

Strictly Confidential: (For Internal and Restricted use only)
Senior School Certificate Examination
March 2019
Marking Scheme - INFORMATICS PRACTICES (SUBJECT CODE 065)
(SERIES: BVM PAPER CODE - 90)

General Instructions:

1. You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and the teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully. **Evaluation is a 10 -12 days mission for all of us. Hence, it is necessary that you put in your best efforts in this process.**
2. Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. **However, while evaluating, answers which are based on the latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and marks be awarded to them.**
3. The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.
4. If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totaled up and written in the left-hand margin and encircled.
5. If a question does not have any parts, marks must be awarded in the left hand margin and encircled.
6. If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out.
7. No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
8. A full scale of marks 0-70 has to be used. Please do not hesitate to award full marks if the answer deserves it.
9. Every examiner has to necessarily do evaluation work for full working hours i.e. 8 hours every day and evaluate 25 answer books per day.
10. Ensure that you do not make the following common types of errors committed by the Examiner in the past:-
 - a. Leaving the answer or part thereof unassessed in an answer book.
 - b. Giving more marks for an answer than assigned to it.
 - c. Wrong transfer of marks from the inside pages of the answer book to the title page.
 - d. Wrong question wise totaling on the title page.
 - e. Wrong totaling of marks of the two columns on the title page.
 - f. Wrong grand total.
 - g. Marks in words and figures not tallying.
 - h. Wrong transfer of marks from the answer book to online award list.
 - i. Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.)
 - j. Half or a part of answer marked correct and the rest as wrong, but no marks awarded.
11. While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as (X) and awarded zero (0) Marks.
12. Any unassessed portion, non-carrying over of marks to the title page, or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.
13. The Examiners should acquaint themselves with the guidelines given in the Guidelines for spot Evaluation before starting the actual evaluation.

14. Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words.
15. The Board permits candidates to obtain a photocopy of the Answer Book on request in an RTI application and also separately as a part of the re-evaluation process on payment of the processing charges.

Specific Instructions:

[In Java]

- Ignore case sensitivity for variable / identifiers

[In SQL related questions]

- Single quote ‘ ’ as well as double quote “ ” should be accepted for text/character/date entries. For example: “AMAR” and ‘amar’ both are acceptable.
- Date entries should be accepted in all formats. For example: ‘YYYY-MM-DD’, ‘YY-MM-DD’, ‘DD-Mon-YY’, “DD/MM/YY”, ‘DD/MM/YY’, “MM/DD/YY”, ‘MM/DD/YY’ and {MM/DD/YY} are correct.
- Semicolon should be ignored for terminating the SQL statements.
- Ignore case sensitivity for commands.
- Ignore headers in output questions.

1	(a)	Write the functions of the following pieces of network hardware : (i) Modem (ii) Switch	2
	Ans	Modem - It converts analog signals to digital signals and vice-versa . Switch - It connects several nodes to form a network and directs the received information only to the intended node.	
		<i>(1 mark for each part)</i> <i>Note: Full 1 mark to be awarded if only expansion of MODEM (Modulator Demodulator) is mentioned .</i>	
	(b)	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.	2
	Ans	(i) Assigning login name and password (ii) Installing firewall (iii) Assigning appropriate file permissions	
		<i>(1 mark each for mentioning any two correct ways)</i> <i>Note: Any other software or hardware methods ensuring network security to be accepted</i>	
	(c)	Expand TCP/IP. Write the purpose of TCP/IP in communication of data on a network.	2
	Ans	Transmission control Protocol/Internet Protocol. TCP/IP controls and manages data transmission over networks.	
		<i>(½ mark for correct expansion of TCP)</i> <i>(½ mark for correct expansion of IP)</i> <i>(1 mark for purpose of TCP/IP)</i>	
	(d)	Expand the following terms: (i) MAC Address (ii) ODF	2
	Ans	(i) MAC address-Media Access Control address (ii) ODF-Open document Format	
		<i>(1 mark for each correct expansion)</i>	

	(e)	Explain in brief any one freedom offered by Open Source Software. Write one example for each of the following: (i) An Open Source Operating System (ii) An Open Source Office Suite	2
	Ans	<ul style="list-style-type: none"> • Freedom to use software for any purpose • Freedom to modify software • Freedom to distribute copies of the software <p>Examples of Open Source Operating System: BOSS ,Linux, Android,Ubuntu , FreeBSD, OpenBSD, NetBSD, DragonFly BSD, OpenSolaris, illumos, AuroraUX, Darwin, OpenDarwin, MINIX, FreeRTOS, FreeDOS, Haiku, House KolibriOS, MenuetOS, GNU, ReactOS, L4, Fiasco, Pistachio, Plan 9, AROS, Syllable, Inferno, NuttX, eCos, RTEMS, HelenOS, E/OS, TempleOS, Kali Linux , Google Chrome OS</p> <p>Example of Open Source Office Suite: Open Office , Neo Office , LibreOffice ,Adobe Open Office (Google Docs, Sheets, Slides)</p>	
		<p><i>(1 mark for mentioning for any one freedom)</i> <i>(½ mark for mentioning any one correct example of Open Source Operating System)</i> <i>(½ mark for mentioning any one correct example of Open Source Office suite)</i></p>	
2	(a)	Write the data type of variables that should be used to store the following in Java : (i) Sales amount (of Sales) achieved by a Sales Person (ii) Roll Number of Student	1
	Ans	<p>i) float /double / int / long ii) int / byte / short / long</p>	
		<p><i>(½ mark each for both parts)</i> <i>Note: String data type to be accepted for Roll number of student</i></p>	
	(b)	Distinguish between isSelected() and setSelected() methods of Java with the help of example.	1
	Ans	<p>Example: <code>rb1.setSelected(true);</code> <code>boolean b=rb1.isSelected();</code> Difference : isSelected() : Returns true if the component is checked otherwise returns false setSelected() : Checks or unchecks component according to boolean value true or false.</p>	
		<p><i>(1 mark for correct difference)</i> <i>Note: Full 1 mark to be awarded if either example or explanation is correct.</i></p>	
	(c)	What will be displayed in jTextField1 and jTextField2 when the following code is executed? <pre>int x,y,z,t; x=3; y=8; z=x+y/8; t=z++;</pre>	2

	<code>jTextField1.setText(""+z);</code> <code>jTextField2.setText(""+t);</code>	
Ans	The content of jTextField1 is 5 The content of jTextField2 is 4	
	<i>(1 mark each for each correct output)</i>	
	OR	
	What will be displayed in jTextField1 and jTextField2 when the following code is executed? <code>int x,y,z,t;</code> <code>t=3;</code> <code>z=0;</code> <code>do</code> <code>{</code> <code> z=z+1;</code> <code>}</code> <code>while(t>3);</code> <code>jTextField1.setText(""+z);</code> <code>jTextField2.setText(""+t);</code>	
Ans	The content of jTextField1 is 1 The content of jTextField1 is 3	
	<i>(1 mark each for each correct output)</i>	
(d)	The following HTML code has error(s). Rewrite the correct code underlining corrections made. <code><ol type="A" begin="4"></code> <code> List item 1</code> <code> List item 2</code> <code> List item 3</code> <code><end></code>	2
Ans	<code><ol type="A" <u>start="4"</u>></code> <code> List item 1 </code> <code> List item 2 </code> <code> List item 3 </code> <code></<u>ol</u>></code> OR <code><ol type="A" <u>start="4"</u>></code> <code> List item 1</code> <code> List item 2</code> <code> List item 3</code> <code></<u>ol</u>></code>	
	<i>1 mark each for identifying and correcting both errors</i> <i>Note : Only 1 mark to be awarded if errors are only identified</i>	
	OR	
	Expand XML. For what purpose is XML used?	
Ans	XML stands for eXtensible Markup Language. Purpose : XML is used to describe data	

	(1 mark for writing the expanded form) (1 mark for correct purpose)	
(e)	Write the output that will be displayed on jLabel1 and jLabel2. <pre>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());</pre>	2
Ans	jLabel1 - The value of e = 11 jLabel2 - KEEPYOURSURROUNDINGSCLEAN	
	(1 mark each for each correct output)	
(f)	Write the output displayed in jTextField1 and jTextField2 when the following code is executed: <pre>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(""+code);</pre>	2
Ans	The content of jTextField1 is 3 The content of jTextField2 is w	
	(1 mark each for each correct output)	
	OR	
	What happens if break statement is omitted with a case in a switch statement?	
Ans	If break is omitted control moves to the next case / statement.	
	(2 marks for correct answer) Note: Full 2 marks to be awarded if explained with an example or Fall through is mentioned .	
3 (a)	In CHAR(10) and VARCHAR(10), what does the number 10 indicate?	1
Ans	It indicates the maximum number of characters that can be stored . OR It indicates the Size of the column.	
	(1 mark for the correct answer)	

