SEMESTER 1 EXAMINATION
COMPUTER APPLICATIONS

Maximum marks: 50

Time allowed: One hour.

You will not be allowed to write during the first 10 minutes.

This time is to be spent in reading the question paper.

ALL QUESTIONS ARE COMPULSORY.

The marks intended for each question are given in brackets [ ]

Select the correct option for each of the following questions.

Question 1.

Choose the correct answer:

(i)   The blueprint that defines the variables and the methods common to all of a certain   [1]
kind is termed as:

    (a)   class

    (b)   object

    (c)   package

    (d)   method

    Answer: _____

(ii)   A data type which contains integer as well as fractional part and occupies 32 bits   [1]
space is:

    (a)   float

    (b)   char

    (c)   double

    (d)   byte

    Answer: _____

(iii)   What is the final value stored in variable x?   [1]

    double x=Math.ceil(Math.abs(-7.3));

    (a)   7.0

    (b)   8.0

    (c)   6.0

    (d)   9.0

    Answer: _____

This paper consists of 14 printed pages.

(iv) Which of the following keyword is used to create symbolic constants in Java? [1]

    (a) final

    (b) Final

    (c) Constant

    (d) Const

    Answer: _____

(v) Name the type of error in the statement given below: [1]

    double x;y;z;

    (a) Logical error

    (b) Syntax error

    (c) Runtime error

    (d) No error

    Answer: _____

Question 2.

Fill in the blanks with the correct options:

(i) The keyword to create an object of a class is _____. [1]

    (a) create

    (b) new

    (c) New

    (d) NEW

    Answer: _____

(ii) The operator which acts on one operand is known as _____. [1]

    (a) binary

    (b) ternary

    (c) unary

    (d) relational

    Answer: _____

(iii) The ASCII code of 'B' is _____. [1]

(a) 67

(b) 66

(c) 98

(d) 99

Answer: _____

(iv) A _____ method needs to be called with help of an object. [1]

(a) void

(b) class

(c) non-static

(d) static

Answer: _____

(v) Parameters used in the method call statement are _____. [1]

(a) Actual parameters

(b) Informal parameters

(c) Formal parameters

(d) Void parameters

Answer: _____

Question 3.

Name the following:

(i) The concept of having more than one constructor with different types of parameters: [1]

(a) Copy constructor

(b) Method overloading

(c) Constructor overloading

(d) Overloaded methods

Answer: _____

(ii) The keyword which indicates that the method returns no value: [1]

(a) public

(b) static

(c) void

(d) abstract

Answer: _____

(iii) The process of binding the data and method together as one unit is called as: [1]

(a) Encapsulation

(b) Inheritance

(c) Polymorphism

(d) Dynamic binding

Answer: _____

(iv) The jump statement that is used inside a switch case construct to terminate a statement sequence: [1]

(a) continue

(b) break

(c) return

(d) goto

Answer: _____

(v) The program code written in any high-level language to solve a problem is: [1]

(a) object code

(b) source code

(c) machine code

(d) bytecode

Answer: _____

Question 4.

State whether the statement is True or False:

(i) char is a non - primitive data type. [1]

    (a) True

    (b) False

    Answer: _____

(ii) Multi line comments in Java start with /* and end with */. [1]

    (a) True

    (b) False

    Answer: _____

(iii) == is an assignment operator. [1]

    (a) True

    (b) False

    Answer: _____

(iv) Java compiler automatically creates a default constructor in case no constructor is present in the java class. [1]

    (a) True

    (b) False

    Answer: _____

(v) System.exit(0) terminates the program from any point. [1]

    (a) True

    (b) False

    Answer: _____

Question 5.

Choose the odd one:

(i) (a) >= [1]

    (b) %

    (c) /

    (d) *

    Answer: _____

(ii)   (a)   double

       (b)   int

       (c)   char

       (d)   String

       Answer: _____

(iii)   (a)   if else

       (b)   if

       (c)   switch case

       (d)   while( )

       Answer: _____

(iv)   (a)   nextlnt()

       (b)   nextDouble()

       (c)   nextString

       (d)   next()

       Answer: _____

(v)   (a)   Robust

       (b)   Platform Independent

       (c)   Inheritance

       (d)   Multithreading

       Answer: _____

Question 6.

Give the output of the following:

(i)   int x=2, y=4, z=1;

    int result = (++z)+y+(++x)+(z++);

    (a) 11

    (b) 12

    (c) 10

    (d) 9

    Answer: _____

(ii)   int x;   [1]

for (x=1; x<=3; x++);

System.out.print (x);

(a)   1 2 3

(b)   1 2 3 4

(c)   4

(d)   1

Answer: _____

(iii)   int f= 10,m=9;   [1]

String e=(m%f==9) ? "YES" : "NO";

System.out.print(e);

(a)   YES

(b)   NO

(c)   YESNO

(d)   NOYES

Answer: _____

(iv)   switch(x){   [1]

   case 'M':

      System.out.print("Microsoft Teams");

      break;

   case 'G':

      System.out.print("Google Meet");

   default :

      System.out.print("Any software");

      break;

   case 'W':

      System.out.print("Web Ex");

      break;

      }

When x='g'

(a)   Google Meet

(b)   Any software

(c)   Google Meet

      Any software

(d)   WebEx

Answer: _____

[1]

(v)   int v=5;

      while (--v>=0) {

      System.out.print(v);

      }

(a)   43210

(b)   54321

(c)   543210

(d)   4321

Answer: _____

Question 7.

