The Department of Computer Science Java Programming is wonderful Attempt all questions (which are not equally weighted) Time allowed 3 hours System out prinding halse [Total 40 Marks] Question1: Multiple choice questions Note:- In each sub question there is exactly onecorrect answer. You are required to write the correct answer in column two of the table which can be found on last page. Make sure you write your name and seat number on that page too Also sign the last page. You are not suppose to detached this page from the rest of the pages during first fifty minutes. After fifty minutes detached and return to the approaching invigilator. Question 1a What will happen if you compile/run this code? class Q1a { public void run(int count) { System.out.println("I am sad because count is " + count); Publication (House Part Place 112) Tale Sticking count--; if (count > 0) // this is line number 6 run(count); System.out.println("I am happy because count is " + count); public static void main(String[] args). { Q1a q1a = new Q1a(); Jagus Phaladhra haif care mar q1a.run(2); seba guipalled album vällen aasa A) Compilation error at line 6. B) Runtime exception at line 6! C) Prints following lines: I am sad because count is 2 m. I am happy because count is 1 D) Prints I am sad because count is 2 I am sad because count is 1 I am happy because count is 0 I am happy because count is 111. Fard 6660At Charles Lands Question 1b The following code will give class Q1b { public static void main(String [] args){ String \$27= new String ("127"); if(s1 == s2)

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phrops of System.out.println("True");
  Port & Daw else
 Total An Mark
                                        System.out.println("False");
  Charlest e-t A) Company and the classical plants and people for all showed
B) Prints III
bol susce is B) Prints "True". vasa mov. vasa no vega sasti sena las
Terformer C) Prints "False". Sengguetan et man tage tad ed agie ozie
   Question 1c
                     //What will happen if you compile/run the following code?
           public class Q1c {
                                static String str1 = "main method with String[] args",
                                static String str2 = "main method with int[] args";
                                public static void main(String[] args) { // this is line 4
                                    System.out.println(str1);
                               public static void main(int[] args)
                                     System.out.println(str2);
                                            Systepa out.printlef") am happy besource et it is
                      A) Duplicate method main(), compilation error at line 4.
                      B) Duplicate method main(), compilation error at line 7.
                       C) Prints - main method with String[] args.
                       D) Prints - main method with int[] args.
                   Question 1d
                   What will happen if you compile/run the following code?
                   public class Q1d {
                                                                                           A) Compilation, autor action &
                                                                      // this is line 2 in points an applicated (d
                               int maxElements;
                               public Q1d() {
                                      maxElements = 100;
                                      System.out.println(maxElements);
                                public Q1d(int i) {
                                      maxElements = i;
                                       System.out.println(maxElements); in bod to a risk !
                                                                                I am and because country !
                                Q1d a = new Q1d(); // this is line 12
                                      Q1d b = \text{new Q1d(999)};
                    A) Prints 100 and 999. ((a) 10 | (a) 10
                    B) Prints 999 and 100.
                     C) Compilation error at line 2, variable maxElements was not initialized
                    D) Compillation error at line 12.
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Question 1e
                            What will happen if you compile/run the following lines of code?
                            class Q1e {
                                      public static void main(String [] args){
                                          int[] iArray = new int[15];
                                      iArray.length = 10; // this is line number 4
                                                                System.out.println(iArray.length); https://www.length.jaris.govii.)
                                                                                                                                                                                                                        [ #101 and adding
                               A) Prints 10.
                                 B) Prints 15.
                                C) Compilation error, you can't change the length of an array.
                                 D) Runtime exception at line 4.
                          Question 1f
                         What will be output by the following code?
                          public class Q1f {
                                  public static void main(String argv[]){
                                                                                                                                                                          19: Jan konserak biov bildarg
                                 int i;
                                           int j;
                                           outer:
                                           for (i = 2; i < 4; i++)
                                                   for (j = 1; j < 3; j++) { for j = 1, j < 3; j++ }
                                                            if (i == 2) \times^{-}
                                                                   continue outer;
                                                           System.out.println("Value for i=" + i + " Value for j=" +j);
agrips name) the production of the policy of the production of the
                                                                  population of every country of the gray is I had a very
                             A) Value for i=1 value for j=1
                              B) Value for i=3 value for j=1
                              C) Value for i=3 value for j=2
                              D) Value for i=3 value for j=1
                                           Value for i=3 value for j=2
                                                                                                                                                                                                          in while = [\ai iai
                        Question 1g
                 If you run the code below, what gets printed out?
