

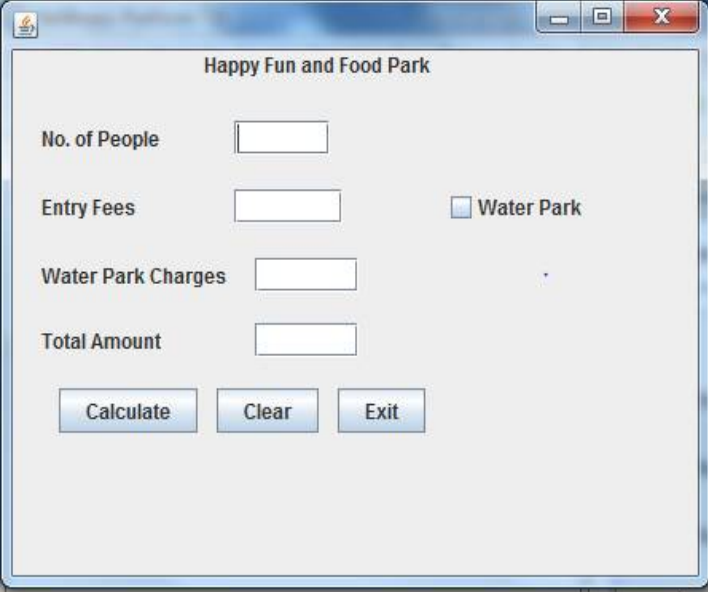
XII INFORMATICS PRACTICES

CBSE Board – 2014

1(a)	Why is a switch called an intelligent hub?	1
Ans.	Function of switch is similar to hub that is to connect different types of devices and computers in network but switch have some advance feature like –monitor and manage network traffic, they also check and monitor the passing IP addresses from them.	
(b)	What was the objective behind developing UNICODE?	1
Ans.	Unicode provides a unique number for every character, no matter what the platform, n matter what the program, no matter what the language.	
(c)	Expand the following terms: (i) OSS (ii) ODF	1
Ans.	(i) OSS – Open Source Software (ii) ODF – Open Document file Format	
(d)	What is the use of Repeater in a Network?	1
Ans.	Repeaters are used in transmission systems to regenerate analog or digital signals distorted by transmission loss.	
(e)	Identify the following device: (i) A device that is used to connect different types of networks. It performs the necessary translation so that connected networks can communicate properly. (ii) A device that converts data from digital bit stream into an analog signal and vice versa.	2
Ans.	1. Gateway 2. Modem	
(f)	Write one advantage and one disadvantage of using Optical fiber cable.	2
Ans.	<u>Advantages :</u> ✓ Secure transmission. ✓ Very high transmission capacity. ✓ Used for broadband transmission and possible to mix data transmission channels with cannels for telescope, TV etc. <u>Disadvantages :</u> ✓ Expensive. . ✓ Hard to install. ✓ Noise exception. ✓ Connection loss.	
(g)	Distinguish between Open Source Software and Proprietary Software.	2
Ans.	Source code of Open Source software is available to the user and therefore the user can customize it according to his/her own requirements and capability. Whereas the source code of proprietary software is available only with its vendor/developer. There- fore, it cannot be customized by the user as per his/her requirements.	
2(a)	Is a string containing a single character same as a char?	1
Ans.	No, string is containing multiple characters.	
(b)	Write a statement in Java to declare a String type variable with a name City.	1
Ans.	String city="Ahemdabad";	
(c)	Distinguish between '/' and '%' operator.	1
Ans.	'/' is used for divide the operands whereas '%' is used for computes the reminder of dividing operands.	
(d)	Which tag/attributes of HTML are used to (i) Insert a picture in the web page. (ii) Insert an empty line in the web page.	1
Ans.	 	

