

[Total No. of Questions - 9] [Total No. of Printed Pages - 3]
(2063)

861

M.Tech 2nd Semester Examination
Object Oriented Programming with JAVA
MT-201

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary continuation sheet will be issued.

- Note :** (i) Attempt any one question from each Section A, B, C, and D which carries 20 marks each.
(ii) Section E is compulsory which carries 20 marks.

SECTION - A

1. Distinguish between the following terms:
- (a) Object and class
 - (b) Data abstraction and data encapsulation
 - (c) Inheritance and polymorphism
 - (d) Dynamic binding and message passing
- (4×5=20)**

OR

2. Given are two one-dimensional arrays A and B which are stored in ascending order. Write a program to merge them into a single sorted array C that contains every item from arrays A and B, in ascending order.
- (20)**

SECTION - B

3. Answer the following:
- (a) Describe different forms of inheritance with examples.
- (10)**

861/

[P.T.O.]

- (b) Give an example where interface can be used to support multiple inheritance. Write a program to illustrate the same. (10)

OR

4. Answer the following:

- (a) What is an exception? How do we define a try block? How do we define a catch block? (10)
- (b) Create a try block that is likely to generate three types of exception and then incorporate necessary catch blocks to catch and handle them appropriately. (10)

SECTION - C

5. Answer the following

- (a) What is an applet? Why do applet classes need to be declared as public. (10)
- (b) Develop an applet that receives three numeric values as input from the user and then displays the largest of the three on the screen. (10)

OR

6. Answer the following

- (a) What is a thread? What is the difference between suspending and stopping a thread? (10)
- (b) Describe the complete life cycle of a thread. (10)

SECTION - D

7. Answer the following

- (a) What is Abstract Window Toolkit (AWT)? Explain AWT classes. (10)
- (b) Explain the method of creating a frame window in an applet. Illustrate the same with the help of a program. (10)

OR

8. Answer the following

- (a) What do you mean by menu and menu Bars? (10)
- (b) How to create menus and menu bars? Illustrate the same with the help of a program. (10)

SECTION - E

9. Answer the following

- (a) Write a program to find the minimum element in an given array.
- (b) What do you mean by overloading methods? Write a program in JAVA to swap two given variables with the use of method overloading.
- (c) Why synchronization is necessary in multithreaded programming? Explain with the help of an example.
- (d) Explain the method of adding and removing controls in Abstract Window Toolkit.
- (e) What is a constructor? How do we invoke constructor? Explain. (5×4=20)