                       public class Q1g {
                                public static void main(String argv[]){
                                                                  String s=new String("ToyotaBicycle");
                                                                  int iBegin = 1;
                                                              int iEnd = 3;
                                                                  System.out.println(s.substring(iBegin, iEnd));
                                                                                                                                   A) conditation of the lichest of the little of the little
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A) oy
   B) yo
   C) yota
   D) oyo
  Question 1h
  Given the following code what will be output?
  public class Q1h {
          static int j = 40;
          public static void main(String argv[]){
                int i = 10:
                  Q1h p = new Q1h(); and a month of the moint in the contract of the contract of
                                                                                             D) Kimilita epoppion at the response
                  p.amethod(i);
                  System.out.print (i + " and ");
                  System.out.println(j); in a sain that only the state of the said
                                                                                                                                                    Sanna boy phile althour.
         public void amethod(int.x){
                  x = x * x:
A) Error: amethod does not contain variable j
 B) 10 and 40
C) 10 and 4000
D) 10, and 20 miles and a secondary inflamment to the
Question 1i
What code placed before the comment // Start For loop would result in the
population of every element of the array ia[] with a value from variable i
public class Q1i {
        public static void main(String argv[])( seal outby the ro) subst (A
                 Q1i1 = new Q1i();
                                                                                                                                  Let 201 only Private pulsy (E.
                                                                                                                              (1) Value for left value for [22].
                 1.amethod();
                                                                                                                            D) Value (or i=0 value for i=1 -
        Value for in 3 value for me } ()bootsen biov silduq
                 int ia[] = new int[4];
                                                                               on the start for loop
                                                                                                             and the property of the State o
                        ia[i]=i; /([///www.gounds):diam.biov.oitate.oildus
                        System.out.println(ia[i]); vo'[") gaing weare gaing
                                                                                                                                                int Had a 3;
                                 System out printly some straight or the the
    A) for(int i=0; i < ia.length() -1; i++)
   B) for (int i=0; i < ia.length(); i++)
   C) for (int i=1; i < 4; i++)
 D) for (int i= o; i/ ia. length i+t)
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What will be the result when you attempt to compile this program?
public class Q1j (Levice actions problems and the grant of the program) public static void
                                                                                                                                              Oppin of Passacratical
                                                                                                                                           D) Output of "Concrete of the
       public static void main(String argv[]){
              double iRand;
              iRand = Math.random();
           System.out.println(iRand * 100);
                                                                                                                                                                                    माद्या स्ट्रेटिन स्ट्रियांच
 A) A random number between 0 and 10
 B) A random number between 0 and 100
 C) A random number between 0 and 1
D) A compile time error about random being an unrecognised method
 Question 1k
What will happen when you compile and run the following code?
public class Q1k { and ion another all to the lab left up to Calingtab
        private static intigration from the and the tint a successive?
        public static void main(String argv[]){
               O1ks = new Q1k();
               s.amethod();
        }//End of main
        public static void amethod() { . ("Viantes" assure to be updayed
               System.out.println(i);
        }//end of amethod
}//End of class
A) A value of 0 will be printed out
                                                                                                                      A) Compile and run with output 'tea?
C) A runtime exception will be thrown not have direct has oligated (8)
D) A compile time error complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the variable in the complaining of the scope of the complaining of the scope of the complaining of the scope of the complaining of the 
                                                               D wantpile and rous whereing with the might be for a large
What will happen when you attempt to compile and run the following code
                                                                                                                                                           pobliciclass On extendent
class Q11 extends Base {
        public static void main(String argv[]) {
               Q11 o = new Q11();
              int iBase=0;
                                                                                                                   public static word managering a gyl for
               o.amethod(iBase);
                                                                                                                                                             a millioner a anito
       public void amethod(int iOver) {
                                                                                                                                                             Base b Fireh Buse 1
              System.out.println("Over.amethod");
                                                                                                                                                                                                            (Vocallers)
class Base {
       private void amethod(int iBase) {
               System.out.println("Base.amethod");
  of building the Arthurst Arthurst of the policy of the first the first of the Arthurst of the
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A) Compile time error complaining that Base amethod is private
B) Runtime error complaining that Base amethod is private
                                                                . It Jugie gouter a his it wonten cilched
C) Output of "Base.amethod"
                                                                                                             . Draft akinab 11
D) Output of "Over.amethod"
                                                                                          Kan de Nous That
Question 1m
What will happen when you attempt to compile and run the following code
public class Q1m {
   public static void main(String argv[]) {
           Q1m q1m= new Q1m(); Of basin a constant polyment mobiles & (A
                                                                     coll specimen ad advantage base. A (B
          q1m.amethod();
                                                                         Thus i as the Fifth three rebusi A D
    Public void amethod() {
         int k=10;
         switch(k) {
              default: //Put the default at the bottom, not here
                        System.out.println("This is the default output");
                                                                       )([] signs zinark) olicip blog blog sibir s üktlari i
                        break;
              case 10: -
                        System.out.print("ten ");
              case 20:
                         System.out.println("twenty"); . | 100 in the block blade block blade
                         break;
                                                                         - - Tuo habiriy ali liivi 030 edibir 14(B.
