XII- INFORMATICS PRACTICES (065)

REVISION EXAM III

MAX. MARKS: 70   **DURATION: 3 HOURS**

GENERAL INSTRUCTIONS: **No. of pages printed: 7**

*(i) **All** questions are compulsory. Write Qn.no along with sub division .For eg: 1a,1b,.*
(ii) Answer the questions after carefully reading the text.

Q1.

    a. What does the last three byte of MAC address indicate? Also state how the MAC differs from logical address? (2)

    b. Explain the term Firewall and Cyber Law. (2)

    c. How is it easier to diagnose fault in Star topology than in Bus topology?. (1)

    d. Sivaram is confused between the terms ASCII and ISCII. Help her by differentiating between ASCII and ISCII. (1)

    e.

    (i) Mention any two freedom offered by Free software. (1)

    (ii) Ms. Neelam has downloaded a software from the internetwhich can be freely distributed and used by anyone but the source code is notavailable. Is it Freeware or free software? Justify your answer as well. (1)

    (iii) Rohan wants to install a software on his system that can help him tocreate, edit and save office documents but he does not want to purchase thesoftware. Suggest him a good software for the same. (1)

    f. Suggest a cable/wiring layout for connecting the IBN Tech solution company's local offices located in New Delhi. Also,, suggest an effective method/technology for connecting the company's regional offices at "Kolkata", "Coimbatore" and "Ahmedabad". (1)

Q2.

    a. Name any two methods associated with jOption dialog. (1)

    b. Name the properties that make the difference between jTextField and jTextArea (1)

    c. Ms. Bhatia is new to Java programming. She has confused with variable and data type. With suitable example explain her concept of variable and data type. (2)

    d. Write the type of C++ Operators (Arithmetic, Logical, and Relational Operators) from the following: (2)

             i. (i) !   (ii) !=   (iii) || (iv) %

    e. What is the purpose of <FORM>tag. Explain any two attributes of <FORM> tag. (2)

    f. When do you prefer Switch case over IF ELSE? Support your answer with an example.   (2)

Q3.

  a. What is MySQL used for? Is it Free software and from where can she obtain the software?   (1)

  b. Anjani wants to replace all NULLS in the column COMM of table EMPL with 100. Write the sql command that solves her problem.   (1)

  c. Categorise the following as Single Row/ Multiple row functions of MySQL amongst the following :   (1)

     TRIM(), MAX(), COUNT(*), ROUND()

  d. Name any two sql commands which are committed by default.   (1)

  e. Predict the output of the query: 1

    SELECT ROUND(75.95,1) – TRUNCATE(75.95,1);

  f. What is the difference in the output of curdate() and date() in MySql?   1

  g. What will be the query output for the following statement. Write in words/sentence.

    (a) SELECT * from SCHOOL where sname like "_ _ _ SURAT";   (2)

    (b) SELECT * from SCHOOL where sname like "DC%";

   h. A table named 'GROUP' has the following contents:

SCode	Stream	No_ of_students
S01	Computer	56
S02	Humanities	34
S03	Bio technology	30

Write the output that will be displayed by statements (i) and (ii).   2

```
SELECT * FROM GROUP;
SET AUTOCOMMIT = 0;
UPDATE GROUP SET No_of_students=40 where SCode="S02";
ROLLBACK;
SAVEPOINT S1;
SELECT * FROM GROUP; ------------ (i)
```

INSERT INTO GROUPVALUES("S05","IP",25);
SAVEPOINT S2;
DELETE FROM GROUP WHERE Stream="computer";
ROLLBACK TO S2;
SELECT * FROM GROUP; ------------ (ii)

Q4.
    a. What will be displayed in jTextField1 and jTextField2 after the following code is executed: (1)

```
int num = 63 , num1 = 46 ;
jTextField1.setText( num + num1 + " " ) ;
jTextField1.setText( " " + num1 + num ) ;
```

    b. What will be the value of X1 and X2 after the execution of the following code:(1)
String X1="Spread", X2="Peace";
X1=X2.concat(X1.substring(2,6));

    c. Rewrite the following code segment using forloop without effecting the output of the code: (2)

```
int a=0,j ;
while(a!=20)
{ j+=a;
if(a%5==0)
{ a+=5;
}
else
{ a+=1;
}
a+=2;
}
```

