COMPUTER APPLICATIONS

**Maximum Marks: 70 Time : One hour 30 mnts**

**ALL QUESTIONS ARE COMPULSORY. Each questions carry 5 marks**

**Select the correct option for each of the following questions.**

**[Section A – 30 marks (5x6)]**

Question 1

Name the following

* + - * 1. These are necessary for understanding the purpose of a part of a program.

Interface

comment

remark

Modifier

b) Which of the following is a Java features?

1)Robust 2) procedural; language 3) Interpreter based 4) not case sensitive

  c) The escape sequence character for \\

1)vertical tab 2) back slash 3) form feed 4) null

d) Which of the following is not a correct integer constant

1) 05 2) 0x5 3) 08 4) .5

e) What does the expression double k = 20/6 return?

1. 3 2) 3.0 3) 3.3 4) 3.33333

Question 2

1. Evaluate the following Java expression, if x=3,y=6,z=8 to find the final value of x

X+= 3\* y++ + ++ z /3 + x++

1) 18 2) 22 3) 26 4)none of these

**b)** Find the output

int k=1,p=10 ;

while( k<=p)

{ k+=3;

p--;

}

System.out.print (k+p);

1)122) 12 3) 15 4 ) none of the above

c) Java expression for **x+5y/3x** is:

1)Math.sqrt(x)+5\*y/3x

2)Math.pow(x,.5) + (5\*y)/(3\*x)

3)Math.sqrt(x)+5\*y/3 \*x

4)Math.sqrt(x)+5\*y/(3 \*x)

d) Find the output

int a=5,b=8 ;

**for(; ; )**

**if(a.b)**

**a-=b;**

**else**

**b-=a;**

**System.out.print(a+b) ;**

1. 10 2) 8 3) 5 4) 2

e) Find the value of n

int n=35;

char ch=’a’;

n=n+ch;

1)100 2) 132 3) 65 4) error

Question 3

a) The ------- keyword allows to resolved name space collision

1. that 2) this3)static 4) None

b) A class may not have ----------

1) data member 2) constructor 3)both 1 & 2 4 ) none

c) this holds the reference of ---------

1) data member 2) method 3) current object 4) static member

d) The ------- keyword allows a function to be referred as class method

1)that 2) this 3) those 4) static

e) goto is a --- word

1) keyword 2) reserve 3) valid 4)all of these

Question 4.  
a) Prefix operator is right associative

1)true 2) false

b) System.in is an object

1)true 2)false

c)A class can not have a void method with it’s name

1) true 2) false

d) A static method should be called with an object

1) true 2)false

e)The function in OOP is termed as method

1)true 2) false

Question 5.

a)The keyword turns an instance variable to class variable

1) const 2) final 3) fixed 4) static

b) Find the odd one

1. int

1. short
2. long
3. Boolean

c)Find the incorrect option

1. Standard constructor

1. Parameterized constructor
2. Copy constructor
3. Non-parameterized constructor

e) Math.round() returns

1) int 2) float 3) double 4) none of these

Question 6.

a)A package which is imported by default

1)java.io 2) java.util 3) java.lang 4) java.net

b) A null statement in java programming is

1) invalid 2) only ; 3) a block of statement 4) none of these

c) In a switch block ‘default’ is a

1) must 2) keyword 3) reserve 4) none

d) A delay loop may be a null loop

1) always true 2) sometimes true 3) false 4) none

e) It is a set of instructions in pseudo machine language [1]

* 1. Byte code
  2. JVM
  3. Source code
  4. Platform

Attempt all the questions

Section B[10x4=40]

Question 7

Write a program to display the following patterns for n number of rows as per user choice

Choice 1 :

Example : row= 4

Output:

1221

2332

3443

4554

Choice 2:

#$#$ $#$#

#$#$

$#$#

[10]

Question 8.

Write a program to define the following class .

Class name – Quadratic

Data member – double root1,root2

int a,b,c,disc

constructor – Quadratic(int,int,int) // to initialize the data member with the required value

Methods:

void discrinant(0 // to find b^2 – 4ac

void displayNature()// to display the nature of root whether real,equal or imaginary

void displayRoots() // to display the roots if real

where if discriminant >0 ,roots are real and unequal , = 0 roots are real and equal and <0 imaginary roots

roots =

[10]

Question 9.

Write a program to check whether a number is twisted prime number or not using suitable user defined functions. Example 73 as 73 and it’s reverse 37 both are prime.

[10]

Question 10.

Design a class to overload a function series( ) as follows:

1. double series(int a,int b,int n) with three arguments returns the sum of the series a/b + 2a/b^2 +3a/b^3 + …….. n terms
2. void series(int n) to display the following series upto n terms

5 ,7,10,14,19 ……….

[10]