

INDIAN SCHOOL SOHAR
FIRST TERM EXAM (2015-2016)
INFORMATICS PRACTICES

Class: XI

Marks: 70

Date: 10 -09-15

Time: 3 hours

Instructions:

- a. All the questions are compulsory.*
b. Answer the questions after carefully reading the text.

1. Answer the questions after carefully reading the text.

- | | |
|--|---|
| a. Enlist the various types of queries available with DDL and DML. | 2 |
| b. What is casting? When do we need it? | 2 |
| c. How is MID () different from LEFT () function? | 2 |
| d. What is the difference between DELETE and DROP commands of SQL. | 2 |
| e. Compare Char and Varchar datatypes. | 2 |
| f. Give the syntax and example of declaring variable. | 2 |
| g. Differentiate between if and switch. | 2 |
| h. What are constants? Write a java command for declaring a constant 'min' with a value of 40. | 2 |
| i. What is unique constraint? How it differ from primary Constraint? | 2 |
| j. What is fall through? | 1 |
| k. Distinguish between unary & binary operators. Give examples of Java operators for each one of them. | 2 |

2. What will be the value of following expressions if j = 5,

- | | |
|-----------------|------------------|
| i) $(5*++j)\%6$ | ii) $(5*j++)\%6$ |
|-----------------|------------------|

3. What will be the output of the following code segments?

```
int a=5, b=10, c=9, d=8;
System.out.print (" " + ((a++)+(++c)-(--b)+(d--)));
System.out.println (" " + ((a>b)? (c>d)? (++d):35 :(--b)));
```

4. Rewrite the following fragment using *while* loop:

```
int sum = 0 ;
for ( int i = 0 ; i <= 5 ; ++ i )
sum = sum + i;
System.out.println ("Sum is: "+ sum );
```

5. Write equivalent Java expressions for the following expression:- 1

i.) $e^{|2x-4x|}$

6. Identify the data type of the following expression: 2

i.) `intval * longval - ch`

ii.) `ft + longval / sh`

If `ch` is a `char`, `sh` is a `short`, `intval` is an `int`, `longval` is a `long` and `ft` is `float` type.

7. Find the output of the following code: 2

```
boolean b;
```

```
int d, as=290;
```

```
int x1=100, x2=200, x3=300 ;
```

i) `b=x1*2==x3 ;`

```
System.out.println ("B="+ b);
```

ii) `d= as-x1>x2? x1: x2;`

```
System.out.println ("D="+ d);
```

8. Rewrite the following if-construct using switch case statement: 2

```
int num ;
```

```
if(num>=2 && num<=3)
```

```
System.out.println("Prime");
```

```
else if(num==4)
```

```
System.out.println("Even");
```

```
else
```

```
System.out.println("Not Valid");
```

9. Rewrite the corrected program after removing errors, underline the corrections: 2

```
Int I=5,J=10;
```

```
if (I<J)||(I=10))
```

```
System.out.println("OK \n");
```

