DEHRADUN PUBLIC SCHOOL
ASSIGNMENT (2019-20)
SUBJECT-INFORMATICS PRACTICES (265)
CLASS - XII

Chapter 1. Computer Networking

Q1. How is firewall useful in ensuring network security? [CBSE 2016]
Q2. How is it easier to diagnose fault in Star topology than in bus topology? Write any two advantages of star topology over bus topology. [CBSE 2017,2018]
Q3. Mr. Ravi, an IT Help Desk executive needs to remotely login a customer’s PC to provide him technical support. Suggest a remote access software to him. [CBSE 2018]
Q4. Write the purpose of the following devices:
   a. Network Interface Card
   b. Repeater
   [CBSE 2017]
Q5. What do you understand by Domain Name Resolution? [CBSE 2015]
Q6. Discuss the significance of Bluetooth technology. [CBSE 2018]
Q7. What is the purpose of logical address of a computer? [CBSE 2017]
Q8. Expand the following terms:
   a. GSM
   b. IP
   [CBSE 2018]
Q9. Write the functions of the following pieces of network hardware:
   a. Modem
   b. Switch
   [CBSE 2019]
Q10. Write two ways used to make sure that the data is secure and is available only to the intended and authorized persons in a network. [CBSE 2019]

Chapter 2. Open Source Concepts

Q11. What is the objective behind developing UNICODE? [CBSE 2014]
Q12. Distinguish between Phonetic text entry and Keymap based text entry. [CBSE 2015]
Q13. What is the full form of the following:
   i) ODF ii) HTTP iii) OSI iv) FLOSS
   [CBSE 2013,14]
Q14. Explain in brief any one freedom offered by Open Source Software. Write two examples each of software in the following categories:
   i) Open Source Operating System
   ii) Open Source Web Browser
   iii) An Open Source Office Suite
   [CBSE 2018,19]
Q15. Write any two advantages of Open Source Software over Proprietary Software. [CBSE 2018]

Chapter 3. Java GUI Programming Revision Tour -I

Q16. In a switch statement, what is the purpose of ‘default’ section? [CBSE 2015]
Q17. Re-write the following if-else segment using switch case statement:

   if( code=='A')
   allowance =3500;
   else if( code=='B')
   allowance =3200;
   else
   allowance =2000;

   [CBSE 2018]
Q18. What will be the value of C after the execution of the following code:

   int P;
   int R=8;
   int oddNum;
   int C=0;
   for(P=1; P<R; P=P+3)
   {
       oddNum = P%2;
       if (oddNum==1)
       {

   [CBSE 2017]
C=C+1;

Q19. Write java code (statements) to declare Y as integer variable. Then, assign the value 30 to a variable Y. Increase the value of Y by 5 and store the increased value in Z. [CBSE 2016]

Q20. What happens if break statement is omitted with a case a in a switch statement? [CBSE 2019]

Q21. What is the purpose of parseInt() method. [CBSE 2016]

Q22. Find the output of the following Java code snippet after execution of each java statement labelled as Line 1, Line 2, Line 3, Line 4: [CBSE 2018]

String userid="INDIA",pwd="";
pwd=userid.substring(0,2); //Line 1
int L=userid.length(); //Line 2
pwd=pwd.toLowerCase(); //Line 3
pwd=pwd.concat(""+L); //Line

Q23. What will be displayed in jTextField1 and jTextField2 after the execution of the following code? [CBSE 2017]

int ndigits=0;
int N=35;
while (N>12) {  
    ndigits=ndigits+1;
    N=N-10;
}
jTextField1.setText(""+ndigits);
jTextField2.setText(""+N);

Q24. Rewrite the following code using for loop: [CBSE 2018]

int attempt=0;
while(attempt<=3)
{
    String login=jTextField1.getText();
    String pwd=jTextField2.getText();
    if(login.equals("XII") && pwd.equals("IP"))
    {
        jOptionPane1.showMessageDialog(null, "Welcome");
        break;
    }
    else
        jOptionPane1.showMessageDialog(null, "Pl try again");
    attempt++;
}

Q25. Write the output displayed in jTextField1 and jTextField2 when the following code is executed: [CBSE 2019]

char code;
int z;
z=0;
code='w';
switch(code)
{
    case 'w' : z=z+1;
    case 'r' : z=z+2;
                break;
    case 's' : z=z+3;
                break;
    default: z=z+4;
}
jTextField1.setText(""+z);
jTextField2.setText(""+t);

Q26. The following code has error(s). Rewrite the correct code underlining all the corrections made:
```java
int n=5, int i=1, f=1;
do {
f=f*i;
i++;
while(i<=n)}
jTextField1.setText(""+f);
```

