

# GBCS SCHEME



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17CS42

## Fourth Semester B.E. Degree Examination, Feb./Mar. 2022 Object Oriented Concepts

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. Discriminate procedure oriented programming and object oriented programming. (08 Marks)
- b. What is function overloading? Write a C++ program to find area of circle, area of rectangle and triangle using function overloading. (07 Marks)
- c. Design a C++ program to implement access control to some shared resources used by all objects of a class using a static variable. (05 Marks)

OR

- 2 a. Describe features of object oriented programming. (08 Marks)
- b. What is class? How it is created? Write a C++ program to create class called Employee with data members name, age and salary. Display at least 5 employees' information. (07 Marks)
- c. With programming example, demonstrate console output/input in C++.. (05 Marks)

### Module-2

- 3 a. List and describe the features of JAVA language. (08 Marks)
- b. Write a JAVA program to display prime numbers between two intervals. (07 Marks)
- c. With syntax, describe switch statement. (05 Marks)

OR

- 4 a. What is multi dimensional arrays? Write a JAVA program to add two matrices. (08 Marks)
- b. What is Ternary operator? Write a JAVA program to find the absolute value of a variable. (07 Marks)
- c. With syntax describe the following : (i) if-else-if ladder (ii) for loop (05 Marks)

### Module-3

- 5 a. What is an Interface? Write a JAVA program to demonstrate multiple inheritance using interface. (08 Marks)
- b. What is super? Demonstrate use of super with suitable programming examples. (07 Marks)
- c. Describe the four types of JAVA access modifiers. (05 Marks)

OR

- 6 a. Define class. Write a program to implement stack operations. (08 Marks)
- b. What is an exception? Describe JAVA exception handling techniques with code snippet. (07 Marks)
- c. Mention the advantages of packages and how access packages from another package. (05 Marks)

### Module-4

- 7 a. What is thread? Describe the two different ways to create threads. (08 Marks)
- b. With programming example, demonstrate an adapter class. (07 Marks)
- c. Mention the commonly used Event Listener Interface. (05 Marks)



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**OR**

- 8 a. What is synchronization? With programming example, demonstrate using synchronized block. (08 Marks)
- b. Describe the following:
- (i) Inter thread communication
  - (ii) The delegation event model (07 Marks)
- c. What is inner classes? Write a program to demonstrate anonymous inner classes. (05 Marks)

**Module-5**

- 9 a. With a neat diagram, describe the applet life cycle. (08 Marks)
- b. Write an applet program to set foreground and background color and output a string. (07 Marks)
- c. With syntax describe standard Applet tag. (05 Marks)

**OR**

- 10 a. With programming examples, explain how to pass parameters to applet. (07 Marks)
- b. Describe applet Skelton code snippet. (05 Marks)
- c. Write a swing applet program to demonstrate with two JButtons named India and Srilanka. When either of the button pressed, it should display respective label with its icon. Refer image icon. "India.gif" and "Srilanka.gif". Set the initial label is "press the button". (08 Marks)

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