Given below is a class with following specifications:

class name   :   Number

void Display(int n) -   To extract and print each digit of given number from last digit of
                         the first digit on separate lines.

                         Example: n=674

                         Output

                         4

                         7

                         6

void Display()   -   To print numbers from 0.5 to 5.0 with updation of 0.5.

Fill in the blanks of the given program with appropriate statements.

class (i) _____

{

    void Display(int n) {

        while((ii) _____)

```
        {
            int rem= (iii) _____
            System.out.println(rem);
            n=(iv) _____
        }
    }
    void Display() {
        for(v)_____; x<= (vi)_____; x+=0.5)
        System.out.println(x);
        }
}
```

(i) (a) Number   [1]
     (b) number
     (c) NUMBER
     (d) NUM

     Answer: _____

(ii) (a) n<0   [1]
     (b) n>0
     (c) n==0
     (d) n=0

     Answer: _____

(iii) (a) n%100;   [1]
      (b) n/10;
      (c) n%10;
      (d) n/100

      Answer: _____

(iv) (a) n%10;   [1]
     (b) n/10;
     (c) n/100;
     (d) n%100

     Answer: _____

(v)   (a)   double   x=0.5

       (b)   Double   x=0.5

       (c)   double   x=0.0

       (d)   Double   x=0.0

       Answer: _____

(vi)   (a)   x>=5.0

       (b)   x<=5.0

       (c)   x==5.0

       (d)   x=5.0

       Answer: _____

Question 8.

A school is giving away merit certificates for the students who have scored 90 percentage and above in class 10.

The following program is based on the specification given below. Fill in the blanks with appropriate Java statements.

class name   :   Student

Member variables:

String name   :   To enter name of a student

double per   :   To enter percentage obtained by the student

String cer   :   To store the message

Member method

void input()   :   To accept the detail

void merit()   :   To check the percentage and award the merit

void display()   :   To display the detail

void main ( )   :   To create an object of the class and invoke the methods

```
import java. (i)_____.*;
class  Student {
     String name;
     double per;
     String cer;
  void input(){
  Scanner obj= new Scanner (System.in);
  System.out.println(" Enter name , Percentage");
  name = obj.next();
```

```java
        per = (ii) _____
    }
    void merit()
    {
    if ((iii)_____)
    {
        cer="AWARDED";
    }
    else
        cer=(iv)_____
    }
    void (v)_____
    {
    System.out.println(name);
    System.out.println(per);
    System.out.println(cer);
    }
    void main() {
    Student s = new (vi)_____
    s.input();
    s. merit();
    s.display();
    }
}
```

(i) (a) utility   [1]

    (b) Util

    (c) util

    (d) UTILITY

    Answer: _____

(ii) (a) obj.nextDouble();   [1]

    (b) nextDouble();

    (c) obj.nextFloat();

    (d) nextFloat()

    Answer: _____

(iii) (a) per>=90

   (b) per<=90

   (c) per>90

   (d) per==90

Answer: _____

(iv) (a) NOT AWARDED;

   (b) "NOT AWARDED";

   (c) "AWARDED";

   (d) "NOT AWARDED"

Answer: _____

(v) (a) display()

   (b) Display()

   (c) Print()

   (d) DISPLAY()

Answer: _____

(vi) (a) Student();

   (b) STUDENT()

   (c) student()

   (d) Student()

Answer: _____

Question 9.

The following program segment checks whether number is an Abundant number or not. A number is said to be an Abundant number when the sum of its factors (excluding the number itself) is greater than the number.

Example:

Factors of number 12 are 1,2,3,4,6

Sum of factors is   1+2+3+4+6 = 16

Fill in the blanks with appropriate java statements

```
void abundant(int n)
  { int s=0;
     for((i)_____;  (ii)_____ ;i++)
     {  if((iii)_____)  
```

```
                s=s+i; }
    if((iv)_____)
    System.out.println("Abundant Number");
    else
    System.out.println("Not Abundant Number");
    }
```

(i) (a) int i=1   [1]

    (b) int i=0

    (c) int i=2

    (d) Int i=1

    Answer: _____

(ii) (a) i<=n   [1]

    (b) i<n

    (c) i>n

    (d) i>=n

    Answer: _____

(iii) (a) n%i==0   [1]

    (b) n%i==1

    (c) n%2==0

    (d) n/2==0

    Answer: _____

(iv) (a) s<n   [1]

    (b) s>n

    (c) s==n

    (d) s=n

    Answer: _____

Question 10.

Read the following case study and answer the questions given below by choosing the correct option:

Java compilation is different from the compilation of other high-level languages. Other high-level languages use interpreter or compiler but in Java , the source code is first compiled to produce an intermediate code called the byte code, this byte code is platform independent and is a highly optimized set of instructions designed to be executed by Java

in the run time system called JVM (Java Virtual Machine), JVM is a Java interpreter loaded in the computer memory as soon as Java is loaded. JVM is different for different platforms.

(i) Full form of JVM is: [1]

    (a) Java Visual Machine

    (b) Joint Vision Mechanism

    (c) Java Virtual Machine

    (d) Java virtual mechanism

Answer: _____

(ii) JAVA code is: [1]

    (a) Compiled and interpreted

    (b) Only compiled

    (c) Only Interpreted

    (d) Translated

Answer: _____

(iii) JAVA source code is compiled to produce: [1]

    (a) Object code

    (b) Byte code

    (c) Final code

    (d) Machine code

Answer: _____

(iv) JVM is an / a _____. [1]

    (a) Interpreter

    (b) Compiler

    (c) Intermediate code

    (d) High level language

Answer: _____