

KENDRIYA VIDYALAYA SANGATHAN, CHENNAI REGION

CLASS XII – COMMON PRE-BOARD EXAMINATION

Sub : Informatics Practices (065) Time allowed : 3 hours Maximum Marks : 70

Marking Scheme

1. (a) Mrs Shasikala is working in an Global Organization. She wants to login in his office computer from her home. 1
Suggest the protocol for the same.
answer :
TELNET
- (b) Which device is used for connecting multiple networks over different protocols? 1
answer :
Router
- (c) Identify the following topologies. 1
(1) A signal / data packet transmitting from one end to other end in linear way.
(2) Each node is connected to two and only two neighboring nodes in circular form.

answer :
(1) BUS topology (2) Ring / Circular topology
- (d) Write any two scripts included in Indian Languages on Unicode. 1
answer :
Devanagiri,Tamil,Malayalam,Gujatrati,telugu,assamese etc.
- (e) Explain following terms. 2
(1) Apache Server (2) Linux
answer :
Apache Server : It is an open source web server for many platforms such as Linux, Unix, Microsoft Windows and other platforms. 1 mark

Linux: It is a popular open source computer operating system. Freely available, freely used it, modify it and redistribute it. -1 Mark
- (f) List out any four advantages of Open Standards. 2
answer :
1) Making the data accessible to all.
2) Application and Platform independence
3) Diversity and inter operatibility in the industry
4) Offers diverse choices for users.
- (g) Differentiate between Dedicated and Non-dedicated server. 2
answer :
Non-Dedicated Server: On a small networks, a workstation which serve as a server as well as normal workstation is known as non-dedicated server. It is nor completely dedicated for serving .

Dedicated Server: On big Network ,a server reserved only for server's different activities of server is known as dedicated server.

-1 mark each
- 2 (a) Which property of the radio button should be set to make the radio buttons mutually exclusive? 1
Ans: Button Group
(1 mark for correct answer)

- (b) What is the difference between <P> and
 tag? 1
 Ans: The "BR" tag inserts a single line break into the web document.
 The "P" tag defines a paragraph, but the paragraph is typically automatically given space before and after by the browser.
 (1/2 marks for each correct answer)
- (c) Write some features of XML. 1
 Ans:
 XML is designed to carry data, Not to display data.
 ·XML does not DO anything
 ·XML is self descriptive
 ·XML is platform independent.
 ·XML can be used to Create new Languages
 (1/2 marks for each any two)
- (d) Which HTML tag is used to for producing a Radio Button in an HTML form? Write one example. 1
 Ans:
 <INPUT> tag is used. (1/2 Mark)
 e.g: <INPUT type = "Radio" name = "uname" /> (1/2 Mark)
- (e) How many times does the following loop execute? What is its type (Entry controlled or Exit controlled) ? 2

```
int x=2,y=20;
while( x <= y)
{
JOptionPane.showMessageDialog(null, "" + x);
}
```

 Ans: Infinite loop (1 marks)
 Entry controlled (1 marks)
- (f) Write a function in java that takes an integer number as parameter and returns its sum of digits. 2
 Ans: 2 marks for correct answer
- (g) Write the HTML code to provide the hyperlink to a website www.kvsangathan.nic.in. 2
 Ans: KVS Website
3. (a) How can we see the list of existing tables in current database? 1
 Ans: Show Tables;
- (b) While creating a table "STUDENT", Kavi forgot to set primary key for the table on ROLLNO key. Write the statement to set the column MobileNo as the primary key of the table. 2
 Ans: Alter Table STUDENT Add Primary Key(MobileNo);
 (1 marks for correct Alter table command and 1 marks for add primary key)
- (c) A student of class XII has created a table "PARTICIPANTS". CITY is one of the columns in table. She wants to find out the names of participants who have not come from Mumbai, Delhi, Ahmedabad. 2

```
SELECT NAME FROM PARTICIPANTS WHERE CITY HAS NOT Mumbai, Delhi, Ahmedabad;
```

