

Exam. Code : 107205

Subject Code : 1689

**Bachelor of Computer Application (BCA) 5th Semester
(Batch 2020-23)**

OPERATING SYSTEM

Paper—III

Time Allowed—3 Hours] [Maximum Marks—75

Note :—Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. What is an operating system ? How does a distributed system work ?
2. What is a process ? How are they scheduled ?

SECTION—B

3. What is process synchronization ? How is it done ?
4. Explain the segmentation briefly.

SECTION—C

5. Explain how does the thrashing occur.
6. What is disk scheduling ? Explain.

SECTION—D

7. Why do the deadlocks occur ? How are they handled ?
8. Describe deadlock prevention and detection.

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JAVA PROGRAMMING LANGUAGE

Paper—IV

Time Allowed—3 Hours]

[Maximum Marks—75

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION—A

1. Explain the salient features of Java that make it different from other programming languages.
2. (a) What is difference between class and object ? How can you create a class and object ? Give example.
(b) Strings are mutable or immutable in Java ? Give example.

SECTION—B

3. Which are advantages of Inheritance ? Which are different types of Inheritance in Java ?
4. What is difference between class, abstract class and interface ? How an interface differs from a class ?

SECTION—C

5. Explain the use of exception handling in Java. Which are checked and unchecked exceptions ?
6. What is use of threads ? Give any three practical examples where threads may be required. Why and how can you change thread priority ?

SECTION—D

7. Explain following :—
 - (a) Buffered Input/Output stream
 - (b) JDBC.
8. Write a program in Java to show records of Student table of MySQL. Assume table as :
Student(RollNo, StudentName, DOB, CourseName).

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WEB TECHNOLOGIES

Paper-II

Time Allowed—3 Hours]

[Maximum Marks—75

Note :— Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

SECTION-A

1. (a) Which are new features in HTML 5 ? What are its drawbacks ?
(b) Explain the use of Client Side and Server Side Scripting. Give example of both.
2. (a) What is CSS3 ? Explain the selectors and styling features of CSS3.
(b) Using JQuery, write a program to display current system date and time when a button is pressed.

SECTION-B

3. Which are various advantages of using PHP ? Explain cookies and sessions of PHP.

4. Suppose you are given an Emp table and Department table as :

Emp(EmpID, EmpName, DepartmentID, DesignationID, Salary)

Department(DepartmentID, DeptName)

Using database connectivity feature of PHP, write a program in PHP to display records of all employees with their department name.

SECTION-C

5. What is SSL ? Write the procedure to obtain and install SSL certificate on your websites. What are its advantages to users ?
6. How are AI and Machine Learning helpful in creating websites ?

SECTION-D

7. What is Block Chain Technology ? How is it helpful in websites development ?
8. What is difference between Augmented Reality and Virtual Reality ? Give example of both. How are these used in websites ?