
Class – XII INFORMATICS PRACTICES
LAST YEAR PAPER-01(2014-15)

Time : 3 Hours, Maximum Marks : 70

Instructions:

- (i) All questions are compulsory.**
 - (ii) Answer the questions after carefully reading the text.**
-

1. (a) A company has 3 departments namely Administrative, Sales, Production. Out of telephone cable, Optical Fiber, Ethernet Cable, which communication medium is best for high speed communication between departments? (1)

Ans. Optical Fiber.

(b) Name one open source Indian operating system. (1)

Ans. Bharat operating system solutions.

(c) What is the purpose of a Server in a network? (1)

Ans. A server manages network resources in a network.

(d) What do the following top level domains signify? (1)

(i) .com

(ii) .org

Ans. (i) .com-Commercial

(ii) .org- Organization

(e) List 2 measures to secure a network. (2)

Ans. Measures to secure a network are:

(i) Login Password

(ii) Firewall

(iii) Anti Virus Software

(iv) File Permissions

(f) Distinguish between MAC address and IP address with the help of example of each.
(2)

Ans.

MAC Address	IP Address
MAC (Media Access Control) address e.g. 00.A0.C9:14:C8:35 is a unique 12 digit hexadecimal number assigned to each Network User Interface.	IP(Internet Protocol) address e.g. 192.168.0.2 is a numerical label that is assigned to a device participating in a computer network using Internet Protocol.
Can never be changed.	Can be changed.

(g) Distinguish between Phonetic text entry and keymap based entry of typing Indian language text. (2)

Ans.

Phonetic text entry	Keymap based entry
In Phonetic text entry, traditional keyboards with English keys are used. While typing, letters are typed phonetically in English script and then converted to corresponding Indian language.	In this method the keyboard keys are mapped to specific characters of Indian language using a keymap.

2. (a) Write the value of t after the execution of the following code: (1)

```
int t;  
int s;  
s=6;  
t = (8 * s++) % 7;
```

Ans.(a) 6.

(b) Which tag is used to display a horizontal rule on a web page? (1)

Ans.(b) <HR>

OR

HR

(c) In a SWITCH statement, what is the purpose of BREAK statements? (1)

Ans. (c) A BREAK statement causes controls to exit the SWITCH statement.

(d) Identify the error in the following HTML code. Rewrite the correct code. (1) <UL

TYPE = "a" START = 4>

Ans. (d) <OL TYPE = "a" START = "4">

OR

<UL TYPE= "circle">

OR

<UL TYPE="disc">

OR

<UL TYPE= "Square">

(e) Write Java code to assign the value 70 to variable y. Then decrease the value of y by 5 and store it in variable z. (2)

Ans.(e) y=70;

z=y-5;

OR

y=70;

y=y-5;

z=y;

OR

y=70;

y=-5;

z=y;

(f) Write the output that will be generated by the code given below: (2) int

```
i;  
int t;  
for (i = 5; i <=10; i = i+5)  
{  
t = i+3;  
system.out.println(" "+t);  
}
```

Ans.(f) 8

13.

(g) "With XML you invent your own tags." Explain this statement with the help of example.

Ans.(g) XML tags are created by the user as there are no standard tags.

For Example:

To store name, the tag <name> may be used as:

```
<name> Sumedha </name>
```

3. (a) Sharmila wants to make the database named 'COMPANY' active and display the names of all the tables in it. Write MySQL commands for it. (1)

Ans. (a)USE COMPANY;

SHOW TABLES;

(b) Write SQL command to remove column named 'Hobbies' from a table named 'Student'.(1)

Ans.(b) ALTER TABLE Student DROP Hobbies;

OR

ALTER TABLE Student DROP (Hobbies);

(c) Rewrite the following SQL statement after correcting error(s). Underline the corrections made. (1)

INSERT IN EMP(EMPNO, SALES)

VALUE (100, 20078.50);

Ans.(c)INSERT INTO EMP (EMPNO, SALES)

VALUES (100,20078.50);

(d) A table STUDENT has 5 rows and 3 columns. Table ACTIVITY has 4 rows and 2 columns. What will be the cardinality and degree of the Cartesian product of them? (1)

Ans.(d) Cardinality=20

Degree=5

(e) Name the SQL commands used to: (2)

(i) Physically delete a table from the database.

