ACHARYA VIDYA KULA, MYSURU

Annual Examination – March-2019

Standard :IX Computer Applications (Theory) Max. Marks: 100

Time Duration: 2 hours

*First 15 minutes is to be spent in reading the question paper. The time given at the head of this paper is the time allowed for writing the answers*

**SECTION – A (40 MARKS)**

**(ATTEMPT ALL QUESTIONS FROM THIS SECTION).**

**Question 1.**

a) What are Keywords ? Write at least 4 Java Keywords. **[5 x 2 = 10]**

b) What is a **Function/ Method** with respect to Java programming language?

c)Write the difference between Static and Non-Static methods.

d) What do you mean by Data Types? Give examples.

e) Write ***one point*** of difference between **float** and **double**.

**Question 2. [5 x 2 = 10]**

a) Write about**or( || )** Logical and **and** (&&) Logical operators of Java with an example each.

b)Write a difference between **%** and **/** with an example each.

c) Write the Java command to create an **object s1** of class **Student**.

d) Evaluate the value of **n** if the value of p = 3, q = 5

int n = ( q – p) < ( p – q) ? ( q – p ) : ( p – q ) ;

e)What is the value stored in z if a = 6.69

double z = Math.floor( a) ;

**Question 3.**

a) Write the value of m. [2]

double m = (Math.sqrt(Math.abs(-81));

b) Find the value of x, if q= 4, a = 6, b = 7 and z=4 [2]

double x = q (a+b – (z2)/4) ;

c) What is printed, after the following function is executed, if the values passed are 20 and 10 [2]

void demo( int a , int b)

 {

 a = a+b;

 b = a – b;

 a= a – b ;

System.out.println( a + “ , “ + b);

 }

d) What is the value stored in z, after evaluating the following expression? [2]

int x = 3 ;

 **z = x ++ \* ++x + 3 \* -- x ;**

e) Analyse the following program snippet and write how many times the loop executes and the output. [2]

int p = 2, q = 3;

for(int z = 10; z>=5; z--)

p\* = q;

System.out.println(p);

f) What do you mean by Type Casting? What are its types? Give an example each. [4]

g) Write the output of the following: [2]

System.out.print(“AVK “ + 6 + 3 );

System.out.println(“ Is an ICSE School in Mysuru”);

h) What is a***Nested Loop ?*** Give an example. [2]

i) What are **Formal** and **Actual** Parameters? Give an example each. [2]

**SECTION – B (4 x 15 = 60 MARKS)**

(ATTEMPT ANY ***FOUR QUESTIONS***FROM THIS SECTION)

**Question 5.** **[ 3 x 5 = 15 ]**

a.Write a Java program to print the numbers that are divisible by 4 and 5 between 10 and 100.

b.Write a Java program to find the value of S. Where **S = ut + ½at2 .**Display the value of S rounded to

thenext higher digit (using Java math function).

c.Write a Java program to print the Fibonacci Series – 0,1, 1, 2, 3, 5, 8, 13 ….. n terms. Accept n from the user.

**Question 6.**

1. Write a program to ***print the sum of all ODD numbers and Even numbers between 100 and 200 separately.*** **[7]**
2. Write a program to ***check whether*** the given number is a ***Perfect number***. A perfect number is an integer, where sum of its factors ( excluding the number itself) is equal to the given number : **[8]**

6 = 1 + 2+ 3 , 28= 1+2+4+7+14 So 6 and 28 are the perfect numbers.

**Question 7**.

1. Write a program in Java to print the value of S. where **S =** $\frac{1}{2}+ \frac{3}{3}+ \frac{5}{4}+…n terms$. Accept n from the user.**( Use Scanner Class function to accept input). [7]**
2. Write a program to find the **value of f=** $\frac{1}{1!}+\frac{2}{2!}+\frac{3}{3!}……..\frac{n}{n!}$**.** Accept n from the user**(Use Scanner Class function to accept input) [8]**

**Question 8.** **[3 x 5 = 15]**

1. Write a Java program to print the following number pattern using loop constructs. Accept n from the user.

 1

 2 2

 3 3 3

 4 4 4 4

 …………….. n

b.Write a Java program to print the following pattern using loop constructs. Accept n from the user.

 \*

 \* \*

 \* \* \*

 \* \* \* \*

 \* \* \* \* n

c.Write a program to print the following pattern, using loop constructs. Accept n from the user.

 5

 5 4

 5 4 3

 5 4 3 2 1

**Question 9**

1. Write a Java program to print all PRIME numbers from 200 to 250.**Hint : A prime number has only two factors ( 1 and number itself)** **[7]**

b. Write a program to find the **highest digit*in a given number***. ( Hint : 9854 : Highest digit is : 9 ) [8]

**Question 10.**

1. Write a Java program to print the mark details of a student. Accept Student name and marks in 5 subjects. Declare a student as PASS, if the score is >=40 in all the subjects. Otherwise FAIL. Calculate Total and Average. Grades are given based on the following criteria [8]

**Average** **Result** **Grade**

<40 FAIL E

>=40 and <60 PASS D

>=60 and<80 PASS C

>=80 and< 90 PASS B

>=90 PASS A

Print the name, Marks in 5 subjects, Result, Total, Average and Grade of a student.

bAn airline announces discount as given below on the tickets depending upon destination chosen by

the passenger. **[ 7]**

**Destination** **Cost (per ticket) Discount**

 America Rs. 75000.00 15%

 Singapore Rs. 40000.00 12%

 Japan Rs. 60000.00 14%

Thailand Rs. 30000.00 13%

 Write a Java program to input name of the passenger, Number of Tickets and Destination.

 Calculate the total ticket amount and discount amount. Find the net amount (Excluding the discount)

to be paid by the passenger.

 Print the Name of the passenger, Number of tickets, Total amount, Discount amount, Net amount.

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