    d. The following code has error(s). Rewrite the correct code underlining all the corrections made : (2)

```
Double Var;
String str;
Switch (Var) {
case 1:str="ONE"; break;
case 2:str="Two"; break;
case 1:str="Three";
```

```
default:        str="No val"; break;
};
```

e. Find the output of the following code segment   (2)

```
int stk =10;
int p,f=1;
for(p=1;p<=10;p+=2)
{
        if(stk % p==0)
        jTextArea1.append( p+ "is a factor of" + stk +"\n");
        else
        jTextArea1.append("Sorry");
f *= p;
}
jTextArea1.append("\n"+f);
```

f. Will both the loop segment produce same output? If not state the reason and write the output   (2)

int k=2; int res=1;	int k=2; int res=1;
while(k++<7)	while(++k<7)
res=res*k;	res=res*k;
System.out.println(res);	System.out.println(res);

g. Mr. Pawan works as a programmer in "ABC Marketing Company" where he has designed Salary generator software to generate the salary of salesman in which Name and Salary are entered by the user. A screenshot of the same is shown below:
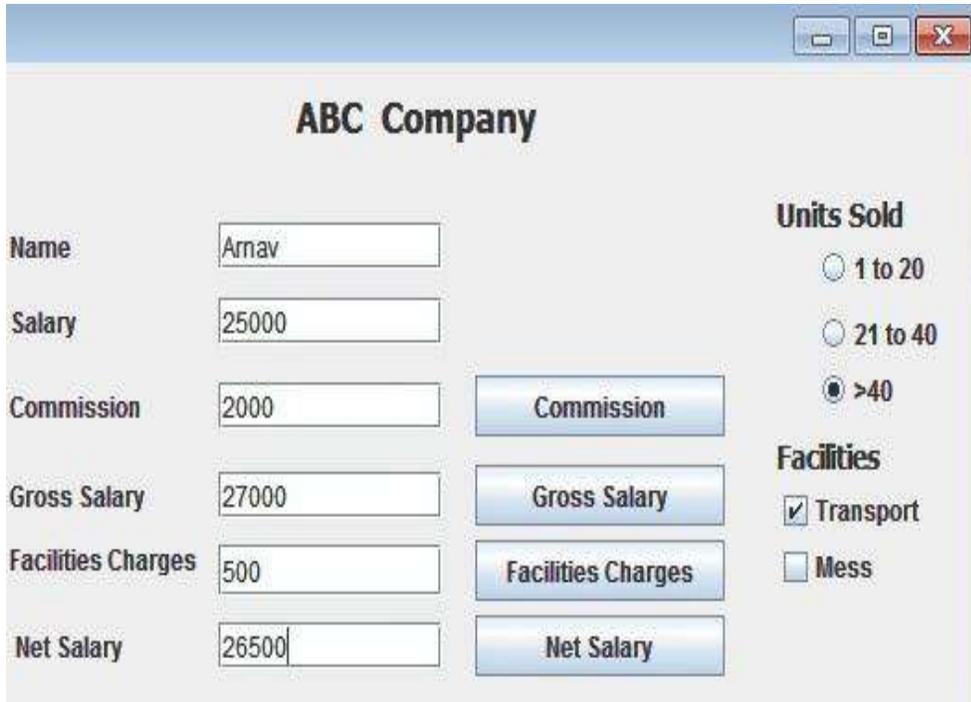
Help him in writing the code to do the following:

i. After selecting appropriate Radio Button, when 'Commission' button is clicked, commission should be displayed in the respective text field as each Salesman will get a commission based on the units sold according to the following criteria: (2)

Units Sold	Commission (in Rs)
1 to 20	500
20 to 40	1000
>40	2000

ii. When 'Gross Salary' button is clicked, Gross Salary should be calculated and displayed in the respective text field as per the given formula: (1)
Gross Salary= Salary+Commission

iii. After required selection of Checkbox(es), when 'Facility Charges' button is clicked, Facility charges will be displayed in the respective text field according to the following criteria:

(1)

Facility	Charges
Transport	500
Mess	2000

iv. Money will be deducted from the Gross Salary according to the facilities opted by the employee. When 'Net Salary' button is clicked, Net Salary should be calculated and displayed in the respective text field as per the given formulae:
Net Salary= Gross Salary-Deductions   (1)