(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																																				
Ans	<pre>SELECT * FROM Employee WHERE CITY NOT IN ('DELHI', 'MUMBAI', 'CHANDIGARH');</pre> <p>OR</p> <pre>SELECT * FROM Employee WHERE CITY <> 'DELHI' AND CITY <> 'MUMBAI' AND CITY <> 'CHANDIGARH' ;</pre> <p>OR</p> <pre>SELECT * FROM Employee WHERE NOT CITY IN ('DELHI', 'MUMBAI', 'CHANDIGARH');</pre>																																					
	<p>(½ mark for Select) (½ mark for where clause) Note: && to be considered instead of AND, != to be considered instead of <>)</p>																																					
(c)	<p>Consider the following table : Table : RESULTS</p> <table border="1" data-bbox="228 1003 1396 1619"> <thead> <tr> <th>STUDENTID</th> <th>NAME</th> <th>EXAMID</th> <th>SCORE</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>Leena</td> <td>1</td> <td>20</td> </tr> <tr> <td>10</td> <td>Leena</td> <td>2</td> <td>25</td> </tr> <tr> <td>11</td> <td>Samarth</td> <td>1</td> <td>30</td> </tr> <tr> <td>11</td> <td>Samarth</td> <td>2</td> <td>35</td> </tr> <tr> <td>12</td> <td>Jai</td> <td>1</td> <td>14</td> </tr> <tr> <td>12</td> <td>Jai</td> <td>2</td> <td>15</td> </tr> <tr> <td>14</td> <td>Shoaib</td> <td>1</td> <td>30</td> </tr> <tr> <td>14</td> <td>Shoaib</td> <td>2</td> <td>12</td> </tr> </tbody> </table> <p>Abhay wants to know the number of students who took the test. He writes the following SQL statement to count STUDENTID without duplicates. However the statement is not correct. Rewrite the correct statement.</p> <pre>SELECT DISTINCT (COUNT STUDENTID) FROM RESULTS;</pre>	STUDENTID	NAME	EXAMID	SCORE	10	Leena	1	20	10	Leena	2	25	11	Samarth	1	30	11	Samarth	2	35	12	Jai	1	14	12	Jai	2	15	14	Shoaib	1	30	14	Shoaib	2	12	2
STUDENTID	NAME	EXAMID	SCORE																																			
10	Leena	1	20																																			
10	Leena	2	25																																			
11	Samarth	1	30																																			
11	Samarth	2	35																																			
12	Jai	1	14																																			
12	Jai	2	15																																			
14	Shoaib	1	30																																			
14	Shoaib	2	12																																			
Ans	<pre>SELECT COUNT (DISTINCT STUDENTID) FROM RESULTS;</pre>																																					
	<p>(1 mark for the correct statement)</p>																																					
(d)	<p>Aman has used the following SQL command to create a table 'stu':</p> <pre>CREATE TABLE stu (id INTEGER, name VARCHAR(100));</pre>	2																																				

	<p>Then,Aman enters the following SQL statements to enter 4 rows:</p> <pre>INSERT INTO stu VALUES (1,"abc"); INSERT INTO stu VALUES (2,"abc"); INSERT INTO stu VALUES (3,"bcd");</pre> <p>Write the output that will be produced by the following SQL statement :</p> <pre>SELECT name, Count(*) FROM stu GROUP BY name;</pre>							
Ans	<table border="1"> <thead> <tr> <th>NAME</th> <th>COUNT (*)</th> </tr> </thead> <tbody> <tr> <td>abc</td> <td>2</td> </tr> <tr> <td>bcd</td> <td>1</td> </tr> </tbody> </table>	NAME	COUNT (*)	abc	2	bcd	1	
NAME	COUNT (*)							
abc	2							
bcd	1							
	<p><i>(1 mark each for line of output)</i> <i>Note : Full 2 marks to be awarded if question is attempted or error mentioned</i></p>							
(e)	Write SQL command 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						
Ans	<pre>ALTER TABLE PLAYER ADD COUNTRY VARCHAR (70) ;</pre> <p>It is a DDL command</p>							
	<p><i>(½ mark for ALTER TABLE)</i> <i>(½ mark for ADD)</i> <i>(1 mark for identifying DDL command)</i></p>							
(f)	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 ?	2						
Ans	<p>45 45 NULL</p>							
	<p><i>(1 mark for mentioning 45 in rows)</i> <i>(1 mark for mentioning NULL)</i> <i>Note : 1 mark to be awarded if "two SQL statements" not provided in question is mentioned .</i></p>							

4 (a)	<p>What will displayed in jTextField1 when the following code is executed?</p> <pre>int x=3,y=6,z=0; if(x>3) z = z + 1; if((x<4) && (y>6)) z = z + 2; if(x>2 && y>=6) z = z + 3; if((x<3) (y>6)) z = z + 4; jTtxtField1.setText(""+z);</pre>	1
Ans	3	
	<p><i>(1 mark for correct answer)</i> <i>Note: Full 1 mark to be awarded if error “jTextField1 is not present in the given code” is mentioned.</i></p>	
(b)	<p>Rewrite the following code after correcting errors. Underline the corrections made.</p> <pre>int a, c; 30 = c; 4 = a; while do(c>10) { a = = a + c; c = c - 5; }</pre>	2
Ans	<pre>int a, c; <u>c=30;</u> <u>a=4;</u> <u>do</u> { <u>a = a + c;</u> c = c - 5 ; } <u>while (c>10);</u></pre> <p>OR</p> <pre>int a, c; <u>c=30;</u> <u>a=4;</u> <u>while (c>10)</u> { <u>a = a + c;</u> c = c - 5; }</pre>	
	<p><i>(½ mark each for identifying and correcting four errors)</i> <i>(Note : 1 mark for only identification of 4 errors)</i></p>	

(c)	How many times will the following loop execute?	2
	<pre>int K =7; int I = -2; do { I=I+2; K=K-1; } while (I<=K) ;</pre>	
Ans	4 times	
	(2 marks for correct answer)	
	OR	
	How many times will the following loop execute?	
	<pre>for (i=2;i<=5;i++) { z = i; }</pre>	
Ans	4 times	
	(2 marks for correct answer)	
	Note : Only 1 mark for mentioning data type of variable not provided	
(d)	Write the output in jTextField1 when the following code is executed:	2
	<pre>int k, n, sum=0; for(k = 2; k <=5; k++) { n = k - 2 * 3; sum = sum + n; } jTextField1.setText(""+sum) ;</pre>	
Ans	-10	
	(2 marks for correct answer)	
	OR	
	Write the output in jTextField1 when the following code is executed:	
	<pre>int k, n=0, sum=0; k = 2; while (k<=5) { n = k + 4; sum = sum + n; k = k + 2; } jTextField1.setText(""+n) ;</pre>	
Ans	8	
	(2 marks for correct answer)	

	(e) Write the values of i and k after the execution of the following code:	2								
	<pre>int i, j, k; i = 2; j = 8; k = 6; do { i = i + 4; k = k + i; } while(i<j);</pre>									
Ans	i=10 k=22									
	<i>(1 mark for each correct value)</i>									
	<p>(f) Ms. Supriya works as a programmer in a courier company, “ABC Packaging and Shipping Service” where she has designed a software to compute charges to be paid by the customers.</p> <ul style="list-style-type: none"> • Weight(in grams) of the parcel is entered by the user. • Any one Category of parcel out of A/B/C is chosen by the user. • Based on the Category selected, Transportation Charges(per gram) are computed according to the following criterion: <table border="1" data-bbox="312 1003 1410 1317"> <thead> <tr> <th>Category</th> <th>Transportation Charges Per gram</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>₹ 2.00</td> </tr> <tr> <td>B</td> <td>₹ 3.00</td> </tr> <tr> <td>C</td> <td>₹ 5.00</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Insurance Charges is a flat ₹ 80.00 per parcel • Total Transportation Charges= Transportation Charges Per gram * Weight in grams (of parcel) entered by the user. • Total Charges = Total Transportation Charges + Insurance Charges. <p>Help Ms. Priya in writing the code to do the following: (i) When Calculate Charges button is clicked, Insurance Charges, Transportation Charges per gram, Total Transportation Charges and Total Charges should be calculated and displayed in the respective text fields.</p>	Category	Transportation Charges Per gram	A	₹ 2.00	B	₹ 3.00	C	₹ 5.00	4
Category	Transportation Charges Per gram									
A	₹ 2.00									
B	₹ 3.00									
C	₹ 5.00									
Ans	<pre>double wt, tc=0.0, ic=0.0, ttc=0.0, totc=0.0; (i) wt=Double.parseDouble(jTextField1.getText()); if(jRadioButton1.isSelected()) tc=2.00; else if(jRadioButton2.isSelected()) tc=3.00; else tc=5.00; jTextField2.setText(""+tc); ic=80.00; jTextField3.setText(""+ic); ttc=tc*wt; jTextField4.setText(""+ttc);</pre>									

