Q1 Choose the correct answer

a) Which of the following is not an object:
   i) Dog
   ii) Bhutan
   iii) Vansh
   iv) Manmohan Singh

b) Which operator has the higher precedence than +
   i) >
   ii) &&
   iii) ?:
   iv) --

c) Which Keyword repeats a construct:
   i) continue
   ii) break
   iii) return
   iv) goto

d) Give the output:

```
x = Math.round(Math.random());
```

   i) 0
   ii) 1
   iii) 1.0
   iv) ~~0.0~~ Either 0 or 1.

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e) Name the type of error:

```
if( marks < 33)
    x = "Pass";
else
    x = "Fail";
```

i) Syntax
ii) Logical
iii) Run-Time
iv) None

Q2 Fill in the blanks:

a) The ____ keyword achieves data hiding.
i) private
ii) public
iii) protected
iv) default

b) If a method is to be made available in ~~this~~ its subclass, its access specifier must be ____.
i) public
ii) private
iii) protected
iv) ~~package~~ default

c) If a function is declared as ____, then object is not required to invoke it.
i) static
ii) public
iii) void
iv) final

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Date.....

d) _____ is not a Wrapper class.

i) Math
ii) Character
iii) Integer
iv) Boolean

e) _____ method does not exist in Java.

i) nextByte()
ii) nextChar()
iii) nextInt()
iv) nextBoolean()

Q3 Name the following:

a) The equivalent method of parseInt()

1. valueOf()
2. valueInt()
3. parseVal()
4. value()

b) Another name for native executable code:

1. Object code
2. class code
3. final code
4. source code

c) Called automatically whenever a new object is created:

1. function
2. method
3. variable
4. Constructor

BE

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Date.....

d) Compulsory in a Java program:

1. class
2. object
3. method
4. main

e) When the parameters of a method are primitive data types, it is _____

1. Call by Value
2. Call by Reference
3. Call by int
4. Call by double

Q4 State True or False

a) Integer is a Keyword
   1. True
   2. False

b) !(4 != 6 || 4 == 6)

   1. true
   2. false

c) package is a keyword.
   1. True
   2. False

d) Java offers a total of 3 conditional statements.
   1. True
   2. False

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Date.....

e) There can exist in one class, glob and local variables with the sam name.

1. True
2. False

Q5 Choose the odd one:

a)
1. :
2. ;
3. .
4. =

b)
1. method
2. function
3. Behaviour
4. class

c)
1. ( )
2. &
3. { }
4. ++

d)
1. ++
2. !
3. --
4. +

e)
1. platform independent
2. case - sensitive
3. procedure - oriented programming
4. applets

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Q6 Give the output:

a) `a-- = --a -(a-1) + a;` // if a = 10

1. 0
2. 10
3. -1
4. 18

b)
```
if (a % b != b % a)
    System.out.println (a/b);
    System.out.println (b/a);      // a = 3, b = 4
```

1. 0
2. 0
3. 1
4. 0.75
   0.3333 ...

c) `big = a>b ? a>c ? c : a : b>c ? b : c;`
// if a = 2, b = 3, c = 4

1. 2
2. 3
3. 4
4. 0

d)
```
int x = 1;
switch (x+1)
  {
    case 1 : x = x+1;
    case 2 : x = x+2; break;
    case 3 : x = x+3;
    default : x = x+x;
  }
System.out.println (x);
```

1. 3
2. 5
3. 14
4. 2

e)
```
i = 500;
while (i > 100)
  {
    i = i % 1;
    if (i != 0)
      Sopln(i);
  }
Sopln(i);
```

1. 500
2. 0
3. 1
4. endless loop

Section B (20 marks)

Q7 Read the following:

class name — overload

Member methods:

void show (int a, int b) — to interchange values of a and b without taking a third variable.

void show (double a, double b) — to display all the numbers in the range of a and b with an increment of 0.1, without using for. [Hint: Use while']

Question 1 Read the program:

class name — Parcel

member variables: int weight (wt. of parcel)
float rate (rate per kg)
float bill (final amnt)

Member Methods

void input ( ) - to accept weight and rate from the keyboard

void print ( ) - to print the details.

void calcu ( ) - calculates the bill as follows :-

For the first kg — Rs. 50/-
For every kg thereafter — Rs. 5/-

void main ( ) - to create an object of the class and invoke the functions of the class.

Ans 9 The following program checks for a perfect number.
A perfect number is such a number whose sum of factors (excluding itself) add up to the number itself.

eg $6 = 1 + 2 + 3 = 6$

$28 = 1 + 2 + 4 + 7 + 14 = 28$