Exam. Code   : 107204
Subject Code :   2128

Bachelor of Computer Application (BCA)

4th Semester

DATA STRUCTURES & FILE PROCESSING

Paper–I

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any **FIVE** questions. All questions carry equal marks.

1. (a) Discuss any three applications of stacks with suitable examples.

    (b) Write down the relative advantages and disadvantages of arrays and linked lists.

2. Write algorithm for converting arithmetic expression from infix notation to polish notation.

3. Show with an example how can graphs be represented in computer memory ? Give relative merits and demerits of each representation scheme.

4. Explain how the following elements will be inserted in a binary search tree :

    A, V, L, T, R, E

5. Explain the algorithm for Heap Sort.

6. Explain the algorithm for Binary Search.

7. Explain the concept of blocking and compaction in File Organization.

8. Explain the concept of indexed Sequential Technique in File organization for accessing data.

Exam. Code : 107204
Subject Code : 2129

Bachelor of Computer Application (BCA)
4th Semester

INFORMATION SYSTEMS
Paper—II

Time Allowed—Three Hours]   [Maximum Marks—75

Note :— Attempt **FIVE** questions in all by selecting at least **ONE** from each unit. All questions carry equal marks.

UNIT—I

1. (a) Explain some fundamental aspects of information along with their role in Information Systems. 8

    (b) Write a note on on-line information capturing and accessing.   7

2. (a) How information is converted to computer readable form ? Explain with examples.   8

    (b) How do you get information from various sources ? Explain.   7

UNIT—II

3. (a) What is system ? When a system is called Information System ? Explain various parts of an Information System.   2+2+4

    (b) Which are the various categories of Information Systems ? Explain in detail.   7

3092(2518)/CTT-37369   1   (Contd.)

4. (a) Explain development life cycle of information system. 8

(b) Compare and contrast any two information technologies in detail. 7

5. (a) Define an Information System. Explain its role and disadvantages in detail. 2+6

(b) What is Hardware and Software ? Explain its role and need in designing Information Systems. 3+4

UNIT—III

6. (a) Explain any two types of Information Systems. 8

(b) How MIS works to manage the Information ? 7

7. (a) Why decision support system is required ? Explain its importance and limitations. 8

(b) Which aspects should be kept in mind while designing practical day-to-day life Information Systems ? Explain various issues in this regard. 7

8. (a) Explain "Accounting Information System" in detail. 8

(b) Design any marketing system and explain various benefits and limitations of that. 7

15/05/18 Evening

Exam. Code : 107204

Subject Code : 2130

Bachelor of Computer Application (BCA) 4th Semester

INTERNET APPLICATIONS

Paper—III

Time Allowed—3 Hours]   [Maximum Marks—75

Note :— Attempt any **FIVE** questions. All questions carry equal marks.

1. What is Internet ? Discuss the working of internet. Also discuss various services offered by Internet.

2. Write short notes on :

    (a) Internet Service Provider (ISP)

    (b) Internet addressing.

3. What is e-mail ? Briefly discuss the structure of e-mail.

4. Explain the following :

    (a) File transfer protocol (FTP)

    (b) Telnet.

5. Discuss the working of World Wide Web (WWW).

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6. Discuss various components of search engine. Also discuss the features of a particular search engine.

7. Briefly explain the following terms :

   (a) Intranet

   (b) Extranet

8. Write short notes on :

   (a) HTML

   (b) Gopher.

Centre no→ 4 Block–I

23/05/18 EVENING

Exam. Code : 107204

Subject Code : 2131

Bachelor of Computer Application (BCA)

4th Semester

SYSTEM SOFTWARE

Paper–IV

Time Allowed—3 Hours] [Maximum Marks—75

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

1. Explain the working of different phases of compilers.

2. (a) Differentiate between Complier and Interpreter.

   (b) Discuss key functions of Assembler.

3. (a) Differentiate between Loader and Linker.

   (b) How loader awakens in compilation process ? Explain.

4. Discuss different data structures used in first pass of assembler.

5. (a) What are lexemes ? How lexemes differ from tokens ? Explain.

   (b) What is meant by syntax error ? At which phase of compilation, syntax error is caught ? Explain.

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6. (a) What is macro ? Explain macro expansion by taking suitable example.

   (b) What are the tasks performed in semantic analysis ? Explain.

7. (a) What is meant by LR Parser ? Explain left recursion in LR parsing process.

   (b) Differentiate between Recursive descent and Predictive parser.

8. Explain the following :

   (a) Linkage Editor

   (b) Bootstrap Loader.