**Q27.** What will be displayed in jTextField1 and jTextField2 when the following code is executed? [CBSE 2019]
```java
int x, y, z, t;
x=3, y=8;
z=x+y/8;
t=z++;
jTextField1.setText(""+z);
jTextField2.setText(""+t);
```

**Q28.** How many times will the following loop execute? [CBSE 2013]
```java
int k=7;
int i=-2;
do {
i+=2;
k=k-1;
}while(i<=k);
```

**Q29.** How many times will the following loops execute? Which one of them is Entry Controlled and which one is Exit Controlled? [CBSE 2013]

<table>
<thead>
<tr>
<th>Loop1</th>
<th>Loop2</th>
</tr>
</thead>
<tbody>
<tr>
<td>int j=8, total=0;</td>
<td>int j=8, total=0;</td>
</tr>
<tr>
<td>while(j&gt;1)</td>
<td>do</td>
</tr>
<tr>
<td>{ total+=j;</td>
<td>{ total+=j;</td>
</tr>
<tr>
<td>j-=2;</td>
<td>j-=2;</td>
</tr>
<tr>
<td>}</td>
<td>}</td>
</tr>
<tr>
<td></td>
<td>while(j&gt;1);</td>
</tr>
</tbody>
</table>

**Chapter 4. Java GUI Programming Revision Tour -II**

**Q30.** Distinguish between Combo box and List box. When would you prefer using them over Radio button and Checkbox? [CBSE 2018]

**Q31.** What is the difference between jTextField and jPasswordField components? [CBSE 2015]

**Q32.** Satyam is designing a frame in Netbeans containing list box. Help him in writing suitable Java statement to extract selected item from a given listbox named “jList1.”. [CBSE 2016]

**Q33.** Write a statement in Java to declare a String type variable with a name City. [CBSE 2014]

**Q34.** What will be the content of the jTextArea1 after executing the following code: for(int i=5; i<=25; i+=5)
```java
{ jTextArea1.setText (jTextArea1.getText () + " " + Integer.toString(2*i));
}
```[CBSE 2014]

**Q35.** Aditya is a programmer at Edudel enterprises. He created the following GUI in NetBeans. Help him to write code in java for the following: [CBSE 2013]

a) To calculate Total marks obtained and display in TextField on the click of command
button “Get Total”. Assume there are three subjects.
b) To calculate Grade obtained and display in TextField on the click of command button “Get Grade”. Criteria for Grade calculation is given below:

<table>
<thead>
<tr>
<th>Marks</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 80</td>
<td>A</td>
</tr>
<tr>
<td>Above 65 and &lt;=80</td>
<td>B</td>
</tr>
<tr>
<td>Above 50 and &lt;=65</td>
<td>C</td>
</tr>
<tr>
<td>&lt;=50</td>
<td>D</td>
</tr>
</tbody>
</table>

c) To stop execution and exit from the application on the click of command button “Exit”.

Chapter 5. Java GUI Programming Revision Tour -III

Q36. Define Object Oriented Programming. [CBSE 2014]
Q37. Define Class with reference to Object Oriented Programming.
Q38. Consider the following java class:

```java
public class Date {
    public int day;
    public int month;
    public int year;
    public Date(int d,int m,int y) {
        day = d; month = m; year = y;
    }
}
```

i) How many instance variables does it have?
ii) Create a Date Object corresponding to 9th June 1991.

Chapter 6. Commonly Used Libraries

Q39. What will be the content of F1 and F2 after the code is executed: [CBSE 2014]

```java
String F1="Hello", String F2="Friend";
F1=F1.concat (F2);
```

Q40. Predict the output:

```java
string Subject = “Informatics Practices”;
jTextField1.setText (Subject. Length ( ) +10 + “”);
```

Chapter 7. Concept of Inheritance

Q41. Explain the concept of Inheritance with the help of example. [CBSE 2014]
Q42. Illustrate the concept of function overloading with the help of an example.

Chapter 8. Database Connectivity to MySQL

Q43. Briefly explain the concept of ResultSet method. Also, discuss the next ( ) and first ( ) methods.
Q44. What is the difference between executeQuery( ) and executeUpdate( ) methods?
Q45. What is Connection?
Q46. Explain ODBC and JDBC.
Q47. Name two commonly used drivers used for database connectivity from Java application.

Chapter 9. Web Application Development

Q48. What is a protocol? How do protocols affect Internet?
Q49. Differentiate between a web browser and web server.
Q50. In the URL, http://www.mycorp.com/pr/master.htm, what is the http component?
Q51. What is a URL? What are its components? Exemplify.

