

**KENDRIYA VIDYALAYA, ARMY CANTT. PANGODE**  
**HALF YEARLY EXAMINATION 2015**  
**INFORMATICS PRACTICES**

**CLASS: XII**

**TIME: 3 Hrs**  
**Mark: 70**

General Instructions:

- Answer all questions
- Programming language: Java
- DBMS: MySQL

- I
- 1 You want to prevent unauthorized access to your local area network. Name the hardware/software you have to install to achieve the same. 1
  - 2 What is Gateway 1
  - 3 Which of the following is not a transmission medium? Telephone lines, Coaxial cable, repeater, Bluetooth 1
  - 4 What is Unicode 1
  - 5 What is the difference between free ware & open source software 1
  - 6 Define Protocol 1
  - 7 Write the full forms of NRCFOSS, MAC, PAN, TCP 2
  - 8 List out the four main denial of service attacks 2
  - 9 Differentiate between true type font & open type font 2
  - 10 Write the advantages of fiber optic cables 2
  - 11 Differentiate between passive hub & active hub 2
- II
- 1 Which property of the radio button should be set to make the radio buttons mutually exclusive? 1
  - 2 Name one container for each of the following categories. 1
    - (i) Top level container
    - (ii) Middle level container
  - 3 Write a function in java that receives a 3 digit integer and return its middle digit. 2
  - 4 How many times does the following loop execute? What is the value of num after the execution? 2

```
int num=5;
do
{
System.out.println("Hello world");
num--;
}while (num>2);
```
  - 5 Find output of the following code. 2

```
int I=1;
while(I<5)
{
    System.out.println(I++);
    I=I*2;
}
```
  - 6 Write java code that takes value for side of a square in jTextField1 and display its area in jTextField2 2

- 7 Obtain output for the following code if the string object age has the value "18". 2  
 JOptionPane.showMessageDialog(null," "+age.length()+Integer.parseInt(age));
- 8 A item id consisting of 4 digits is stored in a string variable stritemid. Now Mr.James wants to store the same as integer type of variable intitemid. Help him to do this 2
- 9 double d=305.675; 4  
 double e=200.500;  
 float f=200;  
 float g=85;  
 System.out.println(Math.round(d));  
 System.out.println(Math.round(e));  
 System.out.println(Math.round(f));  
 System.out.println(Math.round(g));

- III 1 Distinguish between ALTER TABLE and UPDATE commands of MySQL. 1  
 2 Mention two categories in which MySQL commands are broadly classified. 1  
 3 Differentiate between primary key and unique key. 1  
 4 What happens when "ROLLBACK" command is issued in a transaction process? 2  
 5 What is the difference between "%" and "\_" wild card characters with reference to LIKE clause of MySQL? 2  
 6 Consider the following table named "EXAM" with details of marks. Write commands of MySQL for (i) to (iv) and output for (v) to (vii). 7

Table : EXAM

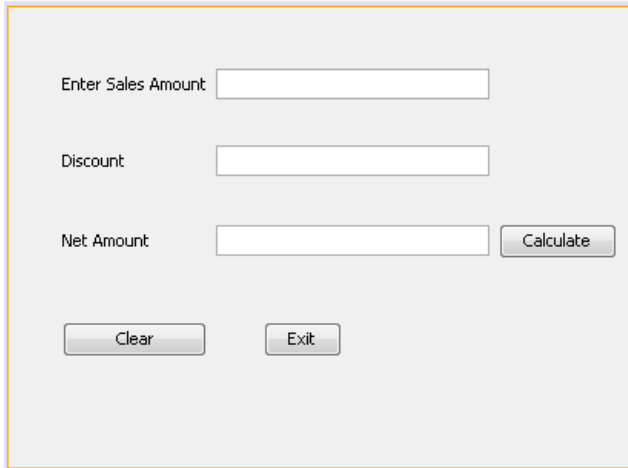
Adno	SName	Percentage	Clsection	Stream
R001	Sushant	90.2	12A	Science
R002	Vaidyanath	80.5	12B	Humanities
R003	Miara	68.9	12B	Science
R004	Niara	96.0	12A	Commerce
R005	Shinjini	88.9	12D	Commerce

- (i) To display all information of the students of humanities in descending order of percentage.  
 (ii) To display Adno, Name, Percentage and Stream of those students whose name is less than 6 characters long.  
 (iii) To add another column Bus\_Fees with datatype and size as Decimal (8, 2).  
 (iv) To increase percentage by 2% of all the Humanities students.  
 (v) SELECT COUNT (\*) FROM Exam;  
 (vi) SELECT SName, Percentage FROM EXAM WHERE Name LIKE "N%";  
 (vii) SELECT ROUND (Percentage, 0) FROM EXAM WHERE Adno="R005";

- IV 1 What is an interface? 1  
 2 What will be the content of jTextField1 after executing the following statement? 1  
 jTextField1.setText("Informatics".substring(3));  
 3 Given the following for loop write equivalent while loop for the above code 2  
 int sz= 25;  
 for(int i=0, sum=0;i<sz; i++)  
 sum=sum + 1;  
 4 The following code has some error(s ).Rewrite the correct code underlining all the corrections made. 2  
 m=1;

```
n=0;
for (; m+n<19;++n)
System.out.println("Hello" \n);
m= M+ 10;
```

- 5 What will be the contents of JTextField1 and JTextFiled2 after executing the following code 2  
 jTextField1.setText("Business".substring(3,4));  
 jTextField2.setText("studies".toUpperCase());
- 6 ABC Sales Enterprise wants developed a software to make the bill for their customer. GUI for the application given below.