 Find out the errors and rewrite the above query.
 Ans: SELECT NAME FROM PARTICIPANTS WHERE CITY NOT IN('Mumbai', 'Delhi', 'Ahmedabad');
 (1 marks for IN identification and 1 marks for correct single quotes)
 Other correct answer also acceptable.
- (d) Predict the output of the query: 1

```
SELECT ROUND(65.95,1) - TRUNCATE(65.95,1);
```

 Ans: 0.1
 (1/2 marks for each correct answer)
- (e) Write the difference between Char and Varchar data types. 1
 Ans : Char create fixed length string. Varchar create variable length string.
 (1/2 marks for each correct answer)
- (f) Write the MySQL query to calculate the Cartesian Product of given two tables. 1
 Ans: SELECT * FROM <TABLE1>, <TABLE2>; OR SELECT * FROM <TABLE1> CROSS JOIN <TABLE2>;

(g) Consider the table HOTEL given below:

2

Table : HOTEL

Room_No	Cust_Name	Room_Type	Room_Rent
204	Rajesh	Single	700
308	Anuja	Double AC	1600
105	Vinamra	Single NAC	500
202	Soma	Single	700

Based on this information, find output of the following queries:

(I) SELECT Room_Type, AVG(Room_Rent) FROM HOTEL GROUP BY Room_Type;

Ans:

Room_Type	AVG(Room_Rent)
Single	700
Double AC	1600
Single NAC	500

(II) SELECT Room_no FROM HOTEL WHERE Cust_Name LIKE '%a%';

Ans:

Room_No
204
308
105
202

4 (a) Define Polymorphism concept in Object Oriented Programming.

1

Ans: (1 mark for correct definition.)

(b) Rewrite the following if else statement using conditional operator

1

```
int i=("I am a student of Kendriya Vidyalaya".length());  
if(i>25)
```

```
    System.out.println("Above Average");
```

```
else
```

```
    System.out.println("Below Average");
```

Ans:

```
int i=("I am a student of Kendriya Vidyalaya".length());
```

```
System.out.println((i>25)? "Above Average": "Below Average");
```

(1 mark for correct answer.)

(c) Given a string Object namely *month* having value as "11" stored in it. What will be the result of following code?

1

```
JOptionPane.showMessageDialog(null,"" +(month.length()+Integer.parseInt(month)));
```

Ans:13

(1 mark for correct answer.)

(d) Rewrite the following code using switch:

2

```
char ch = Character.parseCharacter( charTF.getText( ) );
```

```
if ( ch == 'A' ) || (ch == '1')
```

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

```
else if( ch == 'B' ) (ch == '2')
```

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

```
else
```

```
    System.out.println( "None" );
```

Ans: char ch = Character.parseCharacter(charTF.getText());

```
switch( ch )
```

```

{
    case 'A' :
    case '1' :
        System.out.println( "One" ); break ;
    case 'B' :
    case '2' :
        System.out.println( "Two" ); break ;
    default : System.out.println( "None" );
}

```

(1/2 Mark for using break, 1/2 Mark for using default, 1 Mark for remaining part)

- (e) The following code has some error(s). Rewrite the correct code underlining all the correction made:

2

```

int K=2; Sum=0;
do
{
    Sum=K;
    K+=2;
}
while(K<=20);
jTextField1(Integer.toString(Sum));

```

Ans:

```

int K=2; int Sum=0; // OR int K=2, Sum=0;
do
{
    Sum=K;
    K+=2;
}
while(K<=20);
jTextField1.setText(Integer.toString(Sum));

```

(1/2 marks for each correction)

- (f) What will be the value of P and Q after execution of the following code:

2

```

int P,Q=100;
for(P=10;P<=12;P++)
    Q+=P;
JOptionPane.showMessageDialog(null, "P:" + P + "Q:" + Q + "");

```

Ans: P:13 Q:133

(1 mark for each correct answer)

- (g) Rajani is a programmer in GeSoft Ltd. She designed a GUI to display employees having salary in the given range.