(e)	<p>What will be the values of variables <code>agg</code> and <code>agg1</code> after the execution of the following loops?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Loop 1 <pre>int a=9, agg=9; while (a>10) { agg+=a; a-=2; }</pre> </td> <td style="width: 50%; padding: 5px;"> Loop 2 <pre>int b=9, agg1=0; do { agg1+=b; b-=2; } while (b>10);</pre> </td> </tr> </table>	Loop 1 <pre>int a=9, agg=9; while (a>10) { agg+=a; a-=2; }</pre>	Loop 2 <pre>int b=9, agg1=0; do { agg1+=b; b-=2; } while (b>10);</pre>	2
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Ans.	<p>Agg=9 Agg1=9</p>			
(f)	<p>What will be displayed in <code>TextArea1</code> after the execution of the following loop?</p> <pre>for(int i=5; i>=2;i--) JTextArea1.setText(JTextArea1.getText()+" "+Integer.toString(i*i));</pre>	2		
Ans.	<p>25 16 9 4</p>			
(g)	<p>Give two attributes of <code>Table</code> element of HTML.</p>	2		
Ans.	<p>BORDER, CELLPADDING, CELLSPACING, WIDTH, ALIGN, FRAME</p>			
3(a)	<p>Distinguish between <code>ALTER TABLE</code> and <code>UPDATE</code> commands of MySQL.</p>	1		
Ans.	<p>ALTER is a DDL (Data Definition Language) statement. Whereas UPDATE is a DML (Data Manipulation Language) statement. One is used to update the structure of the table (add/remove field/index etc). Whereas UPDATE is used to update data.</p>			
(b)	<p>Mention two categories in which MySQL commands are broadly classified.</p>	1		
Ans.	<p>DDL – Data Definition Language Commands. DML – Data Manipulation Language Commands.</p>			
(c)	<p>Give two characteristics of Primary Key.</p>	1		
Ans.	<p>Stable: does not change over time Factless: no hidden information Definitive: value always exists Unique: absolutely no duplicates</p>			
(d)	<p>A table <code>FUNFOOD</code> has 13 rows and 17 columns. What is the cardinality and degree of this table?</p>	1		
Ans.	<p>Cardinality – 13 Degree – 17</p>			
(e)	<p>A numeric column <code>MONEY</code> contains 34567.7896. write a command to truncate <code>MONEY</code></p> <p>(i) Up to 2 decimal places. (i.e. expected result 34567.78) (ii) Up to -3 places. (i.e. expected result 34000)</p>	2		
Ans.	<p>(i) SELECT TRUNCATE(34567.7823,2); (ii) SELECT TRUNCATE(34567.7823,-3);</p>			
(f)	<p>What happens when “<code>ROLLBACK</code>” command is issued in a transaction process?</p>	2		
Ans.	<p>A rollback is an explicit command to the database to cancel the results of operations performed by a statement. This event indicates that a transaction ended unsuccessfully.</p>			
(g)	<p>Shanya Khanna is using a table <code>Employee</code>. It has the following columns.</p> <p>Admno, Name, Agg, Stream [coloumn <code>Agg</code> contains Aggregate marks] She wants to display highest <code>Agg</code> obtained in each <code>Stream</code>. She wrote the following statement: SELECT <code>Stream</code>, <code>MAX</code>(<code>Agg</code>) FROM <code>Employee</code>; But she did not get the desired result. Rewrite the above query with necessary changes to help her get the desired output.</p>	2		
Ans.	<p>SELECT <code>Stream</code>, <code>MAX</code>(<code>Agg</code>) FROM <code>Employee</code> GROPU BY <code>Stream</code>;</p>			
4(a)	<p>Define Object Oriented Programming.</p>	2		