Write the java statement for the following requirements.

- a) Write the statement to make the text fields (txtDiscount) and txtNet non- editable. 2  
 b) Calculate discount and net amount for calculate button based on the following criteria. 2  
 Sales Amount Discount  
 >=5000 5  
 >=3000` 3  
 >=1000 1
- c) Write the statement to clear all textfields when clicking the clear button. 1  
 d) Write the code for exit button to close the application. 1

- V 1 Write MySQL command to create the table “Toyz” with the following structure and constraint. 2

**Table : TOYZ**

Column Name	Data Type (size)	Constraint
Toy_no	Int (10)	Primary Key
Toy_name	Varchar (20)	
Type	Char (10)	
Price	Decimal (8, 2)	
Colour	Varchar (15)	

- 2 With reference to SAMS table, which column should be set as the Primary Key? Which column is the foreign key? Give reasons. 2

**Table : SAMS**

ICode	IName	Price	Colour	VCode
S001	Refrigerator	20000	Blue	P01
S002	Mobile Phone	45000	Black	P02
S003	LCD	60000	Silver	P03
S004	Washing Machine	12500	Smoke	P01
S005	Air Conditioner	16000	White	P03

**Table : VENDOR**

VCode	VName
P01	Satish
P02	Manoj
P03	Subodh
P04	Jacob

- 3 Explain 2 DDL commands with example 2
- 4 Write the output of the following sql commands. 2
- (i) SELECT RIGHT('USS/23/67/09',2);
- (ii) SELECT RTRIM('RDBMS MYSQL ');
- (iii) SELECT MOD(7,3);
- (iv) SELECT LENGTH('WELCOME');

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 INFORMATICS PRACTICES- ANSWER KEY

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I	1	Firewall	1
	2	Internet network device that can translate between different protocols.	1
	3	Repeater	1
	4	An international encoding standard for use with different languages and scripts, by which each letter, digit, or symbol is assigned a unique numeric value that applies across different platforms and programs.	1
	5	Freeware- free of cost, open source software-freedom to use, study the code, modify and distribute	1
	6	Set of rules to be followed for the data communication over network.	1
	7	NRCFOSS-National Research Centre for Free and Open source Software, MAC-Medium Access Control, PAN-Personal Area Network, TCP-Transfer Control Protocol	2
	8	Denial of access to information, Denial of Access to application, Denial of access to system, Denial of access to the resources	2
	9	True type fonts contains both screen and printer font data in a single component. Open type fonts supports multiple platforms and expanded character sets.	2
	10	Fibre optic cables have a much greater bandwidth than metal cables. Fibre optic cables are immune to electromagnetic interference. Fibre optic cables are much thinner and lighter than metal wires. Optical fibres are difficult to tap.	2
	11	Passive Hub+Repeater=active hub	2
II	1	Button group.	1
	2	(i) Top level container -JFrame (ii) Middle level container -JMenuBar	1
	3	<code>void midnum() { int n; n=Integer.parseInt(jTextField1.getText()); n=n/10; int m=n%10; System.out.print(m); }</code>	2
	4	3 times. Num=2	2
	5	1	2
		4	
	6	<code>Double a=Double.parseDouble(jTextField1.getText()); Double area=a*a; jTextField2.setText(Double.toString(area));</code>	2
	7	20	2
	8	<code>Intitemid=Integer.parseInt(stritemid);</code>	2
	9	306 201 200 85	4
III	1	Alter Table-DDL, Changes the schema of table. UPDATE – DML changes the content in a table.	1
	2	DDL and DML	1
	3	Primary key won't allow null unique key will allow null value once.	1
	4	All changes done during the transaction will be undone.	2

- 5 % stands for a string. \_ stands for a character. 2
- 6 (i) Select \* from Exam where Stream="humanities" order by Percentage. 7  
(ii) Select Adno, SName, Percentage,Stream from Exam where Length(SName)<6;  
(iii) Alter Table Exam add Bus\_Fees Decimal(8, 2);  
(iv) Update Exam where Percentage=Percentage+(Percentage\*2/100) where Stream="Humanities";  
(v) COUNT (\*)  
5  
(vi) SName, Percentage  
Niara 96.0  
(vii)ROUND (Percentage, 0)  
89
- IV 1 What is an interface? 1  
2 ormatics 1  
3 int sz= 25; 2  
int i=0;  
int sum=0;  
while(i<sz)  
{  
sum=sum + 1;  
i++;  
}  
4 int m=1; 2  
int n=0;  
for (; m+n<19;++n)  
{  
System.out.println("Hello\n");  
m= M+ 10;}  
5 ines 2  
STUDIES
- 6 a)txtDiscount.setEditable(false);txtNet.setEditable(false);  
b) Using if or switch case write the code  
c) Write the statement to clear all textfields when clicking the clear button. 1  
d) System.exit(0); 1
- V 1 Create table Toyz(Toy\_no int(10) Primary Key,Toy\_Name varchar(20), Type Char(10),Price 2  
Decimal(8,2),Colour varchar(15).
- 2 ICode is the primary key and VCode is the foreign key. The VCode in SAMS table takes values from 2  
the column entries in VCode column inVENDOR table where it is the primary key.
- 3 CREATE, ALTER TABLE 2  
4 Write the output of the following sql commands. 2  
(i) RIGHT('USS/23/67/09',2)  
09  
(ii) RTRIM('RDBMS MYSQL ')

RDBMS MYSQL

(iii) MOD(7,3)

1

(iv) LENGTH('WELCOME')

7