	<pre>totc=ttc+ic; jTextField5.setText(""+totc);</pre>																																																	
	<p>(½ mark for correct use of if statement for Radiobutton/CheckBox/Combobox) (½ mark for assigning correct value to variable tc) (½ mark for assigning correct value to variable ic) (½ mark for calculating total transportation charges) (½ mark for calculating total charges) (½ mark for displaying insurance charges , transportation charges) (½ mark for displaying total transportation charges) (½ mark for displaying total charges)</p> <p>Note :</p> <ul style="list-style-type: none"> • 2 Marks for any valid/syntactically correct if/switch condition • 2 marks for displaying insurance charges, transportation charges , total transportation charges and total charges using ANY appropriate swing control or display methods . 																																																	
(ii)	When 'CLEAR' button is clicked, all the textfields and radiobuttons should be cleared.	1																																																
Ans	<pre>jTextField1.setText(""); jTextField2.setText(""); jTextField3.setText(""); jTextField4.setText(""); jTextField5.setText(""); jRadioButton1.setSelected(false); jRadioButton2.setSelected(false); jRadioButton3.setSelected(false);</pre> <p>OR</p> <pre>buttonGroup1.clearSelection();</pre>																																																	
	<p>(½ mark for clearing any text field) (½ mark for clearing radiobutton) Note : NULL in place of "" should be accepted for clearing text field.</p>																																																	
(iii)	When 'Exit' button is clicked the application should close.	1																																																
Ans	System.exit(0);																																																	
	(1 mark for correct answer)																																																	
5.	<p>Consider the following table 'Transporter' that stores the order details about items to be transported. Write SQL commands for the statements (i) to (viii) and write output for SQL queries (ix) and (x)</p> <p style="text-align: center;">Table : TRANSPORTER</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ORDERNO</th> <th>DRIVERNAME</th> <th>DRIVERGRADE</th> <th>ITEM</th> <th>TRAVELDATE</th> <th>DESTINATION</th> </tr> </thead> <tbody> <tr> <td>10012</td> <td>RAM YADAV</td> <td>A</td> <td>TELEVISION</td> <td>2019-04-19</td> <td>MUMBAI</td> </tr> <tr> <td>10014</td> <td>SOMNATH SINGH</td> <td></td> <td>FURNITURE</td> <td>2019-01-12</td> <td>PUNE</td> </tr> <tr> <td>10016</td> <td>MOHAN VERMA</td> <td>B</td> <td>WASHING MACHINE</td> <td>2019-06-06</td> <td>LUCKNOW</td> </tr> <tr> <td>10018</td> <td>RISHI SINGH</td> <td>A</td> <td>REFRIGERATOR</td> <td>2019-04-07</td> <td>MUMBAI</td> </tr> <tr> <td>10019</td> <td>RADHE MOHAN</td> <td></td> <td>TELEVISION</td> <td>2019-05-30</td> <td>UDAIPUR</td> </tr> <tr> <td>10020</td> <td>BISHEN PRATAP</td> <td>B</td> <td>REFRIGERATOR</td> <td>2019-05-02</td> <td>MUMBAI</td> </tr> <tr> <td>10021</td> <td>RAM</td> <td></td> <td>TELEVISION</td> <td>2019-05-03</td> <td>PUNE</td> </tr> </tbody> </table>	ORDERNO	DRIVERNAME	DRIVERGRADE	ITEM	TRAVELDATE	DESTINATION	10012	RAM YADAV	A	TELEVISION	2019-04-19	MUMBAI	10014	SOMNATH SINGH		FURNITURE	2019-01-12	PUNE	10016	MOHAN VERMA	B	WASHING MACHINE	2019-06-06	LUCKNOW	10018	RISHI SINGH	A	REFRIGERATOR	2019-04-07	MUMBAI	10019	RADHE MOHAN		TELEVISION	2019-05-30	UDAIPUR	10020	BISHEN PRATAP	B	REFRIGERATOR	2019-05-02	MUMBAI	10021	RAM		TELEVISION	2019-05-03	PUNE	
ORDERNO	DRIVERNAME	DRIVERGRADE	ITEM	TRAVELDATE	DESTINATION																																													
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10021	RAM		TELEVISION	2019-05-03	PUNE																																													

	(i)	To display names of drivers and destination city where TELEVISION is being transported.	1
	Ans	SELECT DRIVERNAME, DESTINATION FROM TRANSPORTER WHERE ITEM="TELEVISION";	
		(½ mark for SELECT) (½ mark for WHERE)	
	(ii)	To display driver names and destinations where destination is not MUMBAI.	1
	Ans	SELECT DRIVERNAME, DESTINATION FROM TRANSPORTER WHERE DESTINATION <> "MUMBAI"; OR SELECT DRIVERNAME, DESTINATION FROM TRANSPORTER WHERE DESTINATION != "MUMBAI"; OR SELECT DRIVERNAME, DESTINATION FROM TRANSPORTER WHERE DESTINATION NOT IN ("MUMBAI"); OR SELECT DRIVERNAME, DESTINATION FROM TRANSPORTER WHERE NOT DESTINATION = "MUMBAI";	
		(½ mark for SELECT) (½ mark for WHERE)	
	(iii)	To display the names of destination cities where items are being transported. There should be no duplicate values.	1
	Ans	SELECT DISTINCT (DESTINATION) FROM TRANSPORTER;	
		(½ mark for SELECT) (½ mark for DISTINCT)	
	(iv)	To display details of rows that have some value in DRIVERGRADE column.	1
	Ans	SELECT * FROM TRANSPORTER WHERE DRIVERGRADE IS NOT NULL;	
		(½ mark for SELECT) (½ mark for WHERE)	
	(v)	To display names of drivers, names of items and travel dates for those items that are being transported on or before 1 st April 2019.	1
	Ans	SELECT DRIVERNAME, ITEM, TRAVELDATE FROM TRANSPORTER WHERE TRAVELDATE <= "2019-04-01";	
		(½ mark for SELECT) (½ mark for WHERE)	

vi)	To display the number of drivers who have 'MOHAN' anywhere in their names.	1						
Ans	SELECT COUNT (DRIVERNAME) FROM TRANSPORTER WHERE DRIVERNAME LIKE "%MOHAN%";							
	(½ mark for SELECT) (½ mark for WHERE)							
vii)	To display the names of drivers, item names and travel dates in alphabetic(ascending) order of driver names.	1						
Ans	SELECT DRIVERNAME, ITEM, TRAVELDATE FROM TRANSPORTER ORDER BY DRIVERNAME; [OR ORDER BY DRIVERNAME ASC;]							
	(½ mark for SELECT) (½ mark for ORDER BY)							
viii)	To display names of drivers whose names are three characters long	1						
Ans	SELECT DRIVERNAME FROM TRANSPORTER WHERE DRIVERNAME LIKE "_ _ _"; OR SELECT DRIVERNAME FROM TRANSPORTER WHERE LENGTH(DRIVERNAME) = 3 ;							
	(½ mark for SELECT) (½ mark for WHERE)							
ix)	SELECT ITEM,COUNT(*) FROM TRANSPORTER GROUP BY ITEM HAVING COUNT(*) > 1;	1						
Ans	<table border="0"> <tr> <td><u>ITEM</u></td> <td><u>COUNT (*)</u></td> </tr> <tr> <td>TELEVISION</td> <td>3</td> </tr> <tr> <td>REFRIGERATOR</td> <td>2</td> </tr> </table>	<u>ITEM</u>	<u>COUNT (*)</u>	TELEVISION	3	REFRIGERATOR	2	
<u>ITEM</u>	<u>COUNT (*)</u>							
TELEVISION	3							
REFRIGERATOR	2							
	(½ mark for each correct line of output)							
(x)	SELECT MAX (TRAVELDATE) FROM TRANSPORTER WHERE DRIVERGRADE=' A' ;	1						
Ans	<u>MAX (TRAVELDATE)</u> 2019-04-19							
	(1 mark for correct answer)							
6 (a)	Mr. Sen has to create a table named 'Employee' with Columns to store EmpID, Name ,Designation, Age and Salary.EmpID is the Primary Key and Name cannot be NULL. Some of the rows that will be inserted are shown below . 101 Smita Kumar Secretary 28 39500.00 102 Mani Scott Programmer 32 45300.00 103 Firdaus Ali Programmer II 45 67500.00	2						

