Exam. Code : 107205
Subject Code : 2116

BCA 5th Semester

COMPUTER NETWORKS

Paper–I

Time Allowed—3 Hours]   [Maximum Marks—75

Note :– Attempt any **five** questions. All questions are of equal marks.

1. (a) Discuss the use of Network. What are its types ?
                                                              7.5

    (b) What are the physical components of Network Architecture ?   7.5

2. (a) Compare and contrast between OSI and TCP/IP reference model.   7.5

    (b) Write the role of transmission media in computer networks.   7.5

3. (a) What is the meaning of modem ? Write the types of modems.   7.5

    (b) What is the role of switching in computer networks ?
                                                              7.5

4. (a) Define Multiplexing. Discuss with suitable example.
                                                              7.5

    (b) Write a short note on ISDN service.   7.5

5. Define the following :

    (a) IEEE standards 802

    (b) BRAP

    (c) FDDI.   5,5,5

6. (a) Explain in detail any one of the functions of data link layer.   7.5

    (b) Discuss Elementary data link protocol.   7.5

7. (a) Write a short note on concept of routing.   7.5

    (b) How IP addresses are assigned in computer networks ?   7.5

8. (a) Define Cryptography. Write any one application of Cryptography.   7.5

    (b) Explain the steps of File transfer in computer networks.   7.5

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BCA 5th Semester

Paper—II : WEB TECHNOLOGIES

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any *five* questions, all questions carry equal marks.

1. Explain the following :

    (a) Write any five features of modern popular browsers.

    (b) Explain DOM architecture.

2. What do you mean by markup languages ? Give examples of various markup languages. What role does CSS play in web designing ?

3. Explain any five features of Java Script language. Explain Java script's Math, String, Date and RegExp objects with methods and examples.

4. Write a note on Data Base Connectivity. Why do we need data base connectivity ? What is JDBC ?

5. What is use of PHP ? Explain file upload and error handling features of PHP.

6. What is cookie ? What is its use ? Explain PHP in-built functions related with cookies.

7. Explain general architecture of e-commerce web site. Which technologies are used in developing e-commerce web site ?

8. Explain any ten essential features of a good e-commerce web site.

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BCA 5th Semester

OPERATING SYSTEM

Paper–III

Time Allowed—3 Hours] [Maximum Marks—75

Note :– Attempt any **five** questions. All questions carry equal marks.

1. Describe the salient features of the following systems :

   (a) Multi-programmed Systems 7.5

   (b) Batch Systems. 7.5

2. Explain the following process transitions :

   (a) Running to Blocked 5

   (b) Running to Ready 5

   (c) Ready to Running. 5

3. Discuss the classical problem of Synchronization and the methods for process synchronization. 15

4. Compare the following :

   (a) Segmentation and Demand Paging 7.5

   (b) LRU and FIFO page replacement Algorithm. 7.5

5. How memory management is carried out by an Operating System ? Discuss in detail the role of swapping techniques. 15

6. How C-LOOK and SSTF algorithms schedule the disk requests ? Compare them using an example. 15

7. Discuss the following methods for handling deadlocks :

   (a) Deadlock Detection 7.5

   (b) Deadlock Recovery. 7.5

8. Write short notes on the following :

   (a) Deadlock Avoidance 7.5

   (b) Thrashing. 7.5

Exam. Code : 107205
Subject Code : 2119

BCA 5th Semester

JAVA PROGRAMMING LANGUAGE

Paper–IV

Time Allowed—3 Hours]   [Maximum Marks—75

Note :– Attempt any **five** questions. All questions carry equal marks.

1. What are fundamental principles of Object Oriented Programming paradigm ? How JAVA incorporates them ? 15

2. Explain various control statements of JAVA with example code. 15

3. Write a JAVA Program to sort an array of 100 integers. 15

4. Write a JAVA Program to highlight use of Constructors. 15

5. Write a JAVA Program to explain Method Overloading with use of inheritance. 15

6. Write a JAVA Program to highlight Exception Handling in programs. 15

7. Write a JAVA Program to highlight STRING handling. 15

8. Explain different classes and methods used for JAVA I/O (Input/Output). 15