



DELHI PUBLIC SCHOOL

SAIL Township, Ranchi
Annual Examination 2018

Class: XI
Max Marks: 70

Subject: Informatics Practices (065)
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

[30 marks]

Q1. Answer the following questions (General Theory):

[10 Marks]

- (a) Write the differences of Programming and Database languages in terms of evolution of software? [2]
- (b) Write the functions of the System Software with examples. [2]
- (c) Explain the uses of Hardware and Software with example. [2]
- (d) What is a Virus? How utility is related with it? [2]
- (e) What is a 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 **Combo Box**. [2]
- (b) Define the role of **JVM** and **JDK** to develop Java programming. [2]
- (c) How do **showInputDialog** and **showMessageDialog** work? What do you need to import for this? [2]
- (d) Find the value of **s** where $s = ++x + y++ + x + y$; if $x=2$ & $y=3$; [2]
- (e) 'In **exit** and/or **entry control** loop, at least once the loop runs, even condition is false'. Explain. [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 different constraints of a table of a database. [2]

GROUP – B (Java Programming)

[15 Marks]

Q 4. Read the following case study and answer the questions that follow.

Teach Well 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:

TeachWell Public School

Basic Salary Gross Salary

Deductions Net Salary

Employee category

PGT
 TGT
 PRT

More than 10 years

Calculate Clear Exit

Employee Type	Basic Salary	DA (% of Basic Sal)	HRA (% of Basic Sal)	Deductions (% of Basic sal)
PGT	24500	30	30	12
TGT	22500	21	30	12
PRT	21500	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 or displayed for the right button. [1]
- (c) Write the code to **calculate** and **print** the Basic salary, Deductions, Gross Salary and Net Salary based on the given specifications in right corresponding fields: [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=4;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=1;
int Temp=1;
while (Num<=10)
{
    Temp=(Temp+1);
    if (Temp % 2 == 0)
        System.out.println(" is Even");
    else
        System.out.println(" is Odd");
    Num=Num+2;
}
```

- (f) Write a Java code to accept two numbers and swap the numbers not using any third variable. [2]
- (g) Write a Java code to find the sum of first 10 odd numbers. [2]
- (h) Write a Java code to take the value of N and find: $S = 1 + 4 + 27 + 256 + \dots + \text{Nth term}$. [2]

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 4th latter of the Name is I.
- (g) Display the Different Sections present in the table.
- (h) Display the Different Sections and their corresponding numbers (of each section) present in the table.
- (i) Replace the Name “Sumit Malhotra” by “Sumitra Mahapatra”.
- (j) Display each of the Average Mark increased by 2.0 under a caption “Changed Value”.
- (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 in descending order on Average Marks of classes above class 9.
- (n) Delete the records of class 10.
- (o) Enter a new field State of Varchar type of length 20.

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)

[05 Marks]

Q 7. Answer the following questions.

- (a) Explain the statement "e-Governance is the open window to reach Government. [1]
- (b) How does e-Commerce link customer, seller, manufacturer, and 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, and 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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