	Write SQL query to create the above table with appropriate data types and sizes of columns																																											
Ans	<pre>CREATE TABLE Employee (EmpID INTEGER PRIMARY KEY, Name VARCHAR(20) NOT NULL , Designation VARCHAR(20) , Age INTEGER , Salary DECIMAL(8,2));</pre>																																											
Ans	<p>($\frac{1}{2}$ mark for CREATE TABLE) ($\frac{1}{2}$ mark for PRIMARY KEY constraint) ($\frac{1}{2}$ mark for NOT NULL constraint) ($\frac{1}{2}$ mark for Column Names with Data Types) Note : INT in place of INTEGER to be accepted CHAR in place of VARCHAR to be accepted FLOAT in place of DECIMAL to be accepted Any appropriate size of columns to be accepted</p>																																											
	OR																																											
	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 .																																											
Ans	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Admno</td> <td>INT/CHAR / VARCHAR</td> </tr> <tr> <td>Name</td> <td>CHAR / VARCHAR</td> </tr> <tr> <td>Mark1</td> <td>DECIMAL / FLOAT / INT / INTEGER</td> </tr> <tr> <td>Mark2</td> <td>DECIMAL / FLOAT / INT / INTEGER</td> </tr> </table>	Admno	INT/CHAR / VARCHAR	Name	CHAR / VARCHAR	Mark1	DECIMAL / FLOAT / INT / INTEGER	Mark2	DECIMAL / FLOAT / INT / INTEGER																																			
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Mark1	DECIMAL / FLOAT / INT / INTEGER																																											
Mark2	DECIMAL / FLOAT / INT / INTEGER																																											
	<p>($\frac{1}{2}$ mark for each column name and data type) (1 mark if four column names are mentioned without mentioning data type) Note : Any other appropriate column names to be accepted Column size may be ignored</p>																																											
(b)	<p>Consider the following tables PARTICIPANT and ACTIVITY and answer the questions that follow:</p> <p style="text-align: center;">Table: PARTICIPANT</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>ADMNO</th> <th>NAME</th> <th>HOUSE</th> <th>ACTIVITYCODE</th> </tr> </thead> <tbody> <tr> <td>6473</td> <td>Kapil Shah</td> <td>Gandhi</td> <td>A105</td> </tr> <tr> <td>7134</td> <td>Joy Mathew</td> <td>Bose</td> <td>A101</td> </tr> <tr> <td>8786</td> <td>Saba Arora</td> <td>Gandhi</td> <td>A102</td> </tr> <tr> <td>6477</td> <td>Kapil Shah</td> <td>Bose</td> <td>A101</td> </tr> <tr> <td>7658</td> <td>Faizal Ahmed</td> <td>Bhagat</td> <td>A104</td> </tr> </tbody> </table> <p style="text-align: center;">Table: ACTIVITY</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>ACTIVITYCODE</th> <th>ACTIVITYNAME</th> <th>POINTS</th> </tr> </thead> <tbody> <tr> <td>A101</td> <td>Running</td> <td>200</td> </tr> <tr> <td>A102</td> <td>Hopping bag</td> <td>300</td> </tr> <tr> <td>A103</td> <td>Skipping</td> <td>200</td> </tr> <tr> <td>A104</td> <td>Bean bag</td> <td>250</td> </tr> <tr> <td>A105</td> <td>Obstacle</td> <td>350</td> </tr> </tbody> </table>	ADMNO	NAME	HOUSE	ACTIVITYCODE	6473	Kapil Shah	Gandhi	A105	7134	Joy Mathew	Bose	A101	8786	Saba Arora	Gandhi	A102	6477	Kapil Shah	Bose	A101	7658	Faizal Ahmed	Bhagat	A104	ACTIVITYCODE	ACTIVITYNAME	POINTS	A101	Running	200	A102	Hopping bag	300	A103	Skipping	200	A104	Bean bag	250	A105	Obstacle	350	2
ADMNO	NAME	HOUSE	ACTIVITYCODE																																									
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	When the table "PARTICIPANT" was first created, the column 'NAME' was planned as the Primary key by the Programmer. Later a field ADMNO had to be set up as Primary key. Explain the reason .	
Ans	NAME column has duplicate values ,cannot be considered as Primary key, therefore Admno is to be considered as Primary Key.	
	<i>(2 marks for the correct reason)</i>	
	OR	
	Identify data type and size to be used for column ACTIVITYCODE in table ACTIVITY.	
Ans	Data type : CHAR / VARCHAR Size : 4	
	<i>(1 mark for correct data type) (1 mark for mentioning correct size) Note: For the Size, any value more than 4 is also to be accepted.</i>	
(c)	With reference to the above given tables (in Q6 b), write commands in SQL for (i) to (iii)	
(i)	To display Activity Code along with number of participants participating in each activity (Activity Code wise) from the table Participant.	2
Ans	<code>SELECT ACTIVITYCODE ,COUNT (*) FROM PARTICIPANT GROUP BY ACTIVITYCODE ;</code> OR <code>SELECT CONCAT (ACTIVITYCODE ,COUNT (*)) FROM PARTICIPANT GROUP BY ACTIVITYCODE ;</code>	
	<i>(1/2 mark for SELECT) (1/2 mark for FROM) (1/2 mark for correct use of GROUP BY) (1/2 mark for correct use of COUNT())</i>	
	OR	
	How many rows will be there in the cartesian product of the two tables in consideration here ?	
Ans	<i>Number of Rows :25</i>	
	<i>(2 marks for correct answer)</i>	
(ii)	To display Names of Participants , Activity Code, Activity Name in alphabetic ascending order of names of participants.	2
Ans	<code>SELECT NAME , PARTICIPANT.ACTIVITYCODE , ACTIVITYNAME FORM PARTICIPANT , ACTIVITY WHERE PARTICIPANT.ACTIVITYCODE = ACTIVITY.ACTIVITYCODE ORDER BY NAME ;</code> OR <code>SELECT NAME , P.ACTIVITYCODE , ACTIVITYNAME FORM PARTICIPANT P, ACTIVITY A WHERE P.ACTIVITYCODE = A.ACTIVITYCODE ORDER BY NAME ;</code>	

	<p>OR</p> <pre>SELECT PARTICIPANT.NAME , PARTICIPANT.ACTIVITYCODE , ACTIVITY.ACTIVITYNAME FROM PARTICIPANT , ACTIVITY WHERE PARTICIPANT.ACTIVITYCODE = ACTIVITY.ACTIVITYCODE ORDER BY PARTICIPANT.NAME ;</pre> <p>OR</p> <pre>SELECT P.NAME , P.ACTIVITYCODE , A.ACTIVITYNAME FROM PARTICIPANT P , ACTIVITY A WHERE P.ACTIVITYCODE = A.ACTIVITYCODE ORDER BY P.NAME ;</pre>	
	<p><i>(1/2 mark for SELECT)</i> <i>(1/2 mark for FROM)</i> <i>(1/2 mark for correct use of JOIN)</i> <i>(1/2 mark for correct use of ORDER BY)</i></p>	
(iii)	To display Names of Participants along with Activity Codes and Activity Names for only those participants who are taking part in Activities that have 'bag' in their Activity Names and Points of activity are above 250.	2
Ans	<pre>SELECT NAME , PARTICIPANT.ACTIVITYCODE , ACTIVITYNAME FROM PARTICIPANT , ACTIVITY WHERE PARTICIPANT.ACTIVITYCODE = ACTIVITY.ACTIVITYCODE AND POINTS > 250 AND ACTIVITYNAME LIKE '%bag%' ;</pre> <p>OR</p> <pre>SELECT NAME , P.ACTIVITYCODE , ACTIVITYNAME FROM PARTICIPANT P, ACTIVITY A WHERE P.ACTIVITYCODE = A.ACTIVITYCODE AND POINTS > 250 AND ACTIVITYNAME LIKE '%bag%' ;</pre> <p>OR</p> <pre>SELECT PARTICIPANT.NAME , PARTICIPANT.ACTIVITYCODE , ACTIVITY.ACTIVITYNAME FROM PARTICIPANT , ACTIVITY WHERE PARTICIPANT.ACTIVITYCODE = ACTIVITY.ACTIVITYCODE AND ACTIVITY.POINTS > 250 AND ACTIVITY.ACTIVITYNAME LIKE '%bag%' ;</pre> <p>OR</p> <pre>SELECT P.NAME , P.ACTIVITYCODE , A.ACTIVITYNAME FROM PARTICIPANT P, ACTIVITY A WHERE P.ACTIVITYCODE = A.ACTIVITYCODE AND A.POINTS > 250 AND A.ACTIVITYNAME LIKE '%bag%' ;</pre>	
	<p><i>(1/2 mark for SELECT)</i> <i>(1/2 mark for FROM)</i> <i>(1/2 mark for correct use of join)</i> <i>(1/2 mark for correct use of any one condition)</i></p>	

