| | Utech |
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| Name: | |
| Roll No. : | To Annual (NE complete 2 and Excellent) |
| Invigilator's Signature: | |

CS/BCA/SEM-6/BCAE-602B/2013

2013

OBJECT ORIENTED PROGRAMMING WITH JAVA

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) JVM stands for
 - a) Java Virtual Machine b) Java Vision Machine
 - c) Java Visual Machine d) none of these.
 - ii) String str ="ABCD";

System.out.println (str.charAt(2));

The output is

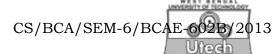
a) *C*

- b) 2
- c) exception occurs
- d) none of these.
- iii) Dynamic method dispatcher is used full for
 - a) resolving method overriding
 - b) resolving multilevel inheritance
 - c) resolving multiple inheritance anomaly
 - d) none of these.

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| iv) | In Java applet, stop() method can be invoked | | | | | |
|-------|---|-----------------------------------|-----------|--|--|--|
| | a) | once | b) | twice A Property Complete and Conference | | |
| | c) | many times | d) | not at all. | | |
| v) | | ch of the following structors? | statem | ients is true regarding | | |
| | a) All cases must define a constructor | | | | | |
| | b) A constructor can be declared private | | | | | |
| | c) A constructor can return a value | | | | | |
| | d) | A constructor musclass. | st initia | lize all the fields of a | | |
| vi) | Wha Inpu | at is the return at Stream class? | type o | f read() method of | | |
| | a) | String | b) | Float | | |
| | c) | Void | d) | None of these. | | |
| vii) | Which of the following JSP expressions are valid? | | | | | |
| | a) <%="Sorry"+"for the"+"break"%> | | | | | |
| | b) | <%="Sorry"+"for the | e"+"breal | k";%> | | |
| | c) | <%="Sorry"%> | | | | |
| | d) | <%="Sorry";%> | | | | |
| viii) | | ass can be converte interface | ed to a | thread by implementing | | |
| | a) | Thread | b) | Runnable. | | |
| ix) | Which is not allowed in EJB programming? | | | | | |
| | a) | Thread Managemen | ıt | | | |
| | b) | Transient Fields | | | | |
| | c) | Listening on a Sock | et. | | | |
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- x) What happens if Database Updation code is written in ejbPassivate() method and if this method is called?
 - a) Exception is thrown
 - b) Successfully executes the Database Updation code
 - c) Compilation error occurs indicating that Database Updation code should not be written in ejbPassivate()
 - d) ejbStore() method is called.

GROUP - B

(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. Write a program to create a window and set its title with "IETE" using AWT.
- 3. How will you call parameterized constructor and overrided method from parent class in sub-class?
- 4. Explain object serialization in Java with suitable example.
- 5. a) In Java, explain how to call a constructor from another.
 - b) Indicate the difference between PATH and CLASSPATH.

3 + 2

- 6. a) Can a super class object reference a sub-class object? Explain.
 - b) Illustrate the uses of 'this' and 'super' keywords.
 - c) Illustrate the uses of 'integer' and 'Integer' keyword.

1 + 2 + 2

GROUP - C

(Long Answer Type Questions)

Answer any three of the following.

 $3 \times 15 = 45$

7. a) What are Adapter classes?

3

- b) What is multithreading? What are the two different ways to create multithreaded program?
- c) What is the difference among final, finally and finalize?

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| | d) | Discuss each part of the following statement: |
|-----|------|---|
| | | <pre>System.out.println();</pre> |
| | e) | How does Java implement platform independence? 2 |
| | f) | What is the difference between an instance member and |
| | | a class member? |
| | g) | What is JAR? Write few options used with JAR. 1 |
| 8. | a) | What is polymorphism? Differentiate between compile |
| | | time and runtime polymorphism with the help of |
| | 1 \ | complete java program. 3 + 3 + 3 |
| | b) | What is the role of garbage collection? |
| | c) | What are packages? Explain the steps to create packages. |
| 9. | a) | What is the difference between character based and byte |
| | | based IO streams? Discuss different types of character |
| | | and byte based streams. 3 + 6 |
| | b) | Write a program to input three integers through keyboard and print the largest among them. |
| 10. | a) | Describe the different stages in the life-cycle of an applet. |
| | b) | Distinguish between init() and start() methods. |
| | c) | What is synchronization? When is it used? |
| | d) | Give an example where interface can be used to support multiple inheritances. $4 + 3 + 3 + 5$ |
| 11. | Writ | e short notes on any <i>three</i> of the following: 3×5 |
| | a) | Abstract class |
| | b) | Exception handling |
| | c) | Interface |
| | d) | Applet viewer |
| | e) | JVM. |
| | | ======== |
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