

Paper ID : 70069

Total Pages : 4

BCA (Semester-IV) Examination, 2022

(Session 2019-22)

COMPUTER APPLICATION

[Paper Code : BCA-401]

(Java Programming)

Time : Three Hours]

[Maximum Marks : 80

Note : Candidates are required to give their answers in their own words as far as practicable. Answer **any five** questions. The questions are of equal value.

1. What is Java? Write down the features and applications of Java.
2. What is loops in Java? Discuss the types of loop with syntex. Write a Java program to print factorial value of a given integer.

3. What is Class and Object? Write a Java program to calculate area and perimeter of a circle using class and object.
4. What are two possible ways of passing arguments to a method? What are the difference between them?
5. What is Inheritance? Discuss the types of inheritance. Write a Java Program to demonstrate the concept of multilevel inheritance.
6. What is two dimensional array? Write a java program to enter $m \times n$ number in an array, print sum of all elements. Array elements entered by the user through stream class.
7. What is Package? Write down the steps for creating and accessing a package with suitable example.
8. What is an Applet? Distinguish between local and remote applets. Discuss the life cycle of an applet.
9. Explain thread priorities. Write a Java program to set the priority of a thread with suitable example.

10. Write notes on **any two** of the following :

- (a) Abstract class
- (b) Life cycle of a thread
- (c) Static data member and static member function
- (d) Visibility control in Java

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BCA (Semester-IV) Examination, 2022

(Session 2019-22)

**COMPUTER GRAPHICS
AND MULTIMEDIA**

[Paper Code : BCA-402]

Time : Three Hours]

[Maximum Marks : 80

Note : Candidates are required to give their answers in their own words as far as practicable. The questions are of **equal** value. Answer **any five** questions.

1. What is computer Graphics? Discuss the application of computer graphics in detail.
2. Discuss the different types of Video Display Device (VDU) in detail.
3. What is Seed Fill Algorithm? Create a program to fill the closed area using the seed fill algorithm.

4. Describe Bit-Mapped Graphics and also explain graphics attribute.
5. Explain ellipse Generation algorithms and Midpoint Ellipse algorithm.
6. Explain Rotation, Reflection and scaling of straight line of Polygon with suitable example.
7. Explain 3-D Graphics Transformations and also explain 3-D projections.
8. Explain Cathode Ray Tube.
9. Explain Multimedia Components and Multimedia Technology.
10. Write short notes on **any two** of the following :
 - (a) Reflection
 - (b) Image Processing
 - (c) Plasma Panel Display
 - (d) Scaling

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BCA (Semester-IV) Examination, 2022

(Session : 2019-22)

COMPUTER APPLICATION

[Paper Code : BCA-403]

(Operating System & Linux)

Time : Three Hours]

[Maximum Marks : 80

Note : Candidates are required to give their answers in their own words as far as practicable. The questions are of **equal** value. Answer **any five** questions.

1. Write in detail about Paging and Segmentation.
2. What is Context Switching? How it is performed and what are its disadvantages?
3. What is Dead Lock? What are four conditions required for Dead Lock to occur?
4. What is Scheduling? Define Process Scheduling, Process State and Thread.

5. What is Virtual Storage system? What are its advantages and disadvantages?

6. Write short notes on the following :

(a) Feature of Operating System

(b) Software and types of Software

7. (a) What are Commands? Distinguish between Internal and External Commands.

(b) Explain following Commands with System and Example :

(i) split

(ii) vm

(iii) touch

(iv) cmp

(v) password

(vi) echo

(vii) cat

(viii) cp

8. How do users interact with Operating Systems using Command Line Interface?
9. What is the role of the Device Controller in a Computer System?
10. Perform the following Commands with example :
 - (i) cat command
 - (ii) ls
 - (iii) rm
 - (iv) MKDIR
 - (v) echo

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BCA (Semester-IV) Examination, 2022

(Session : 2019-22)

COMPUTER APPLICATION

[Paper Code : BCA-404]

(Software Engineering Principles)

Time : Three Hours]

[Maximum Marks : 80

Note : Candidates are required to give their answers in their own words as far as practicable. The questions are of **equal** value. Answer **any five** questions.

1. What is Process Model? Explain the working of Spiral Model.
2. What is Software Engineering? When is it useful? Discuss.
3. What is the use of Testing Phase? Explain various types of testing.
4. What do you mean by Testing? Explain the various Testing Techniques.

5. What is Procedural Design? Explain it with the help of Object-Oriented concepts.
6. Discuss the Waterfall Model of Software Development in detail.
7. What is the importance of Metrics and Measurements in software Engineering? Discuss various types of Software Metrics.
8. What do you mean by Data Flow Diagram (DFD)? Discuss various symbols required to draw a DFD. Explain with suitable example.
9. Elaborate in detail the Taxonomy of CASE tools.
10. Differentiate between :
 - (a) Structured Analysis and Object-Oriented Analysis
 - (b) Verification and Validation
 - (c) DFD and ER Diagram
 - (d) Waterfall and Spiral Model

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