Ans.	Object-Oriented Programming refers to a programming methodology based on objects, instead of just functions and procedures. These objects are organized into classes, which allow individual objects to be group together. Object Oriented Programming consist of 4 fundamental concepts – <ol style="list-style-type: none"> 1. Data Encapsulation 2. Inheritance 3. Polymorphism 4. Data abstraction 	
(b)	<pre>int option=Integer.parseInt(jTextField1.getText()); if (option==1) jTextField2.setText ("Regular employee"); else if (option==2) jTextField2.setText("on probation"); else if (option==3) jTextField2.setText("visiting faculty"); else if (option==4) jTextField2.setText("on contract"); else jTextField2.setText("Invalid option!");</pre>	2
Ans.	<pre>switch(option) { case 1: jTextField2.setText ("Regular employee"); break; case 2: jTextField2.setText("on probation"); break; case 3: jTextField2.setText("visiting faculty"); break; case 4: jTextField2.setText("on contract"); break; default: jTextField2.setText("Invalid option!"); }</pre>	
(c)	What will be the value X1 after execution of the following code: <pre>String x1="Spread", x2="PEACE"; x1=x2.concat(x1);</pre>	1
Ans.	PEACESpread	
(d)	Write Java statement to make a jTextField1.disabled.	1
Ans.	jTextField1.setEnabled(false);	
(e)	What will be displayed in jTextFieldArea1 after the execution of the following code: <pre>int G=1; do { jTextFieldArea1.setText(Integer.toString(G++)); G=G+1; }while(G<=5);</pre>	2
Ans.	5	
(f)	Give the output of the following Java code: <pre>String name="Chennai Express"; int TM=name.length(), TN; TN=80-TM; jTextField2.setText (Integer.toString (TM)); jTextField3.setText (Integer.toString (TN));</pre>	2

Ans.	jTextField2=15 jTextField3=65	
(g)	<p>Mr. Rangaswami works at a Recreation Park as a system analyst. He has created the following GUI. when a group arrives at the Recreation Park, the number of people in the group and whether the group wants to enjoy the Water park or not is entered. Entry fees is Rs. 500 per person. The person can choose to play at Water Park by selecting the checkbox. Rides of Water Park will cost Rs. 250 extra per person.</p>  <p>Help him to write code for the following:</p> <p>(i) On the click of command button 'Calculate', textfield for 'Entry Fees' should display Entry Fees per person x Number of people. If 'Water park' checkbox is selected, textfield for 'Water Park Charges' should display Water Park Charges per person x Number of people. Textfield for 'Total Amount' should display sum of Entry Fees and Water Park Charges for all the people in the group. (3)</p> <p>(ii) Write Java code to clear all Textboxes on the click of 'Clear' button. (1)</p> <p>(iii) Write Java code to close the application on the click of 'Exit' button. (1)</p>	5
Ans.	<pre> (i) //calculate button int p=Integer.parseInt(jTextField1.getText()); int a=Integer.parseInt(jTextField2.getText()); int e=Integer.parseInt(jTextField3.getText()); int person_charges=p*a; int water_charges=p*e; int total=person_charges+water_charges; jTextField4.setText(Integer.toString(total)); //check box if(jCheckBox1.isSelected()==true) { jTextField3.setText("250"); } (ii) //clear jTextField1.setText(""); jTextField2.setText(""); jTextField3.setText(""); jTextField4.setText(""); jCheckBox1.setSelected(false); (iii) //Exit </pre>	

