

ASN Senior Secondary School

PREBOARD EXAMINATION 2019-20

Informatics Practices
CLASS XII

TIME- 3 HR.
MM-70

General Instructions:-

1. All the questions are compulsory.
 2. Do all parts of the same question together.
-

- 1.(a) Two neighbours schools at a distance of 130 meters from each other, decide to join their LANs using UTP cables so that they can share their e-learning resources. But after joining their LANs they are not able to share the resources due to loss of signal in between. Which device should they use so that signal is amplified in- between? 1
- (b) Sumit has written two addresses as 198.165.1.5 and AB.YU.2F.K7.12.65. He is not able to find out the difference between these addresses. Help him for the same. 1
- (c) Write example of one Proprietary and one Open Source Software. 1
- (d) Identify the wired and wireless technologies from the followings: 1
Bluetooth, Optical Fiber, Co-axial, Infrared
- (e) Deepti is confused between the terms ASCII and Unicode. Help her by differentiating between ASCII and Unicode 2
- (f) Many of the programming brains has shifted their focus from Proprietary software to Free and Open software. Mention any two freedom offered by Free software. Going with the flow, Sandhya has downloaded a software from the internet which can be freely distributed and used by anyone but the source code is not available. Is it Freeware or free software? Justify your answer as well. Similarly Premjith wants to install a software on his system that can help him to create, edit and save office documents but he does not want to purchase the software. Suggest him a good software for the same. 2
- (g) Differentiate between Static and dynamic font. 1
- (h) Expand TCP/IP. Write the purpose of TCP/IP in communication of data on a network. 1
- 2.(a) Categorize the following as Keywords/User defined Identifier. 1
(i) MarksUnit (ii) case (iii) break (iv) Marks
- (b) What are the values we can give with type attribute in tag? 1
- (c) Write examples of any two properties and any two methods of JButton component 1
- (d) Which tag is used to define the Header row of a table? 1
- (e) What will be the value of sum after executing the following code: 2
- ```
int x, sum = 0;
for (x= 1; x <=5; x+=2)
{
 sum+=x;
}
```

(f) Write the output that will be displayed on jLabel1 and jLabel2. 2

```
String a,b,c,d,x;
a= "Keep";
b="your";
c="surroundings";
d="clean";
int e = b.length()/4+d.length()*2;
x=b+c+d;
x=a.concat(x);
jLabel1.setText("The value of e = "+e);
jLabel2.setText(x.toUpperCase());
```

(g) What will be displayed in jTextField1 and jTextField2 when the following code is executed ? 2

```
int x,y,z,t;
x = 3; y = 8;
z = x+y/8;
t = z++;
jTextField1.setText(""+z);
jTextField2.setText(""+t);
```

3. Differentiate between char and varchar. In char(10) and Varchar(10) what does number 10 indicate? 1

(b) 'Employee' table has a column named 'CITY' that stores city in which each employee resides. Write SQL query to display details of all rows except those rows that have CITY as 'DELHI' or 'MUMBAI' or 'CHANDIGARH'. 1

(c) Write SQL statement to add a column "COUNTRY" with data type and size as VARCHAR(70) to the existing table named "PLAYER". Is it a DDL or DML or TCL command ? 2

(d) Can a table have multiple primary key? Can it have multiple foreign key? 1

(e) Table Student has the columns RNO and SCORE. It has 3 rows in it. Following two SQL statements were entered that produced the output (AVG(SCORE) as 45 and COUNT(SCORE) as 2) 2

(i) AVG(SCORE)

(ii) COUNT(SCORE)

Data in SCORE column is same in two rows. What data is present in the SCORE column in the three rows ?

(f) A table "Customer" in database 5 columns and no rows in it. What is its cardinality? What will be its cardinality if 4 rows are added in the table. 2

(g) In the table "Student", Priya wanted to increase the Marks (Column Name: Marks) of those students by 5 who have got Marks below 33. She has entered the following statement :  
SELECT Marks+5 FROM Student WHERE Marks<33;

**Identify errors (if any) in the above statement. Rewrite the correct SQL statement** 1

Q4. a. What is the difference between inheritance and polymorphism 1

(b) Identify the error in the following code :

1

```
switch(c)
{ case 9.0 : a= a+2;
 break;
 case 8.0 : a=a+3;
 break;
}
```

(c) What values will be displayed in JOptionPane when the following code is executed ? 2

```
int a=5, b = 2;

while (a < 20)

{ a = a + b;

 b = a - b;

 JOptionPane.showMessageDialog(null,a);

}
```