7	(a)	How does e-governance help in increasing Accountability (answerability of the Government to the people)? Write 2 points.	2										
	Ans	<ol style="list-style-type: none"> 1. Transparency of Government processes, policies and decisions 2. Awareness about new policies and facilities being offered by the Government. 3. Date and time of every transaction is automatically recorded for which the Government is accountable. 4. Practices like influences and bribing are reduced 											
		(1 mark each for any two valid points)											
	(b)	Write 2 precautions to be followed while doing Online Shopping.	1										
	Ans	<ol style="list-style-type: none"> 1) Verify authenticity of the website / vendor 2) Check the product details and past reviews 3) Verify the payment gateway provided by the website. 											
		(½ mark each for any two valid points)											
	(c)	<p>Ms. Deepika of ABC School is creating a form for a Summer Camp application. Help her to choose the most appropriate controls from ListBox , ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S.No.</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Let the user enter NAME of 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>	S.No.	Function	1.	Let the user enter NAME of student	2.	Let the user enter MOBILE NUMBER of student	3.	Let the user choose one TSHIRT size out of the categories : XL / L / M / S	4.	Let the user select Activities out of Rock Climbing / Mountain Biking / Zip Lining / Night Hike . More than one activity may be chosen .	2
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	Ans	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S.No.</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Text Field</td> </tr> <tr> <td>2</td> <td>Text Field</td> </tr> <tr> <td>3</td> <td>RadioButton/ComboBox</td> </tr> <tr> <td>4</td> <td>ListBox/CheckBox</td> </tr> </tbody> </table>	S.No.	Function	1	Text Field	2	Text Field	3	RadioButton/ComboBox	4	ListBox/CheckBox	
S.No.	Function												
1	Text Field												
2	Text Field												
3	RadioButton/ComboBox												
4	ListBox/CheckBox												
		(½ mark for each correct answer)											

Strictly Confidential: (For Internal and Restricted use only)
Senior School Certificate Examination
March 2019
Marking Scheme - Informatics Practices (SUBJECT CODE 065)
(SERIES: BVM -1 PAPER CODE - 90)

General Instructions:

1. You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and the teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully. **Evaluation is a 10 -12 days mission for all of us. Hence, it is necessary that you put in your best efforts in this process.**
2. Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. **However, while evaluating, answers which are based on the latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and marks be awarded to them.**
3. The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.
4. If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totaled up and written in the left-hand margin and encircled.
5. If a question does not have any parts, marks must be awarded in the left hand margin and encircled.
6. If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out.
7. No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
8. A full scale of marks 0-70 has to be used. Please do not hesitate to award full marks if the answer deserves it.
9. Every examiner has to necessarily do evaluation work for full working hours i.e. 8 hours every day and evaluate 25 answer books per day.
10. Ensure that you do not make the following common types of errors committed by the Examiner in the past:-
 - a. Leaving the answer or part thereof unassessed in an answer book.
 - b. Giving more marks for an answer than assigned to it.
 - c. Wrong transfer of marks from the inside pages of the answer book to the title page.
 - d. Wrong question wise totaling on the title page.
 - e. Wrong totaling of marks of the two columns on the title page.
 - f. Wrong grand total.
 - g. Marks in words and figures not tallying.
 - h. Wrong transfer of marks from the answer book to online award list.
 - i. Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.)
 - j. Half or a part of answer marked correct and the rest as wrong, but no marks awarded.
11. While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as (X) and awarded zero (0) Marks.
12. Any unassessed portion, non-carrying over of marks to the title page, or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.
13. The Examiners should acquaint themselves with the guidelines given in the Guidelines for spot Evaluation before starting the actual evaluation.
14. Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words.

15. The Board permits candidates to obtain a photocopy of the Answer Book on request in an RTI application and also separately as a part of the re-evaluation process on payment of the processing charges.

Specific Instructions:

- All programming questions have to be answered with respect to Java Language only.

In Java,

- Ignore case sensitivity for Variable identifiers in programming codes.

In SQL related questions :

- Single quote ‘ ’ as well as double quote “ ” should be accepted for text/character/date entries. For example: “AMAR” and ‘amar’ both are acceptable.
- Date entries should be accepted in all formats. For example: ‘YYYY-MM-DD’, ‘YY-MM-DD’, ‘DD-Mon-YY’, “DD/MM/YY”, ‘DD/MM/YY’, “MM/DD/YY”, ‘MM/DD/YY’ and {MM/DD/YY} are correct.
- Semicolon should be ignored for terminating the SQL statements.
- Ignore case sensitivity for commands.
- Ignore headers in output questions.

1	(a)	ABC bank has many computers connected in a building. What type of network is formed? Name two hardware resources that can be shared by the computers connected in the bank network.	2								
	Ans	Type of network that is formed : LAN / Local Area Network Hardware Resources that can be shared: <ul style="list-style-type: none"> • Modem • Printer • Scanner • Hard disk 									
		<i>(1 mark for part 1)</i> <i>(½ mark each for any two hardware resources)</i>									
	(b)	Write one example of situation when you would use a Remote access software such as Team Viewer.	2								
	Ans	Example : Computer engineer installs a software on a client’s remote desktop computer .									
		<i>(2 marks for any valid example)</i>									
	(c)	Distinguish between ASCII and Unicode. Write 2 points	2								
	Ans	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">ASCII</th> <th style="text-align: center;">Unicode</th> </tr> </thead> <tbody> <tr> <td>Stands for American Standard Code for Information Interchange</td> <td>Stands for Universal Character Set Coding</td> </tr> <tr> <td>Uses 7 bits to represent a character</td> <td>Uses 8 bit, 16 bits, 32 bits depending on encoding type.</td> </tr> <tr> <td>Platform Dependent</td> <td>Platform Independent</td> </tr> </tbody> </table>	ASCII	Unicode	Stands for American Standard Code for Information Interchange	Stands for Universal Character Set Coding	Uses 7 bits to represent a character	Uses 8 bit, 16 bits, 32 bits depending on encoding type.	Platform Dependent	Platform Independent	
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Stands for American Standard Code for Information Interchange	Stands for Universal Character Set Coding										
Uses 7 bits to represent a character	Uses 8 bit, 16 bits, 32 bits depending on encoding type.										
Platform Dependent	Platform Independent										
		<i>(1 mark each for any two valid points)</i>									
	(d)	What are Cookies on a computer?	2								
	Ans	Cookies are small text files placed on a computer by a web server when some sites are viewed online. It provides a way to keep track of user preferences .									
		<i>(1 mark for stating “Cookies as text file”)</i> <i>(1 mark for stating purpose)</i>									

	(e)	Explain in brief any two freedoms offered by open source software.	2										
	Ans	<ul style="list-style-type: none"> ▪ Freedom to use software for any purpose ▪ Freedom to modify software ▪ Freedom to distribute copies of the software 											
		<i>(1 mark each for mentioning any two freedoms)</i>											
2	(a)	Distinguish between Java and Netbeans.	1										
	Ans	Java is a high level programming language while NetBeans is an IDE that enables programmers to easily develop software.											
		<i>(1 mark for correct difference)</i> <i>Note: Java is a programming language and NetBeans is an IDE also to be accepted as a difference .</i>											
	(b)	Name two data types of Java used to store fractional numbers (numbers with decimals).	1										
	Ans	float double											
		<i>(½ mark for each correct datatype)</i>											
	(c)	(i) Which property of jList component lets us add items in a ListBox?	1										
	Ans	(i) Model property											
		<i>(1 mark for correct answer)</i>											
		(ii) Esha has created a List box on her form and has set the selectionMode property to MULTIPLE_INTERVAL . What is the purpose?	1										
	Ans	(ii) MULTIPLE-INTERVAL selection property lets the user select multiple ranges of items within a list.											
		<i>(1 mark for correct answer)</i>											
		OR											
		(ii) Write one difference between Listbox and Combobox.	1										
	Ans	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Listbox</th> <th style="width: 50%; text-align: center;">Combobox</th> </tr> </thead> <tbody> <tr> <td>Supports multiple Selection</td> <td>Supports single Selection</td> </tr> <tr> <td>Occupies more space</td> <td>Occupies less space</td> </tr> <tr> <td>Contains only list , it does not contain text box</td> <td>Contains list and text box</td> </tr> <tr> <td>Scroll style</td> <td>Drop down style</td> </tr> </tbody> </table>	Listbox	Combobox	Supports multiple Selection	Supports single Selection	Occupies more space	Occupies less space	Contains only list , it does not contain text box	Contains list and text box	Scroll style	Drop down style	
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Scroll style	Drop down style												
		<i>(1 mark for ANY one correct difference)</i> <i>Note:Diagram / suitable example depicting the difference to be accepted.</i>											
	(d)	What is the meaning of “Markup” in Hypertext Markup language? Which software is used to create HTML code?	2										
	Ans	In Hypertext Markup language , Markup means tag which tells the web browser how to display the contents on webpage. Text editor is used to create HTML code.											
		<i>(1 mark each for both parts)</i> <i>Note: Any one example of a text editor like Notepad,Wordpad,Notepad++ to be accepted in place of text editor.</i>											