Q5.
   a. While creating a table named "Employee", Mr. Amar got confused as which data type he should chose for the column "EName" out of char and varchar. Help him in choosing the right data type to store employee name. Give valid justification for the same.   (2)

   b. Ms. Shalini has just created a table named "Employee" containing columns Ename, Department, Salary,DepId.
After creating the table, she realized that she has forgotten to add a primary key column in the table. Help her in writing SQL command to add a primary key column empid. The table also has DepId column where the values are repeated. Identify the name of the key. How it differ from primary key.   (2)

   c. Write SQL query to create a table "Registration" with the following structure: (2)
                              Table: Registration

Field name	Datatype	Size	Constraint
Reg_Id	Integer	2	Primary Key
Name	Varchar	20	
Course	Varchar	10	Not NULL
Join_Dt	Date		

   d.   (1)

In the following two tables, find the union value of employee and emp.

EMPLOYEE

Emp.	Name	Salar
1000	Abishek Garg	25000
222	Prachi Goal	30000
1002	Simran Dua	25000
1003	Rishika Pal	40000
1004	Mohit Batra	23000

EMP

Emp.	Name	Salary
1002	Simran Dua	25000
1004	Mohit Batra	2300
1007	Sonal Gupta	2600
1009	Rohit Batia	5000

e. Consider the table **Doctor** given below, write command in SQL for (i) to (iv) and output for (v) to (vi).   (6)

Table : Doctor

ID	Name	Dept	Gender	Experience	ConstFee
201	R.K. Nath	ENT	M	12	300
457	Mahavir Singh	SKIN	M		500
365	M. Asthana	MEDICINE	F	9	250
221	V. S. Nag	ENT	M	3	150
122	S. P. Sinha	NEPHRO	F		200
110	J. P. Pandey	CARDIOLOGY	M	9	500

(i) To display name of all doctors who are in Medicine having more than 10 years of experience in the descending order of experience.

(ii) To display the different departments.

(iii) To display minimum consultation fee of female doctors

(iv) To display name and department of male doctors who has no experience.

(v) SELECT Name, Experience FROM Doctor WHERE id BETWEEN 100 AND 200;

(vi) SELECT SUM(ConstFee),MAX(Experience) FROM Doctor;

Q6.
    a. consider the following tables TRAINER and COURSE and answer the following SQL queries

TRAINER

TID	TNAME	CITY	HIREDATE	SALARY
101	SUNAINA	MUMBAI	1998-10-15	90000
102	ANAMIKA	DELHI	1994-12-24	80000
103	DEEPTI	CHANDIGARG	2001-12-21	82000
104	MEENAKSHI	DELHI	2002-12-25	78000
105	RICHA	MUMBAI	1996-01-12	95000
106	MANIPRABHA	CHENNAI	2001-12-12	69000

COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	AGDCA	12000	2018-07-02	101
C202	ADCA	15000	2018-07-15	103
C203	DCA	10000	2018-10-01	102
C204	DDTP	9000	2018-09-15	104
C205	DHN	20000	2018-08-01	101
C206	O LEVEL	18000	2018-07-25	105

    (i)   To display trainer name,salary,fees and course name. (2)
    (ii) To increase the FEES of courses by 1000 which are started before October 2018? (2)
    (iii)   Display the names of cities that have minimum 2 trainers. (2)

    b. With reference to the above table, answer the following questions.
        (i)   Ms. Prabha wants to add a new record in the course table. When she inserts the record, in the FEES column instead of 0(zero) she gave NULL. She is confused with zero and NULL. Are they same. Help her to understand the difference. (1)

Q7.
a. Write down any two benefits / demerits of net banking. (2)

b. Mr.Vinay Kapoor, a banking professional want to enroll himself in an e-Learning course. Mention him any two challenges of e-Learning (1)

c. Ms. Juhi, works as an IT Executive in a health insurance company named 'Total Health'. She has been assigned a task to design a customer registration page. Help her in choosing the most appropriate controls for the specified task from Textfield, Label, RadioButton, CheckBox, ListBox, ComboBox, Button and writein the third column considering the following points: (2)

· Customer can enter his/her name in the control.
· Customer can type case History
· Customer can choose only one type out of given policy types.
· Customer can choose any number of INCLUSIONS out of given
inclusions. (Critical Illness/Accidental Coverage/Health Checkup/Others)

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