



Indian Association for the Cultivation of Science
(Deemed to be University under *de novo* Category)

Integrated Bachelor's and Master's Program
End-Semester Examination (Semester II-2020)

Subject: Object-Oriented Programming with Java
Full Marks: 50

Subject Code(s): MCS1201B
Time Allotted:

[Answer any five questions]

[5*10=50]

1. a) Describe different features of Object Oriented Programming language.
b) Define class and object with proper example.
[6+4]

2. A class sort contains any array of 50 integers. Member methods and data members are given below
Class name- Sort
Data member-
 arr[]- integers.
 item- number to be searched in the array.
Member methods-
 void inputdata() - to input 50 integers (no duplicate numbers are to be entered)
 void bubblesort() - to sort the array in ascending order using the bubble sort technique and to display the sorted list.
 void binarysearch()- to input item and search for it using the binary search technique. If found print the item found and its position in the sorted list. Otherwise print an appropriate message.
Write a main method to perform the above operation details.
[10]

3. a) Describe constructor overloading with proper example.
b) Describe the use of super keyword in Java with proper example.
[4+6]

4. a) Explain the usage of Java packages.
b) What do you mean by exception? Explain user defined exception by a program.
[4+ (2+3)]

5. a) What do you mean by method overloading and overriding? Explain both with example.

b) What are the characteristic of abstract class?

[7+3]

6. a) Explain the difference between creating a thread by extending the Thread class and creating a thread by implementing Runnable interface.

b) Describe synchronization in respect to multithreading. Write a simple java program which will synchronize between two threads.

[4+ (2+4)]

7. a) What is event? Write an applet program to find GCD of two nos.

b) Explain the difference between equals() and compareTo().

[(2+4) + 4]