(ii) Display the structure of a table.

Ans. (e)(i)DROP TABLE

OR

DROP TABLE<Table Name>;

(ii)DESCRIBE

OR

DESC

OR

DESCRIBE <Table Name>;

OR

DESC<Table Name>;

(f) Write one similarity and one difference between UNIQUE and PRIMARY KEY constraints. (2)

Ans. Similarity-The UNIQUE and PRIMARY key constraints both ensure uniqueness of values for a column or set of columns.

Difference- Primary key cannot have NULL value, but Unique key may be NULL.

(g) What effect does SET AUTOCOMMIT have in transactions? (2)

Ans. If AUTOCOMMIT is set to 1, each SQL statement is considered a complete transaction and committed by default when it finishes.

If AUTOCOMMIT is set to 0, the subsequent series of statements acts like a transaction and no transaction is committed until an explicit COMMIT statement is used.

4. (a) The following code has some error(s). Rewrite the correct code underlining all the corrections made. (2)

```
int written, interview;  
written = Integer.parseInt(jTextField1.getText());  
interview = Integer.parseInt(jTextField2.getText()); if  
(written <80) OR (interview <15) {
```

```
System.out.println(Not selected);  
}  
Else;  
{  
System.out.println("Selected");  
}
```

Ans. (a) int written, interview;
written=
Integer.parseInt(jTextField1.get Text());
interview=

```
Integer.parseInt(jTextField2.getText());
If ((written < 80) == (interview < 15) )
{
system.out.println ("Not Selected");
}
else
{
system.out.println ("Selected");
}
```

(b) How many times will the following loop execute: (2)

```
int z = 7, sum = 0;
do
{
sum = sum + z; z = z+2;
system.out.println(" "+z);
}
while (z <=12);
```

Ans.(b) 3 times.

(c) Rewrite the following program code using IF ELSE IF instead of SWITCH statement. (2)

```
String rem;
int code = Integer.parseInt(jTextField1.getText());
Switch (code)
{
case 1 : rem = "Classes start on 8th April";
break;
case 2 : rem = "Classes start on 10th April";
break;
case 3 : rem = "Classes start on 12th April";
break;
```

```
default : rem = "Contact Admin Office";  
}
```

Ans. (c) String rem;

```
int code=
```

```
Integer.parseInt(jTextField1.getText());
```

```
if (code==1)
```

```
rem= "Classes start on 8th April";
```

```
else if (code==2)
```

```
rem= "Classes start on 10th April";
```

```
else if (code==3
```

```
)
```

```
rem= "Classes start on 12th April";
```

```
else
```

```
rem= "Contact Admin Office";
```

(d) Write the values of sum and t after execution of the following code: (2)

```
int sum,t;
```

```
sum = 27;
```

```
t = 3;
```

```
sum = sum + 2 * (++t);
```

Ans.(d) sum=35

t=4

(e) What will be the contents of jTextField1 and jTextField2 after executing the following code : (2)

```
String s = "Best";
```

```
String r = "Luck";
```

```
String z;
```

```
Z = r.concat(s);
```

```
jTextField1.setText(z);
```

```
jTextField2.setText(r.toUpperCase());
```

Ans.(e) jTextField1=LuckBest

jTextField2= LUCK

(f) Seema is a junior programmer at 'Avon Shoe Factory'. She has created the following GUI in Netbeans.



- 3 items namely Shoes, Sandals and Slippers are manufactured by the factory.
- A buyer can buy more than one item at a time.
- Each pair of shoes costs Rs.1,500.00, each pair of sandals costs Rs.1,000.00 and each pair of slippers cost Rs.500.00.
- The item bought will be selected by the user and the Quantity (number of pairs) bought will be entered by the user.
- Amount to be paid for that item will be displayed in front of the item.

For example if 'Shoe' is selected and Quantity entered is 20, then Amount should be displayed as 30000.