Chapter 10. HTML-I: Basic HTML Elements

Q52. Write the purpose of HTML. How is <P> tag different from <BR> tag in HTML? [CBSE 2018]
Q53. After typing the HTML code using a text editor, how do you see it would look as a webpage?  

Q54. What is the use of <FONT> tag in HTML code? Write any two options used with this tag.  

Q55. Identify the error(s) in the following HTML code. Also write the correct code.  

```html
<BODY Color ="Red" background ="school.jpg">
```

Q56. What is the use of IMG tag? Name one attribute of it.  

Q57. Differentiate between <UL> and <OL> tag.  

Q58. Write the output of the following HTML code:  

```html
<ol start="4">  
  <li>Bake the mixture in oven for an hour</li>  
  <li>Remove from oven</li>  
  <li>allow the mixture to stand for ten minutes</li>  
  <li>Serve</li>  
</ol>
```

Q59. Write HTML tags to do the following:  

a. Inserting a horizontal line in a webpage.  

b. Inserting a line break.  

**Chapter 11. HTML-II: Lists, Tables and Forms**  

Q60. Write the name of the HTML tag used to include numbered list in a HTML Web page.  

Q61. Which HTML tags are used for making a table and adding rows in a HTML document?  

Q62. What is wrong with the following coding:  

```html
<OL type="a" start="d">
```  

Q63. Differentiate between ordered and unordered list.  

**Chapter 12. XML – eXtensible Markup Language**  

Q64. Differentiate between XML and HTML.  

Q65. “With XML there are no predefined tags”. Explain in brief with the help of an example.  

Q66. Consider the following XML document. Check this for well-formedness.  

```xml
<name> Jeevan</name>  
<name> Raunak</name>  
<name> Vasu</name>
```

Q67. Expand XML. For what purpose is XML used?  

**Chapter 13. MySQL Revision Tour**  

Q68. Write MySQL command to open an existing database.  

Q69. Ms. Archana, a class XI student has just started learning MySQL. Help her in understanding the basic difference between Alter and Update command with suitable example. Also suggest her suitable command for the following purpose:  

i. To display the list of the databases already existing in MySQL.  

ii. To use the database named City.  

iii. To remove the pre-existing database named Clients.  

iv. To remove all the records of the table named “Club” at one go along with its structure permanently.  

Q70. What is MYSQL used for? Abhay wants to start learning MYSQL from where can he obtain the MYSQL software.  

Q71. Consider the table:  

<table>
<thead>
<tr>
<th>CompanyCode</th>
<th>Donations</th>
</tr>
</thead>
<tbody>
<tr>
<td>C101</td>
<td>13000</td>
</tr>
<tr>
<td>C102</td>
<td>NULL</td>
</tr>
<tr>
<td>C104</td>
<td>7000</td>
</tr>
<tr>
<td>C105</td>
<td>4000</td>
</tr>
</tbody>
</table>

What output will be displayed by the following SQL statement?  

(i) SELECT AVG(Donations) FROM Company;
Q72. Write two examples of DBMS software.

Q73. 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):

(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?

Q74. Ms. Rajshri is the class Teacher of class XII. She wants to create a table named ‘student’ to store marks in different subjects of her class. Identify any 4 columns for the table along with their suitable data types.

Q75. Write SQL commands for the following statements (i) to (viii) and output for SQL queries (ix) and (x) on the basis of given table:

<table>
<thead>
<tr>
<th>ItemCode</th>
<th>Item</th>
<th>DatePurchase</th>
<th>UnitPrice</th>
<th>Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Frock</td>
<td>2016-01-23</td>
<td>700</td>
<td>10</td>
</tr>
<tr>
<td>102</td>
<td>Cot</td>
<td>2015-09-23</td>
<td>5000</td>
<td>25</td>
</tr>
<tr>
<td>103</td>
<td>Soft Toy</td>
<td>2016-06-17</td>
<td>800</td>
<td>10</td>
</tr>
<tr>
<td>104</td>
<td>Baby Socks</td>
<td>2014-10-16</td>
<td>100</td>
<td>7</td>
</tr>
<tr>
<td>105</td>
<td>Baby Suit</td>
<td>2015-09-20</td>
<td>500</td>
<td>5</td>
</tr>
</tbody>
</table>