	OR	
	Distinguish between the purpose of HTML and XML.	
Ans	HTML is used to create webpage(s) while XML is used to describe data.	
	<i>(2 marks for correct difference/purpose)</i> <i>Note : 1 mark to be awarded for expansion of both terms</i> <i>1 mark to be awarded for mentioning any one difference between HTML and XML</i>	
(e)	What will be displayed in jTextField1 and jTextField2? <pre>int x,y,z,t; x = 7; y= 10; z = x+y*3; t= x + y; jTextField1.setText(""+z); jTextField2.setText(""+t);</pre>	2
Ans	The content of jTextField1 is 37 The content of jTextField2 is 17	
	<i>(1 mark for each correct output)</i>	
(f)	Consider the following code: <pre>salary = 20000; grade= 'g'; switch(grade) { case 'x' : salary = 25000; break ; case 'y' : salary = 30000; break ; }</pre> What will be the value of salary variable after execution of the above code ? What will happen if 'break' statements are omitted from the above code.	2
Ans	Value of salary variable = 20000 Omission of the first break statement will make the control move to the next case / statement. Omission of second break statement will not make any difference.	
	<i>(1 mark for correct value of salary variable)</i> <i>(½ mark each for mentioning the effects of both omissions)</i> <i>Note: if purpose of 'break' used in switch is mentioned ,it should be accepted</i>	
	OR	
	Write equivalent code of the above mentioned code using if elseif statement instead of switch statement.	
Ans	<pre>salary = 20000; grade= 'g'; if(grade == 'x') salary = 25000; else if (grade == 'y') salary = 30000;</pre>	

		OR																																					
		<pre> grade= 'g'; if(grade == 'x') salary = 25000; else if (grade == 'y') salary = 30000; else salary = 20000; </pre>																																					
		(1 mark for if) (1 mark for else if)																																					
3	(a)	Ajay has applied a Constraint on a column(field) such that Ajay will certainly have to insert a value in this field, when he inserts a new row in the table. Which constraint has Ajay used?	1																																				
	Ans	NOT NULL constraint																																					
		(1 mark for correct answer) <i>Note: PRIMARY KEY constraint also to be accepted.</i>																																					
	(b)	'STUDENT' table has a column named 'REMARK' that stores Remarks. The values stored in REMARK are "PASS" or "NOT PASS" or "COMPTT" etc. Write SQL query to display details of all rows except those that have REMARK as "PASS" .	1																																				
	Ans	<pre> SELECT * FROM student WHERE Remark NOT IN ('PASS'); OR SELECT * FROM student WHERE NOT Remark IN ('PASS'); OR SELECT * FROM student WHERE Remark <> 'PASS'; OR SELECT * FROM student WHERE Remark !='PASS'; OR SELECT * FROM student WHERE Remark IN ('NOT PASS', 'COMPTT'); </pre>																																					
		(½ mark for SELECT) (½ mark for WHERE)																																					
	(c)	Consider the following table: Table: Results	2																																				
		<table border="1"> <thead> <tr> <th>STUDENTID</th> <th>NAME</th> <th>EXAMID</th> <th>SCORE</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>Leena</td> <td>1</td> <td>20</td> </tr> <tr> <td>10</td> <td>Leena</td> <td>2</td> <td>25</td> </tr> <tr> <td>11</td> <td>Samarth</td> <td>1</td> <td>30</td> </tr> <tr> <td>11</td> <td>Samarth</td> <td>2</td> <td>35</td> </tr> <tr> <td>12</td> <td>Jai</td> <td>1</td> <td>14</td> </tr> <tr> <td>12</td> <td>Jai</td> <td>2</td> <td>15</td> </tr> <tr> <td>14</td> <td>Shoaib</td> <td>1</td> <td>32</td> </tr> <tr> <td>14</td> <td>Shoaib</td> <td>2</td> <td>13</td> </tr> </tbody> </table>	STUDENTID	NAME	EXAMID	SCORE	10	Leena	1	20	10	Leena	2	25	11	Samarth	1	30	11	Samarth	2	35	12	Jai	1	14	12	Jai	2	15	14	Shoaib	1	32	14	Shoaib	2	13	
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		Write the Outputs that the following SQL statements will generate: (i) SELECT AVG(SCORE) FROM RESULTS WHERE EXAMID = 1; (ii) SELECT EXAMID,AVG(SCORE) FROM RESULTS GROUP BY EXAMID;																																					

Ans	i) 24 ii) <u>EXAMID</u> <u>AVG(SCORE)</u> 1 24 2 22																									
	(1 mark for part (i)) (½ mark each for each row of part (ii))																									
(d)	Consider the table: ITEM. Write SQL statement to delete the last row. <table border="1" data-bbox="220 436 1348 723"> <thead> <tr> <th>PRODUCTID</th> <th>PRODUCTCODE</th> <th>QTY</th> <th>PRICE</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>PEN</td> <td>500</td> <td>20.00</td> </tr> <tr> <td>102</td> <td>PEN</td> <td>800</td> <td>10.00</td> </tr> <tr> <td>103</td> <td>PEN</td> <td>1000</td> <td>20.00</td> </tr> <tr> <td>104</td> <td>PENCIL</td> <td>700</td> <td>10.00</td> </tr> <tr> <td>105</td> <td>PENCIL</td> <td>800</td> <td>20.00</td> </tr> </tbody> </table>	PRODUCTID	PRODUCTCODE	QTY	PRICE	101	PEN	500	20.00	102	PEN	800	10.00	103	PEN	1000	20.00	104	PENCIL	700	10.00	105	PENCIL	800	20.00	
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104	PENCIL	700	10.00																							
105	PENCIL	800	20.00																							
Ans	DELETE FROM ITEM WHERE PRODUCTID=105;																									
	(1 mark for DELETE) (1 mark for WHERE clause)																									
(e)	(i) Write the purpose of setting AUTO COMMIT=0 ; (ii) Table 'employees' has the following data <table border="1" data-bbox="316 994 1369 1137"> <thead> <tr> <th>empid</th> <th>lastname</th> <th>salary</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>Sharma</td> <td>50000</td> </tr> <tr> <td>102</td> <td>Arora</td> <td>25000</td> </tr> </tbody> </table> <p>Write the output of the following SQL statements:</p> <pre>SET AUTOCOMMIT = 0; UPDATE employees SET salary = 70000 WHERE lastname = 'Sharma'; SAVEPOINT Sh; UPDATE employees SET salary = 30000 WHERE lastname = 'Arora'; SAVEPOINT Ar; SELECT SUM(salary) FROM employees; ROLLBACK TO SAVEPOINT Sh; SELECT SUM(salary) FROM employees;</pre>	empid	lastname	salary	101	Sharma	50000	102	Arora	25000	2															
empid	lastname	salary																								
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Ans	i) Autocommit = 0 disables the automatic COMMIT mode of the current session, ie. SQL statement is not committed when it successfully completes. ii) <u>SUM(SALARY)</u> 100000 95000																									
	(1 mark for part (i)) (½ mark each for each row of part (ii))																									

