I TERM EXAMINATION: 2023-24

Time: 2 hrs.

Class - X

Subject - Computer Application M.M.: 100

Answers to this paper must be written on the paper provided separately. You will not be allowed to write during the first 15 minutes.

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

The time given at the head of this paper is the time allowed to write the answers.

This paper is divided into TWO sections.

Answer ALL the questions in Section A and any FOUR questions from Section B. The intended marks for questions or parts are given in [].

SECTION - A [40 MARKS] As some viter work

	Attempt ALL questions from this section.
2.1-	Choose the correct answer from the following option:- (0): > i)sirter [20]
	i. The access specifier which gives the most accessibility is
	a. private b. public c. protected d. default
	ii. What is the following statement doing?
	Car hybrid = new Car();
	그는 경기에서 가입하다는 이 사람들이 되었다면 가입니다. 이 사람들은 사람들이 되었다면 그렇게 되었다면 그렇게 되었다면 그렇게 되었다면 그래요?
	a. Method invocation b. assignment c. declaration d. Object creation
	iii. Which of the following is not a jump statement in Java?
	a. Jump b. return c. break d. continue
7.00	iv. Default value of double datatype is
[2]	a 0.0f b. 0.0i. c. 0.0d d. none of these
194	v. if y = 14 find z = $(++y) * (y+++5)$
:-i	a. 300 b. 310 c. 315 d. 320
5773	vi. if a = 48 and b = 13: find a+ = b++ *5/a++ + b a. 64 b. 63 b. 63 c. 49
101	
[2]	vii. Evaluate n if value of p = 5 and q = 19 :: n = $(q - p) > (p - q)?(q - p)?(p - q)$;
	a. 13 b. 14 c. 15 d. 16+ s)
	viii. What is the name of the Java Interpreter?
	a. Compilersu bara JVM and to compJDK as avait the lad up JRE and the
[1]	ix. Java is a case sensitive language. Which is the most appropriate statement
	with respect to this context: 101 - 101 use value of -101
	a. Upper and Lower case letters are ignored to be have and third d
M.	b. Only uppercase letters are ignored wollofted to be to be the sold by
	c. Only Lowercase letters are ignored.
	d. Upper and Lower case letters are distinguished and an area of the desired and area of the desired and area of the desired and area of the desired area.
	x. What is the code name of Java which is platform independent?
	a. Object code by Byte code included the state of the Byte code included the state of the state
	c. Source code usexs a spread a d. None of these works at
	xi. Predict the output for Math.sqrt(-36);
	a. 6 b6 c. NAN d. None of these
	xii. 'Division by 0' is which type of error?
	a. Syntax Error b. Run time Error
	c. Logical Error d. None of these
	xiii. Return type of Math.round() is
	a. double b. float c. int district two de long
	있는 것도 많은 마른 이번 것 되었습니다. 이번 경험 이 전문 전문 이 사람들이 되었습니다. 그는 사람들이 되었습니다. 그는 사람들이 되었습니다. 그런 그는 사람들이 되었습니다. 그는 사람들이 모든 사람들이 되었습니다. 그는 사람들이 되었습니다.

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xiv. If b = -15.6 find p = Math.rint(Math.abs(b));
                                                                   d. 16.0
                            b. 15.0
                                             c. 17.0
      xv. Which loop executes atleast once?
                                                                   d. switch
               do-while b. while
                                             C.
      xvi. How many times will following code print "Java"?
           for(int i = 1; i \le 5; i++);
          System.out.println("Java");
      xvii. The loop which does not have the body of the loop is known as _
               Infinite Loop
                                                      Step Loop
                                                     None of these
               Null Loop
      xviii. How many times the following loop executes?
               while(i < 10)
               if(i++ \% 2 == 0)
               System.out.printin(i);
                                                                   d.
                                                                       10
           a.
                            b. 5
      xix. Which of the following statement is used to terminate the loop?
                                                                       None of these
               continue
                            b. break
                                                     return
                                                 c.
      xx. Default delimiter used in Scanner class is :
                           b. colon
              comma
                                                     slash
                                                                   d.
          How are data hiding and encapsulation related? Explain.
Q.2-
                                                                                          [2]
         Explain Logical operators.
                                                                                          [2]
      iii. Write different ways of writing comments in Java programs.
                                                                                          [2]
      iv. Rewrite using if-else
          comm(sale >= 10000) ? sale * 15/100 : sale * 5/100;
                                                                                          [2]
          Write a Java expression for the following:-
                                                                                          [2]
          f = \frac{\sqrt{(a+b)}}{a^2 + b^2} - cd
      vi. Write the equivalent Java statements for the following using ONLY
          mathematical functions.
                                                                                          [2]
              Print the positive value of -101
              Print the rounded off value of 234.49
      vii. Give the output for the following statements:
                                                                                          [2]
               Math.floor(8,96);
          a.
              Math.min(10, 23) + Math, pow(2, 3);
          b.
      viii. Analyse the following program segment and answer the following segment: [2]
              Write the output of the program segment.
          b. How many times the body of the loop gets executed?
               for(int a = 10; a \le 50; a + = 4)
                   if(a\%6 == 0)
                   break;
                   else
                   if(a \% 5 == 0)
                   System.out.println(a);
               }
```

