

**R17**

Code No: 843AE

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA III Semester Examinations, July/August - 2021****JAVA PROGRAMMING****Time: 3 Hours****Max.Marks:75****Answer any five questions****All questions carry equal marks**

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- 1.a) How Java provides portability? Explain.  
b) Explain static classes. [7+8]
2. Define a class name "Set" that contains three integers a, b, c. Define the below methods.  
void addition(int a, int b, int c);  
void subtraction(int a, int b, int c);  
Write a program to display the addition and subtraction of the sets.  
What is the problem with the above methods declaration? What is to rectify the error? [15]
3. Demonstrate the concept of polymorphism in JAVA with an example code. [15]
4. Define a class for Home Automation. In the initial phase, implement two simple methods like void display Lights(), void off Lights()(just print simple messages like Led is glowing etc..) and also include an abstract method void control Lights(). Inherit the Home Automation class to Reverse Engg Clinics class and implement the abstract method void control Lights () in Reverse Engg Clinics class using JAVA code. [15]
5. What is an Runnable interface? Create two threads, one thread displays even integers from 0 to 10, one thread displays odd integers from 1 to 11. Implements the above scenario using Runnable interface in multi threading. [15]
6. Explain exception handling in JAVA with an illustrative example. [15]
7. Design the given form with AWT components. [15]

**Student Registration Form**

Name

Sex ☐ Male ☐ Female

Course

MobileNo

8. How to create and give a brief description of each component a JComboBox and a List using AWT. Explain how they are different give the sample code. [15]

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