	(f) While creating a table, when a column is declared with data type and size as : DECIMAL(20,6) , how many maximum number of digits may be present to the right of the decimal point? Which command in SQL is used to see the structure of the table?	2
Ans	6 DESC / DESCRIBE / SHOW FIELDS FROM <TABLE NAME>;	
	(1 mark each for both parts)	
4	(a) Identify error(s) in the following code. <pre> switch (7) { case 1: r =7; break; case 2.1: r = r-1 ; break; default: r= -1; } </pre>	1
Ans	<pre> switch (<u>7</u>) { case 1: r =7; break; case <u>2.1</u>: r = r-1 ; break; default: r= -1; } </pre> <p>switch(7) - In place of 7 there should be a variable or an expression . case 2.1 - case label cannot be of floating point/real data type.</p>	
	(½ mark each for identifying both errors) Note : Full 1 mark to be awarded if rectified code is written.	
	OR	
	Write the purpose of break inside the switch statement.	
Ans	break statement is used to terminate the “case” and exit from the switch.	
	(1 mark for correct explanation) Note: Full 1 mark to be allotted if purpose is explained with a suitable example	
(b)	Write the values of pr and sum after execution of the following code: <pre> int b = 2; int p = 3; int pr = 1; int sum = 5; for(int i = 1; i <= p; i++) { pr = pr * b; sum = sum + i; } </pre>	2
Ans	pr = 8 sum = 11	
	(1 mark each for each correct value)	

(c)	<p>What values will be displayed in jTextField1 and jTextField2 when the following code is executed.</p> <pre>int a, c; c = 30; a = 4; do { a = a + c; c = c - 5; } while (c>10); jTextField1.setText(""+a); jTextField2.setText(""+c);</pre>	2
Ans	<p>The content of jTextField1 is 94 The content of jTextField2 is 10</p>	
	<p><i>(1 mark for each correct output)</i></p>	
(d)	<p>Write the following code using 'for' loop instead of 'while' loop</p> <pre>int K = 7; int I = -2; while (I<=7) { K = K - 7; I = I + 2; }</pre>	2
Ans	<pre>int K = 7; for (int I=-2;I<=7;I=I+2) { K = K - 7; }</pre>	
	<p><i>(½ mark for initialization expression)</i> <i>(½ mark for test expression)</i> <i>(½ mark for update expression)</i> <i>(½ mark for body of loop)</i></p>	
	<p>OR</p>	
	<p>How many times will the above 'while' loop execute?</p>	
Ans	<p>5 times</p>	
	<p><i>(2 marks for correct answer)</i></p>	
(e)	<p>Write the output that will be produced on jTextField1 by First Code and Second Code.</p> <p><u>First Code :</u></p> <pre>int counter = 1, x = 10; while (counter > x) { x = x + 7; } jTextField1.setText(""+x);</pre>	2

	<p>Second Code :</p> <pre>int counter = 1, x = 10; do { x = x + 7; } while (counter > x); jTextField1.setText(""+x);</pre>																													
Ans	Output of First Code : 10 Output of Second Code : 17																													
	<i>(1 mark each for correct output of each code)</i>																													
(f)																														
(i)	<ul style="list-style-type: none"> When checkbox of an item is selected, Amount, Tax and Total Amount should be displayed in front of the item. For example if 'Vegetable Salad' is selected ,30.00 should be displayed in Amount field, 3.00 should be displayed in tax field and 33.00 should be displayed in Total Amount. When "Calculate" is clicked, the Grand Total Amount which is sum of total amount of all the items, Discount and Amount to Pay should be displayed. 	4																												
	<p><i>(4 marks to be awarded to all the candidates who have correctly attempted any part of Q.No.4)</i></p> <p>OR</p> <p><i>(4 marks to be awarded to all the candidates, who have mentioned that Q.No.4 has error / is incomplete)</i></p>																													
(ii)	When 'Clear' button is clicked, all the textfields and checkboxes should be cleared.	1																												
Ans	<pre>jTextField1.setText(""); jCheckBox1.setSelected(false);</pre>																													
	<p><i>(1/2 mark for clearing any text field)</i></p> <p><i>(1/2 mark for clearing check box)</i></p> <p>Note : NULL in place of "" should be accepted for clearing text field.</p>																													
(iii)	When 'Close' button is clicked, the application should close.	1																												
	<pre>System.exit(0);</pre>																													
	<i>(1 mark for correct answer)</i>																													
5.	<p>Consider the following table 'Activity'. Write SQL commands for the statements (i) to(viii) and write output for SQL queries (ix) and (x).</p> <p style="text-align: center;">Table : Activity</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>PID</th> <th>PARTICIPANT</th> <th>GRADE</th> <th>EVENT</th> <th>POINTS</th> <th>EVENTDATE</th> <th>HOUSE</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>Amit Dubey</td> <td>A</td> <td>Running</td> <td>200</td> <td>2018-12-19</td> <td>Gandhi</td> </tr> <tr> <td>102</td> <td>Shivraj Singh</td> <td></td> <td>Hopping bag</td> <td>300</td> <td>2019-01-12</td> <td>Bose</td> </tr> <tr> <td>103</td> <td>Raj Arora</td> <td>B</td> <td>Skipping</td> <td>200</td> <td>2018-12-19</td> <td>Gandhi</td> </tr> </tbody> </table>	PID	PARTICIPANT	GRADE	EVENT	POINTS	EVENTDATE	HOUSE	101	Amit Dubey	A	Running	200	2018-12-19	Gandhi	102	Shivraj Singh		Hopping bag	300	2019-01-12	Bose	103	Raj Arora	B	Skipping	200	2018-12-19	Gandhi	
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		104	Kapil Raj	A	Bean bag	250	2018-12-19	Bhagat	
		105	Deepshikha Sen	A	Obstacle	350	2018-03-31	Bose	
		106	Saloni Raj		Egg & Spoon	200	2018-12-20	Bose	
	(i)	To display names of Participants and points in descending order of points.							1
	Ans	<pre>SELECT PARTICIPANT,POINTS FROM Activity ORDER BY POINTS DESC;</pre>							
		<p>(½ mark for SELECT) (½ mark for ORDER BY)</p>							
	(ii)	To display names and points of participants who have scored points in the range 200 and 300 (both values included).							1
	Ans	<pre>SELECT PARTICIPANT,POINTS FROM Activity WHERE POINTS BETWEEN 200 AND 300;</pre> <p>OR</p> <pre>SELECT PARTICIPANT,POINTS FROM Activity WHERE POINTS>=200 AND POINTS<=300;</pre>							
		<p>(½ mark for SELECT) (½ mark for WHERE)</p>							
	(iii)	To display House wise total points scored along with House name (i.e. display the HOUSE and total points scored by each HOUSE)							1
	Ans	<pre>SELECT HOUSE,SUM(POINTS) FROM Activity GROUP BY HOUSE;</pre>							
		<p>(½ mark for SELECT) (½ mark for GROUP BY)</p>							
	(iv)	To display the names and EVENTDATE of participants who took part in the event anytime in the month of December of 2018.							1
	Ans	<pre>SELECT PARTICIPANT,EVENTDATE FROM Activity WHERE EVENTDATE BETWEEN '2018-12-01' AND '2018-12-31';</pre> <p>OR</p> <pre>SELECT PARTICIPANT,EVENTDATE FROM Activity WHERE EVENTDATE>='2018-12-01' AND EVENTDATE<='2018-12-31';</pre>							
		<p>(½ mark for SELECT) (½ mark for WHERE)</p>							

(v)	To display names of events that have 'bag' anywhere in the event names.	1
Ans	SELECT EVENT FROM Activity WHERE EVENT LIKE '%bag%';	
	(½ mark for SELECT) (½ mark for WHERE)	
vi)	To change the name of Event "Egg&Spoon" to "Lemon&Spoon" everywhere in the table "Activity"	1
Ans	UPDATE Activity SET EVENT = 'Lemon&Spoon' WHERE EVENT = 'Egg&Spoon';	
	(½ mark for UPDATE) (½ mark for WHERE)	
vii)	To display the average POINTS of all the Participants who have got some grade.	1
Ans	SELECT AVG(points) FROM Activity WHERE GRADE IS NOT NULL;	
	(½ mark for SELECT) (½ mark for WHERE)	
viii)	To display HOUSE wise, Lowest points scored.(ie. Display house and lowest points scored for each house)	1
Ans	SELECT HOUSE, MIN(POINTS) FROM Activity GROUP BY HOUSE;	
	(½ mark for SELECT) (½ mark for GROUP BY)	
ix)	SELECT AVERAGE(POINTS) FROM Activity WHERE HOUSE = 'Gandhi' or HOUSE = 'Bose';	1
Ans	<u>AVERAGE(POINTS)</u> 250	
	(1 mark for correct answer) Note: Full 1 mark to be awarded if error in question mentioned	
(x)	SELECT COUNT(DISTINCT POINTS) FROM ACTIVITY;	1
Ans	<u>COUNT(DISTINCT POINTS)</u> 4	
	(1 mark for correct answer) Note: ½ mark to be awarded if distinct points are mentioned.	