```
ix. Convert the following if-else-if construct into switch case:
        if(var == 'A')
                                                          wroned moves smeller date
                                                   THE LAND SECTION SET OF MINE
             System.out.println("good");
                                                 From New 200 and Co. F. C. St. Land
                                                 HOW A TO I FEBRUARY THE STAND SHA
             else if(var == 'B')
                                          For and above 330 ands $170 miles
        Add a securior of 10 % and Court Parcet 15 5 and the balk to askenberg the
             System.out.println("very good");
                                                 to the the peak to the constraint the
        1
                             Capillay the Nester of the Costomer's offered and received
             else if(var == 'C')
                                                                 terrinam an areal of
         1
                                                          Manne of the customer
             System.out.println("excellent");
                                                                Y COLORAGORANIA
         1
                             Firm a mean direct program to energy the tollowing
             else
         1
                                                    mands a request no uniterest
             System.out.prlntln("work hard");
         Convert the following segment into an equivalent while loop
                                                                                        [2]
           for(x = 10, c = 20; c > 10; c = c = 2) ognar a requisit sensor recently
              x++;
                                                              . 5.9 ME Y 有高户 200 中心
           Design a class to input a number and check if it is a vern in 192 maic.
             week. Filtomacal source is the suries navintein next learn is the function
                                SECTION - B [60 MARKS]
                                                              mot own enorgets
                     Attempt any FOUR questions from this Section.
   The answer in this section should consist of the programs either Blue J environment
                    or any program environment with Java as the base.
       Each program should be written using variable description/mnemonic codes
                   such that the logic of the program is clearly depicted.
                       Flow charts and algorithms are not required.
      A Dudeney number is a positive integer that is a perfect cube such that the sum
Q.3-
      of its digits is equal to the cube root of the number. Write a program in Java to
      input a number and check whether it is a Dudeney number or not.
                                                                                       [15]
      Example
                            Input 512
      Sum of digits ->
                            5 + 1 + 2 = 8 Cuberoot of 512 is 8
      So 512 is a Dudeney number
Q.4- Write a program to input a number and check whether it is a magic number or
       not. A number is said to be Magic number if the sum of its digits are calculated
       till a single digit is obtained by repeatedly adding the sum of its digits. If the
       single digit comes to be 1 then the number is a magic number.
                                                                                       [15]
       Example: 199 \rightarrow 1 + 9 + 9 = 19 \rightarrow 1 + 9 = 10 \rightarrow 1 + 0 = 1
 Q.5- Write a menu driven program to perform the following according to users choice
       using switch statement.
                                                                                       [15]
            Volume of Sphere
            Volume of Cylinder →
            Volume of Cone
```

Q.6- WAP to calculate the electricity bill depending on the units consumed and the [15] slab criteria given below: For first 50 units ₹ 0.50/unit For next 120 units ₹ 0.85/unit For next 130 units ₹ 1.20 / unit Add a surcharge of 20 % and Govt. Tax of 15.5 % on the bill to calculate the total bill to be paid by the customer Display the Name of the Customer , Units consumed and bill amount in following manner. Name of the customer Units xxxx XXXXXXXXXXXXXXX Q.7- Write a menu driven program to display the following patterns on the screen [15] depending on the user's choice :. 6 7 8 10 11 12 0 1 13. 14 good slinky male viupe on the 1 0 1 Design a class to input a range and display all the palindrome numbers Q.8-[15] within that range. Design a class to input a number and check if it is a term in Fibonacci series. Fibonacci series is the series in which next term is the sum of previous two terms. (Fibonacci series :: 0 112 3 5 8 13.....) in manners with lava as the base #####nable description/nurmonic codes e de la company see the end of the street are not required. same and another integer that is a perfect cube such that the sum direction and the cabe special the author. Write a program in Java to and whether it is a Dudoney number of not [31] Rei Sle Marketshir some and check whose each is a made number or

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