TCP / IP models.

OR

Explain the reasons for cyber crimes? How are cyber crimes are different from conventional crimes? Explain different kinds of cyber crimes.

5. a) Explain the functions of DBA.

   b) What is data independence? Explain the different types of data independence.

   c) What is the database schema? How many internal, conceptual and external schema can be defined for the database?

   d) Explain the different types of deployment models of cloud computing. What are the differences between private and public clouds?

OR

Define the data, information, knowledge and database. What are the different kinds of data models? Give two advantages of each models.

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