



Name :

Roll No. :

Invigilator's Signature :

**CS/M.Sc.(SE)/SEM-2/MI-202/2013
2013**

OBJECT TECHNOLOGY

Time Allotted : 3 Hours

Full Marks : 70

*The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words
as far as practicable.*

**GROUP - A
(Multiple Choice Type Questions)**

1. Choose the correct alternatives for the following : $10 \times 1 = 10$

i) Which view describes the organization of static software modules in development environment ?

- a) Logical view b) Implementation view
- c) Deployment view d) Process view.

ii) The default layout manager for a frame is

- a) flow layout b) border layout
- c) grid layout d) card layout.



- iii) Which keyword when applied on a method indicates that only one thread should execute the method at a time ?
- a) Transient
 - b) Volatile
 - c) Synchronized
 - d) Static
 - e) Final.
- iv) Which of the following is true about interfaces ?
- a) Methods declared in interfaces are implicitly public, static and final
 - b) Variable declared in interfaces are implicitly public, static and final
 - c) An interface can extends any number of interfaces
 - d) The keyword 'implements' indicate that an interfaces inherits from another.
- v) If a base class has a method defined as `void mehthod(){}` , which of the following are legal prototypes in derived class of this class ?
- a) `void mehthod()`
 - b) `int mehthod(){return 0;}`
 - c) `void method(int i){},`
 - d) `private void mehthod(){}.`



viii) The output of

```
String s=new String();  
System.out.println(s);
```

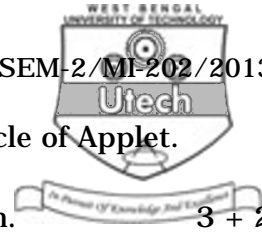
- a) null
 - b) EmptyString
 - c) S
 - d) none of these.
- ix) Which of the following is not a wrapper class ?
- a) Decimal
 - b) Integer
 - c) Boolean
 - d) Character.
- x) Which of the following methods are invoked by the AWT to support paint and repaint operation ?
- a) paint()
 - b) repaint()
 - c) draw()
 - d) redraw().

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. a) Explain different access specifier.
- b) What is the difference between '=' (equal) and '==' operator ? $3 + 2$
3. Differentiate between any *three* of the following :
- a) Abstract class and interface
 - b) Static and final keyword
 - c) Method overloading and method overriding
 - d) Instance variable and class variable
 - e) Object and object reference.



4. a) What is Applet ? Explain the Life Cycle of Applet. 3 + 2
 b) Explain aggregation and generalization. 3 + 2
5. What is the basic goal of UML ? What do you mean by collaboration diagram ? 2 + 3
6. What is run-time polymorphism ? Discuss with example.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. a) What is object ? Why Java is called an Object Oriented Language ? 2 + 3
 b) Write short notes on the following : 5 × 2
- i) this
 ii) final
 iii) super
 iv) Constructor
 v) Order of precedence and associativity.
8. a) What is wrapper class ? Discuss in detail. 5
 b) Discuss with example the “Parameter Passing Mechanism” in Java. 10



9. a) What is aggregation ? How aggregation is different from Association and generalization ? 2 + 3
- b) What is "Abstract Data Type" ? 2
- c) What do you mean by Object-Oriented Programming ? How is it different from Conventional procedural/structured Programming ? 2 + 6
10. a) What is JVM ? 3
- b) What is JIT ? 3
- c) Discuss with example of Writing, Comiling and Running a Java program. 4
- d) Write short notes the following : 5 × 1
- i) Encapsulation
 - ii) Data hiding
 - iii) Inheritance
 - iv) Class
 - v) Object.
11. a) Write the differences between 'String' and 'StringBuffer'. 5
- b) What is thread ? Discuss the Life Cycle of thread. 2 + 3
- c) Explain 'state Chart' and 'activity diagram' with example. 5



12. a) Draw a state chart diagram which explain the various states of making a phone call. 5
- b) A passenger calls the lift from its current floor and after entering the lift the passenger presses the destination button. The lift on arrival at destination will wait for next response upto a time limit. if there is no response within the time the lift will go back to its home floor that is ground floor. Represent these features with help of State Diagram. 10

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