DELHI PUBLIC SCHOOL, RANCHI
Final Semester Examination 2011

Class: XI   **Subject: Informatics Practices (065)**
Max Marks: 70   **Time: 3 Hours**

General Instructions:
- *There are 4 groups A, B, C, D*
- *Group A contains 30 marks of 3 sets of theory questions of each of 10 marks.*
- *Group B contains of 15 marks of Java programming using IDE (Net Beans)*
- *Group C contains of 20 marks of RDBMS (MySQL)*
- *Group D contains of 05 marks of IT Applications*
- *Always keep margin at the left side of your answer script & clearly write the Question Numbers*
- *Try to maintain the order of the questions in each group during answering.*
- *Keep spaces and mark 'line-of-separation' in between two answers.*

GROUP – A

Q1. Answer the following questions *(General Theory)***:**   **[10 Marks]**

(a) Write the differences between 3GL and 4GL?   [2]

(b) Write the function of the Operating System. Give two examples.   [2]

(c) Explain the Hardware and Software with example.   [2]

(d) What is a Virus? How utility is related with?   [2]

(e) What Bar Code Reader? How does a scanner work?   .   [2]

Q2. Answer following questions *(Theory of Programming concept & Java with IDE)***:**   **[10 Marks]**

(a) How do you differentiate the use of **Radio Button** and **Check Box**.   [2]

(b) Define the role of **JVM** and **JDK** to develop Java programming.   [2]

(c) Why do you **import javax.swing.JOptionPane**? Give any two applications.   [2]

(d) Find the value of s where s= x++ + ++y + x + y;   if x=3 & y=2;   [2]

(e) Differentiate between **exit control** and **entry control,** with suitable examples.   [2]

Q3. Answer the following: *(Theory of RDBMS)*   **[10 Marks]**

(a) What is RDBMS? Give two examples.   [2]

(b) What are the conditions to consider a field as Primary Key? What is a Foreign Key?   [2]

(c) Define: (i) Data redundancy (ii) Data inconsistency   [2]

(d) How can you restrict a field from reading repeated data? Give a command as example.   [2]

(e) Define Attribute and Tuple in terms of RDBMS.   [2]

GROUP – B (Java Programming)

[15 Marks]

Q 4. Read the following case study and answer the questions that follow.
TeachWell Public School wants to computerize the employee salary section.The School is having two categories of employees : Teaching and Non Teaching. The Teaching employees are further categorized into PGTs, TGTs and PRTs having different Basic salary. The School gives addition pay of 3000 for employees who are working for more than 10 years. Now answer the following questions:

Employee Type	Basic Salary	DA (% of Basic Sal)	HRA (% of Basic Sal)	Deductions (% of Basic sal)
Non Teaching	12500	31	30	12
PGT	14500	30	30	12
TGT	12500	21	30	12
PRT	11500	20	25	12

(a) Write the code to Exit button to exit from running of the above program. [1]

(b) Write the code to clear the fields where data entered and displayed for the right button. [1]

(c) Write the code to calculate the Basic salary, deductions, gross salary and net salary based on the given specifications: [3]

- Add 3000 to net salary if employee is working for more than 10 years.

- Gross salary=Basic salary + DA + HRA

- Net salary = Gross salary – deductions

(d) Find the **output** of the following: [2]

```
int j = 10,x=0,i=0;
for (i=1;i<=4;i++)
{
  if(i % 2 == 0)
    x = x + (i * j);
    j = j - 2 ;
}
System.out.println(""+x);
```

(e) Rewrite the program using **FOR** loop: [2]

```
int Num=6;
int Temp=Num;
while (Num>=1)
{  Temp=(Temp-1);
  if (Temp % 2 == 0)
    System.out.println(" is Even");
  else
    System.out.println(" is Odd");
  Num=Num-2;
}
```

(f) Write the Java code to accept two numbers and swap the numbers not using any third variable. [1.5]

(g) Write the Java code to take a number and find table of the same. [1.5]