Help Seema write code for the following: (3)

(a) When 'Calculate' button is clicked, the amount should be displayed in front of each item (in the appropriate textfield) and Total amount (sum total of all the amounts) should be displayed in the appropriate textfield. (1)

Ans. (a) float qty1=0, qty2=0, qty3=0, amt1=0, amt2=0, amt3=0, total; if

(jCheckBox1.is Selected())

qty1=Float. parse Float(j TextField1.getText());

if (jCheckBox2.is Selected())

qty2=

```

Float.parse Float( jTextField2.getText());
if (jCheckBox3.is Selected( )
qty3=
Float.parse Float( jTextField3.getText());
amt1=qty1*1500;
amt2=qty2*1000;
amt3=qty3*500;
jTextField4.setText (""+amt1);
jTextField5.setText (""+amt2);
jTextField6.setText (""+amt3);
jTextField7.setText (""+total);

```

(b) When Clear button is clicked, all the Textfields and Checkboxes should be cleared.

Ans (b) jTextField1.setText ("");
jTextField2.setText ("");
jTextField3.setText ("");

jCheckBox1.setSelected(false);

(c) When Stop button is clicked, the application should close. (1)

Ans.(c) System.exit(0);

5. (a) Write one similarity and one difference between CHAR and VARCHAR data types. (2)

Ans.(a) Similarity-

- Both are used for storing non numeric data.
- Both can store 1 to 255 characters.
- Values must be enclosed in single quotes or double quotes.

Difference:

CHAR	VARCHAR
-------------	----------------

Used for fixed length string	Used for variable length string
Padded to the specific length when stored	No padding takes place

(b) Consider the following table named “GARMENT”. Write command of SQL for (i) to (iv) and output for (v) to (vii).

Table: GARMENT

G CODE	G NAME	SIZE	COLOUR	PRICE
111	T Shirt	XL	Red	1400.00
112	Jeans	L	Blue	1600.00
113	Skirt	M	Black	1100.00
114	Ladies Jacket	XL	Blue	4000.00
115	Trousers	L	Brown	1500.00
116	Ladies Toop	L	Pink	1200.00

(i) To display names of those garments that are available in ‘XL’ size. (1)

Ans.(i) SELECT GNAME FROM GARMENT
WHERE SIZE= ‘XL’;

(ii) To display codes and names of those garments that have their names starting with ‘Ladies’. (1)

Ans.(ii) SELECT GCODE, GNAME FROM
GARMENT WHERE NAME LIKE ‘Ladies%’;

(iii) To display garment names, codes and prices of those garments that have price in the range 1000.00 to 1500.00 (both 1000.00 and 1500.00 included). (1)

Ans.(iii) SELECT GCODE, GNAME FROM GARMENT
WHERE PRICE BETWEEN 1000 AND 1500;

OR

SELECT GCODE, GNAME FROM GARMENT
WHERE PRICE >=1000 AND PRICE <=1500;

(iv) To change the colour of garment with code as 116 to “Orange”. (1)

Ans.(iv) UPDATE GARMENT SET COLOUR = 'Orange'
WHERE GCODE=116;
UPDATE GARMENT SET COLOUR = 'Orange'
WHERE GCODE= '116';

(v) SELECT COUNT(DISTINCT (SIZE)) FROM GARMENT; (1)

Ans.(v) 3.

(vi) SELECT AVG (PRICE) FROM GARMENT; (1)

Ans.(vi) 1800.

(vii) SELECT GNAME FROM GARMENT WHERE SIZE IN ('M', 'L') AND PRICE > 1500; (1)

Ans.(vii) Jeans.

(c) What is the degree and cardinality of 'Garment' table? (1)

Ans.(c) Degree=5 , Cardinality=6.

6. (a) Write MySql command to create the table DEPARTMENT with given constraints. (2)

TABLE DEPARTMENT

COLUMN_NAME	DATATYPE(SIZE)	CONSTRAINT
Department ID	int (4)	Primary Key
Dep Name	varchar (50)	Not Null
Manager ID	char (4)	
Location	varchar (30)	

Ans. (a) CREATE TABLE DEPARTMENT

(
DEPARTMENT INT(4) PRIMARY KEY,
DEPNAME VARCHAR(50) NOT NULL,
MANAGERID CHAR(4),
LOCATION VARCHAR(30)
);

(b) In a Database, there are two tables given below:

Table: EMPLOYEE

EMPLOYEE ID	NAME	SALES	JOB ID
E1	SAMITA SINHA	1100000	102
E2	VIJAY SINGH TOMAR	1300000	101
E3	AJAY RAJPAL	1400000	103
E4	MOHIT RAMNANI	1250000	102
E5	SHAILJA SINGH	1450000	103

Table: JOB

JOB ID	JOB TITLE	SALARY
101	President	200000
102	Vice President	125000
103	Administration Assistant	80000
104	Accounting Manager	70000
105	Accountant	65000
106	Sales Manager	80000

Write SQL Queries for the following :

(i) To display employee ids, names of employees, job ids with corresponding job titles.