(i) Write a query to display the details about the Cot.
(ii) Write a query to display the names of items and their unit price that have unit price less than 800 and discount more than 5%.
(iii) Write a query to display the names of items and their date of purchase that were purchased after 31st December, 2015.
(iv) Write a query to display the number of items that have more than 10% as discount.
(v) Write a query to display the item code and unit price in descending order of unit price.
(vi) Write a query to increase the unit price of each item by 10% of their unit price.
(vii) Write a query to display the names of items that have ‘Baby’ anywhere in their item names.
(viii) Write a query to display the highest unit price of items.
(ix) SELECT ITEM, COUNT(*) FROM INFANT GROUP BY ITEM HAVING COUNT(*)>1;
(x) SELECT MAX(UNIT PRICE) FROM INFANT WHERE DISCOUNT>5;

Q76. Consider the following table:

<table>
<thead>
<tr>
<th>Admin</th>
<th>Name</th>
<th>Stream</th>
<th>Optional</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001</td>
<td>Shrishti</td>
<td>Science</td>
<td>CS</td>
<td>90</td>
</tr>
<tr>
<td>1002</td>
<td>Ashi</td>
<td>Humanities</td>
<td>Maths</td>
<td>80</td>
</tr>
<tr>
<td>1003</td>
<td>Aditya</td>
<td>Commerce</td>
<td>IP</td>
<td>60</td>
</tr>
<tr>
<td>1004</td>
<td>Ritu Raj</td>
<td>Science</td>
<td>IP</td>
<td>65</td>
</tr>
<tr>
<td>1005</td>
<td>Sonali</td>
<td>Commerce</td>
<td>Maths</td>
<td>60</td>
</tr>
<tr>
<td>1006</td>
<td>Saumya</td>
<td>Science</td>
<td>IP</td>
<td>65</td>
</tr>
<tr>
<td>1007</td>
<td>Ashutosh</td>
<td>Science</td>
<td>IP</td>
<td>95</td>
</tr>
<tr>
<td>1008</td>
<td>Prashant</td>
<td>Commerce</td>
<td>P.ED</td>
<td>80</td>
</tr>
<tr>
<td>1009</td>
<td>Aman</td>
<td>Commerce</td>
<td>IP</td>
<td>70</td>
</tr>
<tr>
<td>1010</td>
<td>Rishabh</td>
<td>Humanities</td>
<td>P.ED</td>
<td>85</td>
</tr>
</tbody>
</table>

Write commands in SQL for (i) to (v):

(i) To display the details of all those students who have IP as their optional subject.
(ii) To display name, stream and optional of all those students whose name starts with "A".
(iii) To give an increase of 3 in the average of all those students of humanities section who have Maths as their optional subject.
(iv) To display a name list of all those students who have average more than 75.
(v) To display names of Students whose names are four characters long.
Chapter 14. Database Transactions

Q77. What do you mean by committing a transaction? [CBSE 2012]

Q78. 'Class' table has columns RNO and NAME. The following statements are executed:
SET AUTOCOMMIT=0;
INSERT INTO CLASS VALUES(5,'Rajiv');
COMMIT;
UPDATE CLASS SET NAME= 'Rajeev' WHERE ID=5;
SAVEPOINT A;
INSERT INTO CLASS VALUES(6,'Chris');
SAVEPOINT B;
INSERT INTO CLASS VALUES(7,'Feroze');
SELECT * FROM CLASS;
ROLLBACK TO B;
SELECT * FROM CLASS;
What will be the output of both the above given SELECT statements? [CBSE 2018]

Chapter 15. More on SQL—Grouping Records and Table Joins

Q79. Mr. Shankar created a table VEHICLE with 3 rows and 4 columns. He added 1 more rows to it and deleted one column. What is the Cardinality and Degree of the Table VEHICLE?

Q80. Consider the tables Employee and Project given below:

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>Designation</th>
<th>P_Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rahul</td>
<td>M</td>
<td>Programmer</td>
<td>2</td>
</tr>
<tr>
<td>Sanjana</td>
<td>F</td>
<td>Analyst</td>
<td>1</td>
</tr>
<tr>
<td>Radhika</td>
<td>F</td>
<td>Programmer</td>
<td>1</td>
</tr>
<tr>
<td>Anuradha</td>
<td>F</td>
<td>Analyst</td>
<td>3</td>
</tr>
<tr>
<td>Harish</td>
<td>M</td>
<td>Analyst</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P_code</th>
<th>P_Name</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Financial Accounting System</td>
<td>Large</td>
</tr>
<tr>
<td>2</td>
<td>Library System</td>
<td>Medium</td>
</tr>
<tr>
<td>3</td>
<td>Inventory Control System</td>
<td>Small</td>
</tr>
</tbody>
</table>

With reference to these tables, write commands in SQL for (i) and (ii) and output for (iii) and answer for (iv).