	System.exit(0);																															
5(a)	What is the difference between “%” and “_” wild card characters with reference to LIKE clause of MySQL?	2																														
Ans.	The ‘%’ character matches any substring whereas the ‘_’ character matches any character.																															
(b)	Name a function of MySQL used to give the first occurrence of a string2 in string1.	1																														
Ans.	Instr()																															
(c)	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																														
	<p>Table : EXAM</p> <table border="1"> <thead> <tr> <th>Adno</th> <th>SName</th> <th>Percentage</th> <th>Clsection</th> <th>Stream</th> </tr> </thead> <tbody> <tr> <td>R001</td> <td>Sushant</td> <td>90.2</td> <td>12A</td> <td>Science</td> </tr> <tr> <td>R002</td> <td>Vaidyanath</td> <td>80.5</td> <td>12B</td> <td>Humanities</td> </tr> <tr> <td>R003</td> <td>Miara</td> <td>68.9</td> <td>12B</td> <td>Science</td> </tr> <tr> <td>R004</td> <td>Niara</td> <td>96.0</td> <td>12A</td> <td>Commerce</td> </tr> <tr> <td>R005</td> <td>Shinjini</td> <td>88.9</td> <td>12D</td> <td>Commerce</td> </tr> </tbody> </table> <p>(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”;</p>	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	
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Ans.	<p>(i) SELECT * FROM EXAM WHERE Stream LIKE ‘Humanities’ ORDER BY Percentage DESC; (ii) SELECT Adno, Sname, Percentage, Stream FROM EXAM WHERE Sname LIKE ‘_____’; (iii) ALTER TABLE EXAM ADD (Bus_Fees DECIMAL(8, 2)); (iv) UPDATE EXAM SET PERCENTAGE=Percentage+(Percentage*2/100) WHERE Stream LIKE ‘Humanities’ (v) <u>COUNT(*)</u> 5</p> <p>(vi) <u>Sname</u> <u>Percentage</u> Niara 96.0</p> <p>(vii) <u>ROUND(Percentage,0)</u> 89</p>																															
6(a)	Write MySQL command to create the table “Toyz” with the following structure and constraint.	2																														
	<p>Table : TOYZ</p> <table border="1"> <thead> <tr> <th>Column Name</th> <th>Data Type (size)</th> <th>Constraint</th> </tr> </thead> <tbody> <tr> <td>Toy no</td> <td>Int (10)</td> <td>Primary Key</td> </tr> <tr> <td>Toy_name</td> <td>Varchar (20)</td> <td></td> </tr> <tr> <td>Type</td> <td>Char (10)</td> <td></td> </tr> <tr> <td>Price</td> <td>Decimal (8, 2)</td> <td></td> </tr> <tr> <td>Colour</td> <td>Varchar (15)</td> <td></td> </tr> </tbody> </table>	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)														
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Ans.	CREATE TABLE TOYZ(TOY_NO INTEGER(10) PRIMARY KEY, TOY_NAME VARCHAR(20), TYPE CHAR(10), PRICE DECIMAL(8, 2), COLOUR VARCHAR(15));																															
(b)	In a Database – SAMS and VENDOR are two tables with the following information. Write MySQL queries for (i) to (iii), based on tables SAMS and VENDOR:	6																														

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

- (i) To display ICode, IName and VName of all the vendors, who manufacture "Refrigerator". (2)
 (ii) To display IName, ICode, VName and Price of all the products whose price is more than 20000. (2)
 (iii) To display vendor names and names of all items manufactured by vendor whose code is "P03". (2)

Ans. (i) SELECT S.ICODE, S.INAME, V.VNAME FROM SAMS S, VENDOR V WHERE S.VCODE=V.VCODE AND S.INAME="Refrigerator";
 (ii) SELECT S.INAME,S.ICODE, V.VNAME, S.PRICE FROM SAMS S, VENDOR V WHERE S.VCODE=V.VCODE AND S.PRICE>20000;
 (iii) SELECT V.VNAME, S.INAME FROM SAMS S, VENDOR V WHERE S.VCODE=V.VCODE AND V.VCODE="P03";

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

Ans. Primary Key –ICode
Foreign Key –Vcode

7(a) Define e-Business. Name one popularly used e-Business website. **1**

Ans. E-business refers to any form of transaction (exchange) that uses an electronic medium to facilitate the transaction.
 www.amazon.com

(b) How does e-governance help in reducing corruption? Write two points. **2**

Ans. ✓ By MCA-21 E-governance web site general public can get information regarding the registered companies due this facility public can identify fraud companies.
 ✓ Passport details of passport holders are available on passport.gov.in web site by which fake passport can be identified easily and passport department can control the crime using passports .

(c) Suruchi works for a Shopping Mart. She wants to create controls on a form for the following operations: Choose most appropriate controls out of Text box, Label, Radio Button, List box, Combo box, Check box and Command button. **2**

SNo	Function
1	Enter the Item code
2	Select Item Size (from a list of sizes)
3	Enter Quantity
4	Submit the Form

Ans.	SNo	Function	Control
	1	Enter the Item code	Text Box
	2	Select Item Size (from a list of sizes)	Combo Box
	3	Enter Quantity	Text Box
	4	Submit the Form	Command button.