Write the code for the following

- 1) Mention the name of all the components used to create above JFrame (1)

- 2) Write the java statements to execute the query to display the records in the JFrame, if the database name is Firm and table name is Employee. (4)
- 3) Display code for clear and exit buttons (1)

Ans:

- 1) jTable, jLabel, jButton, jTextField - 1 marks for all correct ans
- 2) Complete code including try catch 4 marks for correct answer
- (3) ½ marks for clear and ½ marks for exit code

5. (a) What do you understand by primary key and candidate key? 2

Ans: Primary Key: use to set unique value in each row. And use to refer in other table as a foreign key.
Candidate key is use to set unique value in each row.

- (b) Write the output of the following MySQL statements : 2

(i) SELECT MOD(ROUND(124.60),5);

Ans: 4.6

(ii) SELECT SUBSTR(TRIM(' I LOVE PROGRAMMING '),3,5);

Ans: LOVE

(iii) SELECT CONCAT("KENDRIYA ", "VIDYALAYA") "FULL NAME";

Ans:

FULL NAME
KENDRIYA VIDYALAYA

(iv) SELECT WEEKDAY(CURDATE());

Ans:

WEEKDAY(CURDATE)
0 for Monday.....
6 for Sunday
As per exam date day

- (c) Consider the table **STUDENT** given below, write MySQL Commands for (i) to (v) and output for (vi) to (viii): 6

Name	Class	DOB	Sex	City	Marks
Nanda	X	6/6/95	M	Agra	551
Saurabh	XII	7/5/93	M	Mumbai	462
Sanal	XI	6/5/94	F	Delhi	400
Trisla	XII	8/8/95	F	Mumbai	450
Store	XII	8/10/95	M	Delhi	369
Marisla	XI	12/12/94	F	Dubai	250
Neha	X	8/12/95	F	Moscow	377
Nishant	X	12/6/95	M	Moscow	489

- (i) To display all the information of males whose city is NEITHER Delhi or Mumbai. (1)

Ans: SELECT * FROM STUDENT WHERE Sex='M' AND NOT City IN('Delhi', 'Mumbai');

- (ii) To display the details of all the students whose date of birth is after Nishant's Birth date 12/6/95. (1)

Ans: SELECT * FROM STUDENT WHERE DOB> '12/6/95';

- (iii) To Display all information about class XII students rankwise (descending order).

(1/2)

Ans: SELECT * FROM STUDENT WHERE Class= 'XII' order by Marks desc;

(iv) List names of all students in agewise. (1/2)

Ans: SELECT Name FROM STUDENT ORDER BY DOB ;

or

Ans: SELECT Name FROM STUDENT ORDER BY DOB DESC;

(v) To count the number of students in XII Class of Mumbai city. (1/2)

Ans: SELECT COUNT(*) FROM STUDENT WHERE Class = 'XII' AND City= 'Mumbai';

(vi) SELECT DISTINCT (Sex) FROM STUDENT. (1/2)

Ans:

DISTINCT (Sex)
M
F

(vii) SELECT AVG(Marks), Class FROM STUDENT GROUP BY class. (1)

Ans:

AVG(Marks)	Class
459	X
427	XII
325	XI

(viii) SELECT COUNT(*)FROM STUDENT WHERE Class = 'XI' (1)

Ans:

count (*)
2

6. (a)

Column Name	EmpID	EmpName	EmpAdd	EmpPhone	EmpSal	DeptID
Key Type	<u>Primary</u>					Foreign
Null/Unique		Not Null		Unique		
Foreign Key Table Name						Department
Foreign Key Column						DeptID
Data type	Integer	Char	Varchar	Integer	Double	Integer
Length	6	20	30	10	9,2	2
Constraint					<20000	

2

Create table Employee as per following Table Instance Chart.

Ans:

Create Table Employee(EmpID Integer(6) Primary Key,

EmpName Char(20) Not Null,

EmpAdd Varchar(30),

EmpPhone Integer(10) Unique,

EmpSal Double(9,2) CHECK EmpSal<20000,

DeptID Integer(2),

Foreign Key (DeptID) References Department(DeptID));

(2 marks for correct answer partial correct answer partial marks cut.)

