

C.S.B.Tech/Even/ECE/6th Sem/EE-604C/2014

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11. Write a short notes on (any three):

- a) Constructor
- b) Abstraction
- c) Wrapper class
- d) Exception handling in OOP.
- e) Aggregation.

2014

Object Oriented Programming

Time Allotted : 3 Hours

Full Marks : 70

*The figure 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)

Choose the correct alternatives for the following:

10x1=10

1) After the following code fragment, what is the value in a?

```
String s;  
int a;  
s = "Foolish boy."  
a = s.indexOf("fool");
```

- a) -1
- b) 0
- c) 4
- d) random value

100

1

[Turn over]

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ii) If s = "text", what is the value returned by s.lengtht()?

- a) false
- b) true
- c) 4
- d) 5

iii) What is the value of k after the following code fragment?

```
int k=0;
int n=12;
while (k < n)
{
    k=k+1;
}
```

- a) 0
- b) 11
- c) 12
- d) Unknown

iv) Given the following code fragment:

```
int A[];
int i = 0;
A = new int A[4];
while (i < 4)
{
    A[i] = 10;
    i = i + 1;
}
```

What is the value of A[3]?

- a) 0
- b) 3
- c) 10
- d) Unknown

v) The following is NOT an example of a data type.

- a) int
- b) public
- c) Button
- d) Void

vi) The following a legal Java statement

- a) m1=new TextField("sixty");
- b) 1a=6;
- c) add(m1);[ans]
- d) m1.setText("Hello world);

vii) The method set Label can be used with what type of Object?

- a) DoubleField
- b) int
- c) TextField
- d) String

viii) What is the value stored in result after executing the

following line in a program? result = 6/2*3;

- a) 1.2
- b) 9
- c) 1
- d) 0

ix) Java is

- a) platform dependent programming language
- b) platform independent programming language
- c) partial platform independent programming language
- d) none of these.

x) Which exception is thrown by the readt() method of input Stream class?

- a) Exception
- b) FileNotFoundException
- c) ReadException
- d) IO Exception
- e) None of these

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following 3x5=15

What is singleton class? Give a example of single class with proper java coding.

(1+4)

Differentiate between the following (any two):

(2.5x2)

- a) Abstract class and interface
- b) Object and object reference
- c) Static and final keyword
- d) Method overloading and method overriding

```
Class A {
    Private int x;
    Static int y;
    int display ( int a, int b);
    {
        System.out.println("X=" + x + "Y=" +y);
    }
}
```

What will be the memory allocation for attributes and method on objects a1, a2 of type A? Only picture of a1 and a2 along with their member and their memory size required.

(1+2+2)

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5. a) Explain "Public static void main(String[] args)" in brief
b) Explain try and catch declaration
6. Explain access specifies used in Java
7. a) What is thread? Draw the state transition diagram of J

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. 3x15=

- thread.
 - b) Write a java program which will show the requirement of synchronized method over a normal method in thread.
 - c) Write a java program which will show that constructor is automatically invoked during object creation.
- (1+4+5)
8. a) What is an interface? Implement interface in Java with a sample code.
 - b) Explain inheritance with its types.
 - c) Explain all the keywords of the statement: public static void main (String[] args)
 - e) What is the difference between inner class and nested class in java
 - f) Give a method that does not declare any exception. Can we override that method in a subclass to throw an exception?

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(3+5+3+2+2)

Write down a Java code to generate a linear singly linked list having at least 4 nodes.

Discuss Applet life-cycle indicating the functions, which are used.

What do you mean by 'Java is a platform independent language'?

(5+7+3)

- 1) What is class? How does it accomplish data hiding?
 - 2) When do we declare a method or class as "final"?
 - 3) Discuss the different levels of access protection available in Java.
 - 4) Correct the code for overloading method?
- ```
public class Figure
{
 public String draw(String s)
 {
 Return "Figure Drawn"
 }

 public void draw (string s) { }
 public void draw (double f) { }
}
```
- 5) Describe different forms of inheritance with examples.

(3+2+3+2+5)