(2)

Ans.(i) SELECT EMPLOYEEID, NAME, E.JOBID, JOBTITLE
FROM EMPLOYEE E, JOB J
WHERE E.JOBID=J.JOBID;

OR

SELECT EMPLOYEEID, NAME, J.JOBID,
JOBTITLE FROM EMPLOYEE E, JOB J WHERE
E.JOBID=J.JOBID;

OR

```
SELECT EMPLOYEEID, NAME, EMPLOYEE.JOBID, JOBTITLE
FROM EMPLOYEE, JOB
WHERE EMPLOYEE.JOBID=JOB.JOBID;
```

(ii) To display names of employees, sales and corresponding job titles who have achieved sales more than 1300000. (2)

```
Ans.(ii) SELECT E.NAME, E.SALES, J.JOBTITLE
FROM EMPLOYEE E, JOB J
WHERE E.JOBID=J.JOBID AND E.SALES> 1300000;
```

OR

```
SELECT NAME, SALES, JOBTITLE
FROM EMPLOYEE, JOB
WHERE EMPLOYEE.JOBID=JOB.JOBID
AND SALES>1300000;
```

OR

```
SELECT NAME, SALES, JOBTITLE
FROM EMPLOYEE, JOB
WHERE EMPLOYEE.JOBID=JOB.JOBID
AND EMPLOYEE.SALES>1300000;
```

(iii) To display names and corresponding job titles of those employee who have 'SINGH' (anywhere) in their names. (2)

```
Ans.(iii) SELECT E.NAME, J.JOBTITLE
FROM EMPLOYEE E, JOB J
WHERE E.JOBID=J.JOBID AND NAME LIKE '%SINGH%';
```

OR

```
SELECT NAME, JOBTITLE
FROM EMPLOYEE, JOB
WHERE EMPLOYEE.JOBID=JOB.JOBID
AND NAME LIKE '%SINGH%';
```

OR

```
SELECT NAME, JOBTITLE
FROM EMPLOYEE E, JOB J
WHERE E.JOBID=J.JOBID AND NAME LIKE '%SINGH%'
```

(iv) Identify foreign key in the table EMPLOYEE. (1)

Ans.(iv) JOBID.

(v) Write SQL command to change the JOBID to 104 of the Employee with ID as E4 in the table 'EMPLOYEE'.

Ans.(v) UPDATE EMPLOYEE
SET JOBID=104 WHERE EMPLOYEEID='E4';

OR

```
UPDATE EMPLOYEE
SET JOBID= '104' WHERE EMPLOYEEID='E4';
```

7. (a) Write one advantage and one disadvantage of e-learning to students. (2)

Ans.(a) Advantages:

Students can

- (i)** learn at their own pace.
- (ii)** learn at any age.
- (iii)** study anywhere provided they have a access to a computer and internet connection.
- (iv)** assess themselves and take feedback to enhance their learning.

Disadvantages:

- (i)** As teacher student personal interaction is absent, learners with low motivation or bad study habits may fall behind.
- (ii)** Slow Internet connection may make access e-learning course material difficult.

(b) What precaution must be taken with regard to making payments while shopping online? (1)

Ans.(b) (i) Share payments information with known or reputable vendors.

(ii) Before entering any personal or payment information, make sure that the URL should start with http

(iii) Look for a small lock icon in web browser.

(c) James works for a Garments company. He has created a form for the employees.

Help him choose most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, Checkbox, Label and Command Button for the following entries:

(2)

S. No.	Function
1	To enter first name of the employee
2	To select gender(M/F)
3	To choose category of employee (Permanent/ Temporary)
4	To allow entering remarks about the employee in the form of paragraph.

Ans.(c)

S. No.	Function	Control
1	To enter first name of the employee	Text field
2	To select gender(M/F)	Radio Button/ Combo Box
3	To choose category of employee (Permanent/ Temporary)	Radio Button/ Combo Box
4	To allow entering remarks about the employee in the form of paragraph.	Text Area

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