A) Compile and run with output "ten " to minice ad live goldion (E)
B) Compile and run with output "ten twenty" ( They make problems A ( )
C) Compile and run with output "This is the default output" in the compile and run with output "This is the default output" in the compile and run with output "This is the default output outp
D) Compile and run with output "twenty"
                                                and the second property way traffer a constitute tartw
Question 1n
Given the following code
public class Q1n extends Base ( ) (( ) vy a spin Change bley bits a hiding
     static boolean b1=false;
     static int i = -1;
     static double d = 10.1;
     public static void main(String argv[]) {
          Q1n m = new Q1n();
                                                                    System, out, printing Chrei, amediden
          Base b = new Base();
          //Here
                                                                              private void a method (intillace) [
                                                                     Sylving to prin In The second of the
class Base{}
Which of the following, if inserted at the comment //Here will allow the code to
 compile and run without error
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B) m=b:
                                                         C) i=d;
                                                           D) b1 = i;
                                                                                                                                                                            tendration of start and energiality
                                                         Question 10
                                                          Given the following class definition which of the following can be legally placed
                                                       after the comment line //Here?
              3 Code.
                                                                   public static void main(String arg[]) (
                                                                                 Q10 m = new Q10(10);
                                                                        Q1o(inti) {
                                              ( So wish a super(i); and large the management of the contract work of the
                                             be proposed to be a galactic bulliance of the constraint of many a street and a series of sections.
                                            · this(i);
                                           2.50 do 22.0
                                                                                                                                                                                                                            पानी किया असी प्रकृतियां
                                                                                 //Here
                                           MIRE perfection of the of yourse as important to the
                                          and factors. I be written by such a thin solve of the analysis of the continuous
                                           halous to intermediate proof the recurrent with transfer of the 14th 14th recommends.
                                        the contract the second three for the second three second
                                     class Base {
                                         public Base(int i) { }
                                              A) Q10 m = new Q10();
                                                          B) super();
                                                         C) this("Hello",10);
                                                         D) Base b = new Base(10);
                                                 Question 1p
                                                Given the following class definition, which of the following statements would be
                                                 legal after the comment //Here
                                                 class Q1p {
                                     String s= new String("Between");
                                                              public void amethod(final int iArgs) {
                                     int iam;
                                   class Bicycle {
                                                                                      public void sayHello() {
                                                                                                 int iOther;
                                                                                      ] //End of bicycle class
                                  William bought the reaches the principle of the comme
                                        telling } //End of amethod
                                                           public vo. d another() {
                                                                           //Here
                                     billiares to a state of the second and the second of the
code to
                                                 A) Bicycle b = new Bicycle();
                                                     B) System.out.println(s);
                                                     C) System.out.println(iOther);no
                                                     D) System.out.println(iam); no
                                                                  Bissing Colonial Parish and Colonial Property of the Colonial Property
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last page. Also sign the last page. 14 Dages during first fifty minutes.

Write a class Triangle with three instance double variables namely sideA, sideB sideC.

The class must also have following methods.

- A default constructor which produces a triangle with all sides being equal to 10 A one parameter constructor which accepts a double and creates an equilate triangle with all sides being equal to passed parameter.
- A two parameter constructor which accepts two doubles x and y and creates isosceles triangle with sides x, x and y.
- A three parameter constructor which accepts three doubles x, y and z and create a triangle intose vides one respectively equal to xy
- A constructor which accepts a reference to an existing triangle and create corresponding clone. It also returns the reference of the cloned triangle.
- A class method objectCount() which returns the current count of how man objects of type triangle have been created.
- An instance method perimeter() which calculates and returns the perimeter the triangle.
- An instance method is Right Angled () which returns true if this triangle is a righ angled one and returns false otherwise.
- An instance method toString(), which returns a suitable String representation of current object.