

7. Discuss various File Organization techniques. Also discuss their relative advantages and disadvantages.
8. Briefly explain the following terms:
 - a) Hashing
 - b) Index Sequential file.

Exam. Code : 107204
Subject Code : 1721

Bachelor of Computer Application (BCA) 4th Semester
DATA STRUCTURES & FILE PROCESSING
Paper - I

Time Allowed—2 Hours]

[Maximum Marks—75

Note :— There are **Eight** questions of equal marks. Candidates are required to attempt any **Four** questions.

1. What is Dequeue? How it is represented in memory?
2. Write short notes on:
 - a) Data organization
 - b) Operations on Stack
3. What is a Graph? how is it represented in memory ?
Discuss breadth first search technique for traversing graph.
4. Write short notes on:
 - a) Binary Search tree
 - b) Linear search vs Binary search
5. Write an algorithm for Bubble Sort. Discuss Bubble Sort with the help of an example.
6. Write an algorithm for Merge Sort using an example.

6. Write the features, components and uses of office automation systems.
7. What is Case Study ? Design a Case Study of your choice for Inventory Control.
8. Develop a Marketing System in context of information flow and its type.

Exam. Code : 107204
Subject Code: 1722

Bachelor of Computer Application (BCA)
4th Semester

INFORMATION SYSTEMS

Paper - II

Time Allowed—2 Hours]

[Maximum Marks—75

Note :— There are **Eight** questions of equal marks. Candidates are required to attempt any **Four** questions.

1. (a) Explain various ways of capturing On-line Information.
(b) How information is converted into computer readable form ?
2. (a) Define information. Explain its various sources.
(b) Write a detailed note on On-line Information Access.
3. (a) What are Systems ? Explain its various components.
(b) Explain various categories of Information Systems.
4. (a) What is Information System ? How it works along with its functional units ?
(b) How information systems are developed through its cycle ? Explain.
5. Briefly describe each of the types of Information System along with their importance.

8. Explain the following :
- (a) Dynamic Linking
 - (b) Bootstrap Loader.

Exam. Code : 107204
Subject Code: 1724

Bachelor of Computer Application (BCA)
4th Semester

SYSTEM SOFTWARE

Paper - IV

Time Allowed—2 Hours] [Maximum Marks—75

Note :— There are **Eight** questions of equal marks. Candidates are required to attempt any **Four** questions.

1. What does System Software do ? Which are different types of System Software ? Discuss various components of system software with the help of a suitable example.
2. What is job of a translator ? Which are different types of translators ? How do they differ ?
3. Discuss various phases of a one pass and two pass assemblers.
4. What is use of macros ? What is meant by macro expansion? What is need of conditional macro expansion ? Give an example.
5. Discuss various phases of a compiler design.
6. What is the difference between Incremental compiler and Cross compiler ?
7. What are basic functions of a loader ? What is the difference between Linker and Loader ?

6. Give a note on various Family Welfare Programmes.
Write a note on 'Environmental Protection Act, 1986.
7. Give a detailed account of role of information technology in environment and human health.
8. Give definition, causes, effects and control measures of Water pollution.

Exam. Code : 107204

Subject Code : 1725

Bachelor of Computer Application (BCA) 4th Semester
ENVIRONMENTAL STUDIES (ESL-221)

Paper—VII

Time Allowed—2 Hours] [Maximum Marks—75

Note :— There are *eight* questions of equal marks.
Candidates are required to attempt any
four questions.

1. What is Water logging ? What are the effects of use and over-utilization of surface and ground water ?
2. Write notes on 'Land as a resource and its degradation'.
What is soil erosion and desertification ?
3. Give introduction, types, characteristic features, structure and function of Forest ecosystem.
4. Define Genetic, Species and Ecosystem diversity.
Discuss about biodiversity at global, national and local levels.
5. Write note on renewable and non-renewable energy resources ?