



MANIPAL INSTITUTE OF TECHNOLOGY MANIPAL

IV SEMESTER B.TECH. DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2017 SUBJECT: PROGRAMMING IN JAVA (open elective) [CSE 3290] REVISED CREDIT SYSTEM (02/05/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

Answer ALL the questions.
Missing data may be suitably assumed.

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- 1A. Differentiate between type conversion and type casting with an example for each.3M
- 1B. Explain the two short circuit logical operators available in java with an example for each. 3M
- 1C. Define a class called Student with following private data members: Name(String), mark1(int), mark2(int) and mark3(int). Write parameterized constructor to initialize the data members. Write a disp() method to display the details. Design an interface called Exam with a method Percent_Calc(). Design a new class called Result which extends Student and implements the method Percent_Calc () which computes and displays the percentage of marks in 3 subjects [Maximum mark in every subject is 100]. Also use parameterized constructor to initialize superclass members. Write a main method which creates an object of Result class and initializes the members. Use respective methods to display the details of Result object and Percentage marks.
- 2A. What is dynamic method dispatch? Explain with a complete example $program_{4M}$ Java's way to achieve run time polymorphism.
- 2B. Find errors in the following java program:

```
class A {
    public void static(string s[]) {
        int x;
        if(x==10) {
            int y=20;
            x=x*y;
            }
        y=100;
        int bar=1;
        {
            int bar=2;
        }
      }
    }
}
```

2M

2C.	What is the difference between method overloading and method overriding? Explain with suitable examples.	? 4M
3A.	What is the need for synchronization? With an example program explain	ן אויי
3B	synchronized method.	41VI
00	create use and run a packaged program.	3M
3C.	Differentiate between checked and unchecked exceptions. Give two examples	~ •
	each.	3M
4A.	Write a Java program to copy one file to another using Byte stream classes by passing the names of source and destination files as command line	
	arguments.	4M
4B.	What are the two different uses of the keyword <i>final</i> with Inheritance? Explain with the relevant example.	3M
4C.	Write an applet java program to do the following:	
	 (i) Display the message "Welcome to applet programming" in the applet window 	
	(ii) Set foreground and background with some colors	
	(iii) Display the message "This is status window" in the status window o the applet.	f 3M
5A.	What are anonymous inner classes? Demonstrate the working of anonymous inner class to handle only mouse pressed event using a adapter class.	3M
5R	Design an applet as shown in Fig. 5B using AWT controls When Calculate	

5B. Design an applet as shown in Fig. 5B using AWT controls. When *Calculate* button is clicked it should display the factorial of a number entered in Result textbox.

Enter a numb	per:
Result:	
	Calculate
	Fig. 5B

5C. Write the steps required to access a database using JDBC.

ЗM

4M