(b) In a database there are two tables Books and Issued as shown below.

2

Books			Issued		
Book_Id	Book_name	Quantity		Book_Id	Quantity-issued
C001	Fast Cook	5		T001	4
F001	The Tears	20		C001	5
T001	C++	10		F001	2
T002	VB	15			
F002	NetBeans	50			

(i) Identify the foreign key column in the table Issued.

Ans: Book_Id

(ii) How many rows and columns will be there in the Natural Join of these two tables?

Ans: Rows :3 , Columns: 4

(1/2 marks for each correct answer)

(c) Study the following table TEACHER and SALARY and write the MySQL commands for the questions (i) and (ii) and give outputs for MySQL queries (iii) and (iv). 6

Table : **TEACHER**

SID	NAME	DEPT	SEX	EXPERIENCE
101	Siddharth	Computer	M	12
104	Raghav	Physics	M	5
107	Naman	Chemistry	M	10
114	Nupur	Computer	F	3
109	Janvi	Physics	F	9
105	Rama	Accounts	M	10
117	James	Computer	F	3
111	Binoy	Accounts	F	12
130	Samuel	Computer	M	15

Table : **SALARY**

SID	BASIC	ALLOWANCE	DA
101	12000	1000	300
104	23000	2300	500
107	32000	4000	500
114	12000	5200	1000
109	42000	1700	200
105	18900	1690	300
130	21700	2600	300

(i) Display NAME and DA of all staff who are in Accounts department and having more than 10 years of experience and DA is more than 300. (2)

Ans: Select NAME, DA from TEACHER T, SALARY S Where DEPT= 'Accounts' **AND** EXPERIENCE >10 **AND** DA>300 **AND** S.SID=T.SID;

(2 marks for correct answer and 1 marks for partial correct answer)

(ii) Display the NAME and SALARY of all staff whose salary is more than average salary. (SALARY=BASIC +ALLOWANCE+ DA) (2)

Ans: Select NAME, BASIC+ALLOWANCE+DA AS 'SALARY' from TEACHER T, SALARY S Where (BASIC+ALLOWANCE+DA)>(select AVG(BASIC +ALLOWANCE+ DA) from salary);

(2 marks for correct answer and 1 marks for partial correct answer)

(iii) Select NAME, DA, BASIC from TEACHER, SALARY Where BASIC>20000 and TEACHER.SID=SALARY.SID;

(1)

Ans:

NAME	DA	BASIC
Raghav	500	23000
Naman	500	32000
Janvi	200	42000
Samuel	300	21700

- (iv) Select NAME, DEPT, SEX, BASIC, DA from TEACHER, SALARY Where DEPT LIKE '%o%' and DA >=500 and TEACHER.SID=SALARY.SID; (1)

Ans:

NAME	DEPT	SEX	BASIC	DA
Nupur	Computer	F	12000	1000

7. (a) Write any two social impact of e-business. 1

Answer :

1. Un-shortened supply chain.
2. Improved customer service

- (b) Define front – end of an information system. 2

answer :

This is the user interface that the user sees and which is responsible for interacting with the user. The front end is responsible for receiving user's queries, requests etc and passing it over to the back-end. The front-end basically includes graphical user interfaces and the input forms, through which users interact with the system. The interface allows users to issue commands to the system and view the results, and in case of the input forms, enter and modify date.

- (c) Mrs. Ranjeeta is developing a software for the Company. She wishes to create controls on a form for the following functions. Choose appropriate controls from Text field, Label, Radio button, Check box, List box, Combo box, Button and write in the third column. 2

S. No.	Control used to	Control
1	Enter Employee number	
2	Employee Name	
3	Select Department	
4	Select Manager Name	

Answer :

S. No.	Control used to	Control
1	Enter Employee number	Text Field
2	Employee Name	Text Field
3	Select Department	list box/ combo box/radio button
4	Select Gender of Employee	list box/ combo box/radio button