(i) Display the Name and Designation of the employees who have taken under the Library System Project.
(ii) Display the Number of Employees involved in Financial Accounting System.
(iii) Select Name, Gender, Designation from Employee, Project where Employee.P_Code = Project.P_Code and Size = “small”;
(iv) How many rows will be there in Cartesian product of the two tables in consideration here?

Q81. In a Database there are two tables:

<table>
<thead>
<tr>
<th>Item_Code</th>
<th>Item_Name</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>Refrigerator</td>
<td>90,000</td>
</tr>
<tr>
<td>222</td>
<td>Television</td>
<td>75,000</td>
</tr>
<tr>
<td>333</td>
<td>Computer</td>
<td>42,000</td>
</tr>
<tr>
<td>444</td>
<td>Washing Machine</td>
<td>27,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item_Code</th>
<th>Brand_Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>LG</td>
</tr>
<tr>
<td>222</td>
<td>Sony</td>
</tr>
<tr>
<td>333</td>
<td>HCL</td>
</tr>
<tr>
<td>444</td>
<td>IFB</td>
</tr>
</tbody>
</table>

Write MySql queries for the following:

(i) To display Item_Code, Item_Name and corresponding Brand_Name of those Items, whose Price is between 20000 and 40000 (both values inclusive)
(ii) To display Item_Code, Price and Brand_Name of the item, which has Item_name as “Computer”.
(iii) To increase the price of all the Items by 10% that have price greater than 50,000.

Q82. Name two Group (Aggregate) Functions of SQL [CBSE 2016]

Q83. Consider the table below:

<table>
<thead>
<tr>
<th>EMPID</th>
<th>DEPARTMENT</th>
<th>SALARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>E101</td>
<td>PERSONNEL</td>
<td>60000</td>
</tr>
<tr>
<td>E102</td>
<td>ACCOUNTS</td>
<td>65000</td>
</tr>
<tr>
<td>E103</td>
<td>MARKETING</td>
<td>40000</td>
</tr>
<tr>
<td>E104</td>
<td>PERSONNEL</td>
<td>62000</td>
</tr>
</tbody>
</table>
Identify error(s) in the following SQL statement. Rewrite the correct SQL statement.

Q84. Name SQL Single Row functions (for each) that:

(i) Returns a number.
(ii) Returns lowercase letters.
(iii) Return names of days. For example: “Monday”, “Tuesday”.
(iv) Returns weekday number. For example: 1 for Sunday, 2 for Monday, 3 for Tuesday.

Chapter 16. Tables and Integrity Constraints

Q85. Mr. Sondhi created two tables with DEPTNO as primary key in Table1 and foreign key in Table2. While inserting a row in Table2. Mr. Sondhi is not able to enter a value in the column DEPTNO. What could be the possible reason for it?

Q86. Write the SQL command to create the following table as per the given specifications:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Size</th>
<th>Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pno</td>
<td>Integer</td>
<td>4</td>
<td>Primary Key</td>
</tr>
<tr>
<td>Name</td>
<td>Varchar</td>
<td>20</td>
<td>Unique</td>
</tr>
<tr>
<td>Age</td>
<td>Integer</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Varchar</td>
<td>15</td>
<td>Default “OPD”</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charges</td>
<td>Decimal</td>
<td>7,2</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Gender</td>
<td>Char</td>
<td>1</td>
<td>Default “M”</td>
</tr>
</tbody>
</table>

Q87. Write SQL command to add a new column for the table given above with the following specification:

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor_name</td>
<td>Varchar</td>
<td>20</td>
</tr>
</tbody>
</table>

Chapter 17. IT Applications

Q88. Write two advantages of e-Business sites. How do online retailers usually offer customers a wider range of products at prices that are lesser than those of traditional stores?

Q89. How does e-governance help in building trust between the Government and citizens? List two advantages of e-governance to a disabled person. How does e-governance help in increasing Accountability (answerability of the government to the people)?

Q90. Ms. Deepika of ABC School is creating a form for a Summer Camp Application. Help her to choose the most appropriate controls from Textfield, Label, RadioButton, CheckBox, ListBox, ComboBox, Command Button for the following entries:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Let the user enter Name of the student</td>
</tr>
<tr>
<td>2</td>
<td>Let the user enter Mobile Number of student</td>
</tr>
<tr>
<td>3</td>
<td>Let the user choose one TSHIRT size out of the categories: XL/L/M/S</td>
</tr>
<tr>
<td>4</td>
<td>Let the user select Activities out of Rock Climbing / Mountain Biking / Zip Lining / Night Hike. More than one activity may be chosen.</td>
</tr>
</tbody>
</table>