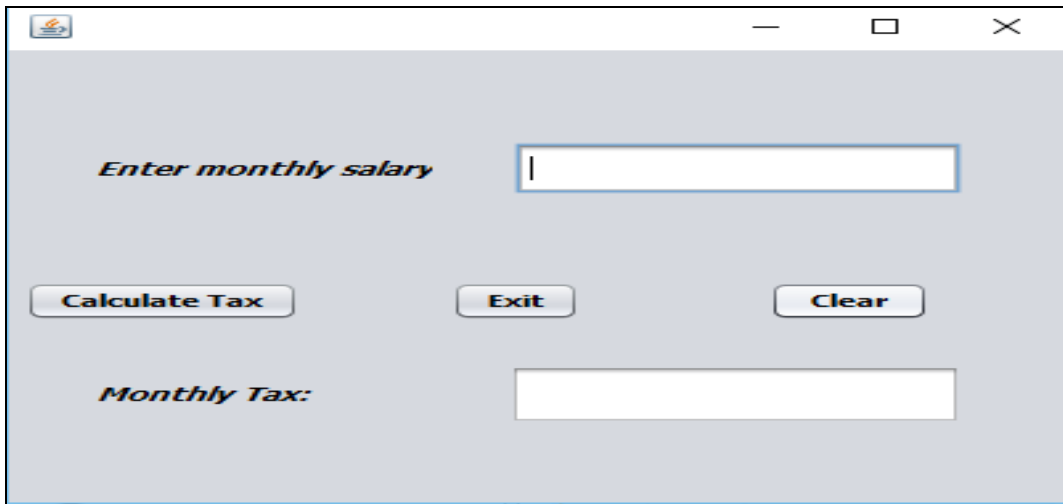
```
System.out.println ("Not OK");
```

10. Write java code for finding the maximum out of three given numbers. Read all numbers from text fields and display the result in a label. 2

11. Write a java code for finding the sum of the following series:
 $1+2^1+3^2+4^3+5^4+\dots\dots\dots+n^{n-1}$ 2

12. Write a program in Java to accept monthly salary from the user .Find and display income tax with the help of following rules:

Monthly Salary	Income Tax
19000 or more	40% of monthly salary
13500 - 18999	30% of monthly salary
13499 or less	20% of monthly salary



- (i) Write a code for clear button to clear all text fields. 1
- (ii) Write a code for Exit button the application 1
- (iii) When Calculate Tax Button is clicked, Display the Monthly income tax 2

13. Write SQL commands for creating table *Graduate* as per structure given below

Table Structure:

Column Name	Data Type	Constraint
Roll_no	Integer(4)	Primary key
Name	Varchar(30)	Not Null
Stipend	Integer(5)	
Average_mark	Integer(3)	
Stream	Varchar(15)	
Grade	Char(1)	

Table: Graduate

Roll_no	Name	Stipend	Stream	Average_mark	Grade
1	Karan	100	Physics	65	C
2	Rohini	300	Chemistry	75	C
3	Saket	500	Physics	90	A
4	John	150	Mathematics	70	C
5	Rajesh	400	Computer Science	80	B
6	Janak Puri	300	Mathematics	73	C
7	Rohit	Null	Mathematics	50	D
8	Arun	100	Computer Science	63	C
9	Palak	300	Computer Science	78	B
10	Divya	Null	Physics	45	E

- (i) Create table “Graduate” based on the the table structure given below. 2
- (ii) Insert a new row: 11, Serin, Null, Chemistry, 52, D. 1
- (iii)View the structure of the table created by you. 1
- (iv)List the name of those students who obtained grade C sorted by name. 1
- (v) Display a report, listing name, stipend, stream and amount of stipend received in the year assuming that the stipend is paid every month. 1
- (vi)Add a Not Null constraint on stream. 1
- (vii) Increase the stipend of stream physics by 50. 1
- (viii)Display all the details from above table in ascending order of Average_mark and descending order of stream. 1
- (ix)Display the names of stream in upper case without any repetition. 1
- (x) Increase the size of stream to 25. 1
- (xi)Change the name of column stream to subject. 1
- (xii) Remove column Average_mark. 1
- (xiii)Display the name of those graduates whose name contains ‘a’ as the second character. 1

- (xiv) Display two characters extracted from third right character of name for graduates whose stream is chemistry or Mathematics. 1
- (xv) Add a new column DOA of datatype date. 1
- (xvi) Double the stipend of those graduates having grade A and B .
Change the stream of graduate to ' Computer Science' whose Roll_no is 6. 1
- (xvii) Display a report as <name> is a graduate of stream <stream> for all graduates. 1
- (xviii) Mark all changes permanently. 1

14. Write the output of the following SQL queries:

- i) Select MOD(30.500,5)+Round(100.50,1); 1
- ii) Select SIGN(-15) "Sign"; 1
- iii) Select RIGHT('USS/23/67/09',2); 1
- iv) Select length(trim('Riya#Jain####')); (# means blank space) 1
- v) Select mid(trim('#Informatics Practices###'),6,6); (# means blank space) 1
- vi) Select char(73,80); 1

15. Find the error and rewrite the corrected query:

- i) Select Substr("mathematics","e") as position from Graduate; 1

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