(h) Write the Java code to find the sum of first 10 odd numbers. [1.5]

(i) Write the Java code to take the value of N and find: **S = 1 + 4 + 27 + 256 +…..…… Nth term.** [1.5]

GROUP – C (RDBMS – MySQL)

[20 Marks]

Q 5. Write the SQL commands based on MySQL to: [15X1=15]

Table: CLASS

STDCODE	NAME	CLASS	SECTION	AVGMARK	DOB
S009	SUMIT MALHOTRA	11	A	86.55	12-DEC-1995
S010	KUSUM VIMANI	12	C	79.85	22-MAR-1994
S012	SARITA VERMA	12	C	98	23-JAN-1992
S015	KAILASH SINGH	10	D	78.45	5-OCT-1993
S020	SANJAY SRIVASTAVA	11	K	85.45	10-MAY-1990
S033	KAVITA SAXSENA	9	K	66.50	12-SEPT-1993
S052	BIJAY MAJUMDAR	12	B	88	5-NOV-1989

(a) Create the table Class, using NOT NULL, UNIQUE, PRIMARY KEY, DEFAULT value of Average Marks is 00.00 as constraints in appropriate attributes/fields/columns.

(b) Enter a new record: S009, Rashmi Sinha, 11, E, 80.5, 15-8-1991.

(c) Re-arrange the records in descending order on Average Marks.

(d) Display the Name, Class and Date Of Birth of the students who have either less than 80 Average Marks, OR year of birth before 1993.

(e) Display the Name, StdCode and Date of Birth of those whose first character of name is S.

(f) Display the Name, StdCode and Date of Birth of those where 7th latter of the Name is A.

(g) Display the Different Sections present in the table.

(h) Display the Different Sections and their corresponding numbers present in the table.

(i) Replace the Name "Sumit Malhotra" by "Sumitra Mahapatra".

(j) Increase each of the Average Mark by 2.0 to display.

(k) Display Numbers of each section in the table of those who got Average Marks more than 75.

(l) Display the Maximum Average Marks from each section.

(m) Display the values of Name and Date of Birth close together (concatenate).

(n) Show the first character of each name as Capital.

(o) Remove all of the blank spaces from name field.

Q 6. Write the OUTPUT of the SQL commands (& functions) based on MySQL: [10 X 0,5=5]

(a) SELECT MID(Name, 3,4) FROM CLASS WHERE AvgMark=98;

(b) SELECT DAYOFWEEK(DOB) FROM CLASS WHERE STDCODE="SO52";

(c) SELECT DAYOFWEEK(SYSDATE());

(d) SELECT LEFT(Name,3) FROM CLASS WHERE STDCODE="SO15";

(e) SELECT SUBSTR(Name,3,4) FROM CLASS WHERE STDCODE="SO12";

(f) SELECT LOWER(Name) FROM CLASS WHERE STDCODE="SO12";

(g) SELECT SECTION FROM CLASS WHERE NAME NOT LIKE "_A%";

(h) SELECT Name, Class FROM CLASS WHERE Section IN ("A", "B", "C");

(i) SELECT Class , Section FROM CLASS WHERE Class>=12 AND Section="C";

(j) SELECT (AVGMARK + 10) FROM CLASS WHERE Class >=11;

GROUP-D (IT Applications)

Q 7. Answer the following questions. **[05 Marks]**

(a) Explain the statement "e-Governance is the open window to reach Government. [1]

(b) How does e-Commerce link customer, seller, manufacturer, distributor. [1]

(c) Can you explain "On-line library is an good example of e-Learning" ? [1]

(d) Ramesh wants to develop an application by creating a form with some controls on Net Beans platform. Choose appropriate controls from Text Field, Labels, Option Button, Check Box, List Box, Combo Box, Command Button by which he may design it rightly and write in the third column. [2]

Srl No	Control used to	Control
1	Display name	
2	Choose stream	
3	Choose the name of the city to enter into address	
4	Submit the form	

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