(d) Write the code given below using 'for' loop instead of 'while' loop :

2

```
int i=1;
while(i<=5)
{
 if(i * i == 4)
 jTextField1.setText(""+i);
 i=i+1;
}
g
```

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

```
String str ="Mahatma";
jTextField1.setText(str.substring(4));
jTextField2.setText("" +str.length());
```

(f) Write the value that will be stored in variable a after execution of the following code 2

```
if
(i) initial value of a is 8.
(ii) initial value of a is 10.
int b = 9;
if (a > b)
 a=a+5;
a=a+2;
```

g) A programmer at Beta Builders is required to make the following GUI interface to calculate wages to be paid to the labourers **as shown below:** 5

Male and Female labourers are respectively paid at the rate of Rs.140/- per day and Rs.160/- per day. Skilled Labourers are paid extra at the rate of Rs.50/- per day.

Create the above interface in Java(using NetBeans) and set/write code for the questions that follow:

- i. Ensure at design time that only one of the radio buttons(Male and Female) can be selected at a time.

- ii. When “Calculate Wages” button is clicked, calculate and display the total wages in the corresponding textfield
- iii. When “Clear” button is clicked , Clear the Name and TotalWages textfields.
- iv. When “STOP” button is clicked the application should be terminated.

5.(a) How can you remove the column of a table? Explain with example.

2

(b) What are TCL commands? Explain the role of Commit and Rollback with example.

2

(c) Consider the table **Doctor** given below, write command in SQL for (1) to (4) and output for (5) to (8).

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      |

(1) To display name of all doctors who are in Medicine having more than 10 years of experience.

(2) To display the different departments.

(3) To display minimum consultation fee of female doctors

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

(5) SELECT AVG(ConstFee) FROM Doctor WHERE NOT Gender='F';

(6) SELECT Count(Experience) FROM Doctor;

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

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

6.(a) Write MySql Command to create the Table “Hotel” with the following structure:

2

Table: Hotel

| Field Name | Field Type  | Constraint  |
|------------|-------------|-------------|
| Room_No    | Integer(3)  | Primary Key |
| Type       | Varchar(20) |             |
| Fare       | Integer(4)  | Not Null    |
| Floor      | Varchar(10) |             |

(b) In a database, there are two table “Company” and “Model” as shown below:  
Company

| CompID | CompName | CompHO    | Cont Person |
|--------|----------|-----------|-------------|
| 1      | Titan    | Okhla     | BC.Joshi    |
| 2      | Ajanta   | Najafgarh | V.P.Gupta   |
| 3      | Maxima   | Shahdara  | R.Kumar     |

Model

| ModelID | CompID | ModelCost |
|---------|--------|-----------|
| T020    | 1      | 2000      |
| M059    | 2      | 7000      |
| M032    | 3      | 2500      |

- (i) Identify the foreign Key column in the table model. 1  
(ii) Check every value in CompID column of both the tables. Do you find any discrepancy? 1

(c) Consider the tables product and client give below –  
Product

| PID   | ProdName | Manufactures | Price |
|-------|----------|--------------|-------|
| T P01 | Pen      | Cello        | 5     |
| T P02 | Gel pen  | Luxar        | 10    |
| T P03 | Ink pen  | Luxar        | 10    |
| T P04 | Pencil   | Natraj       | 2     |
| T P05 | Sketch   | Camel        | 2     |

Client

| CID | CliName | City     | PID  |
|-----|---------|----------|------|
| 01  | Rakesh  | Delhi    | TP01 |
| 02  | Prakash | Mumbai   | TP05 |
| 03  | Suresh  | Delhi    | TP03 |
| 04  | Dinesh  | Delhi    | TP02 |
| 05  | Pravesh | Banglore | TP04 |

- i. To Display the details of products whose Price is in the range of 6 to 10 [2]  
ii. To display client name, city from table chart and ProdName and price from table product [2]  
iii. To increase the price of all products by 10. [2]

- 7 (a) Write two major Projects of E-Governance in India? [1]  
(b) How is e-learning beneficial to students? [2]  
(c) Ashok works for a Hotel. He wants to create controls on a form in NetBeans for the following function. Choose appropriate controls from TextField, Label , RadioButton , CheckBox , List , ComboBox , Button and write in the third column.

[2]

| S.No. | Controls use to      | Control |
|-------|----------------------|---------|
| 1     | Select room type     |         |
| 2     | Enter customers name |         |
| 3     | Enter arrival date   |         |
| 4     | To book rook         |         |