6	(a)	Write SQL query to create a table 'Transporter' with the following structure:	2		
			Field	Type	Constraint
			OrderlId	Integer	Primary key
			DriverName	Varchar (50)	NOT NULL
			ItemTransported	Varchar (50)	
			TravelDate	Date	
			DestinationCity	Varchar (50)	

Ans CREATE TABLE Transporter
 (OrderlId INTEGER PRIMARY KEY,
 DriverName VARCHAR(50) NOT NULL,
 ItemTransported VARCHAR(50) ,
 TravelDate DATE,
 DestinationCity VARCHAR(50)
);

(½ mark for CREATE TABLE)
 (½ mark for PRIMARY KEY constraint)
 (½ mark for NOT NULL constraint)
 (½ mark for Column Names with Data Types)

OR

What is the difference between PRIMARY KEY and UNIQUE constraint applied on Columns of a table? Explain with the help of example.

Ans

PRIMARY KEY	UNIQUE
Primary key is used to identify a row (record) in a table	Unique-key is used to prevent duplicate values in a column
A table can have only one primary key	A table can have multiple unique keys
Primary key does not accept NULL values.	Unique key may accept only one NULL value.

Example

Table: Results

STUDENTID	NAME	EXAMID	EMAILID
10	Leena	1	abc@gmail.com
11	Beena	2	xyz@hotmail.com
12	Samarth	1	
13	Shoaib	1	nml@gmail.com
14	Sheela	2	xyz@yahoo.com

Primary key : STUDENTID

UNIQUE key: EMAILID

(1 mark for ANY one correct difference)
 (1 mark for example)
 Note: Full 2 marks to be awarded if difference explained with example

(b)	<p>Consider the following tables SUPPLIER and ITEM and answer the questions that follow:</p> <p>Table: SUPPLIER</p> <table border="1" data-bbox="220 248 1236 517"> <thead> <tr> <th>SNo</th> <th>SName</th> <th>Area</th> <th>Email</th> </tr> </thead> <tbody> <tr> <td>S01</td> <td>Quant Computers</td> <td>East</td> <td>abc@gmail.com</td> </tr> <tr> <td>S02</td> <td>Superb Media</td> <td>West</td> <td>sss@hotmail.com</td> </tr> <tr> <td>S03</td> <td>Media Store</td> <td>North</td> <td></td> </tr> <tr> <td>S04</td> <td>Avon Hardware</td> <td>North</td> <td>xyz@gmail.com</td> </tr> <tr> <td>S05</td> <td>AV Tech</td> <td>South</td> <td>tmt@hotmail.com</td> </tr> </tbody> </table> <p>Table : ITEM</p> <table border="1" data-bbox="220 568 919 920"> <thead> <tr> <th>INo</th> <th>IName</th> <th>Price</th> <th>SNo</th> </tr> </thead> <tbody> <tr> <td>N01</td> <td>Mother Board</td> <td>15000</td> <td>S01</td> </tr> <tr> <td>N02</td> <td>Hard Disk</td> <td>4000</td> <td>S01</td> </tr> <tr> <td>N03</td> <td>Keyboard</td> <td>800</td> <td>S02</td> </tr> <tr> <td>N04</td> <td>Mouse</td> <td>300</td> <td>S01</td> </tr> <tr> <td>N05</td> <td>Mother Board</td> <td>13000</td> <td>S02</td> </tr> <tr> <td>N06</td> <td>Key Board</td> <td>400</td> <td>S03</td> </tr> <tr> <td>N07</td> <td>Hard Disk</td> <td>4500</td> <td>S03</td> </tr> </tbody> </table> <p>Which column should be set as the Primary key for SUPPLIER table? Mr. Vijay, the Database Manager feels that Email column will not be the right choice for Primary key. State reason(s) why Email will not be the right choice.</p>	SNo	SName	Area	Email	S01	Quant Computers	East	abc@gmail.com	S02	Superb Media	West	sss@hotmail.com	S03	Media Store	North		S04	Avon Hardware	North	xyz@gmail.com	S05	AV Tech	South	tmt@hotmail.com	INo	IName	Price	SNo	N01	Mother Board	15000	S01	N02	Hard Disk	4000	S01	N03	Keyboard	800	S02	N04	Mouse	300	S01	N05	Mother Board	13000	S02	N06	Key Board	400	S03	N07	Hard Disk	4500	S03	2
SNo	SName	Area	Email																																																							
S01	Quant Computers	East	abc@gmail.com																																																							
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N07	Hard Disk	4500	S03																																																							
Ans	<p>Primary key for Supplier table : SNO Email cannot be set as the primary key as Primary key column cannot be NULL. Many Suppliers may not have emailids.</p>																																																									
	<i>(1 mark each for each part)</i>																																																									
	OR																																																									
	Write the data type and size of INo column of 'ITEM' table.																																																									
	Data Type: Char/Varchar Size :3																																																									
	<p><i>(1 mark each for each part)</i> Note : Any size greater than 3 also to be accepted</p>																																																									
(c)	With reference to the above given tables (in Q6 b), Write commands in SQL for (i) to (iii)																																																									
(i)	To display names of Items,SNo and Names of Suppliers supplying those items for those who have stores located in North area.	2																																																								
Ans	<pre> SELECT IName , SNo , SName FROM ITEM, SUPPLIER WHERE ITEM.SNo=SUPPLIER.SNo AND AREA = 'North' ; OR SELECT IName , SNo , SName FROM ITEM I , SUPPLIER S WHERE I.SNo=S.SNo AND Area = 'North' ; </pre>																																																									

	OR	
	<pre>SELECT ITEM.IName , ITEM.SNo , SUPPLIER.SNAME FROM ITEM, SUPPLIER WHERE ITEM.SNo=SUPPLIER.SNo AND SUPPLIER.Area = 'North' ;</pre>	
	<p>(½ mark for SELECT) (½ mark for FROM) (½ mark for correct use of join) (½ mark for correct use of condition)</p>	
(ii)	To display Names of Items , SNo, Price and corresponding names of their suppliers of all the Items in ascending order of their Price.	2
Ans	<pre>SELECT INAME, SNo, Price, SName FROM ITEM, SUPPLIER WHERE ITEM.SNo=SUPPLIER.SNo ORDER BY Price;</pre>	
	<p>(½ mark for SELECT) (½ mark for FROM) (½ mark for correct use of join) (½ mark for correct use of order by)</p>	
(iii)	To display Item Name wise, Minimum and Maximum Price of each item from the table Item. i.e. display IName , minimum price and maximum price for each IName.	2
Ans	<pre>SELECT IName, MIN(Price), MAX(Price) FROM Item GROUP BY IName;</pre>	
	<p>(½ mark for SELECT) (½ mark for MIN) (½ mark for MAX) (½ mark for GROUP BY)</p>	
	OR	
	What will be the number of rows in the Cartesian product of the above two tables?	
Ans	35	
	(2 mark for correct value)	
7 (a)	State one way with which an online shopper can be sure that he/she is using a secure website	1
Ans	<ul style="list-style-type: none"> ● By checking the URL of the website. If it begins with “https” instead of “http” it means that the site is secured . ● By checking for the padlock icon on the browser window. 	
	(1 marks for correct answer)	
(b)	Write 2 precautions to be followed while doing Online shopping.	2
Ans	<ul style="list-style-type: none"> ● Verify authenticity of the website / vendor ● Check the product details and past reviews ● Verify the payment gateway provided by the website. ● Avoid using public computers while doing online shopping . ● Browse privately using incognito/InPrivate mode. 	
	(1 marks for each valid correct precaution)	

(c)	<p>Mr. Ibrahim is creating a form for Hair Care Salon application. Help him to choose the most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries:</p> <table border="1" data-bbox="220 293 1393 613"> <thead> <tr> <th>S.No.</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>To let the user enter NAME</td> </tr> <tr> <td>2</td> <td>To let the user enter PHONE NUMBER</td> </tr> <tr> <td>3</td> <td>To let the user choose HAIR SERVICE out of washing/ dyeing/ styling/ straightening. More than one service may be chosen.</td> </tr> <tr> <td>4</td> <td>To let the user choose one Mode of Payment out of the categories : Cash/Credit Card/Debit Card/Paynn</td> </tr> </tbody> </table>	S.No.	Function	1.	To let the user enter NAME	2	To let the user enter PHONE NUMBER	3	To let the user choose HAIR SERVICE out of washing/ dyeing/ styling/ straightening. More than one service may be chosen.	4	To let the user choose one Mode of Payment out of the categories : Cash/Credit Card/Debit Card/Paynn	2
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Ans	<table border="1" data-bbox="220 663 1388 992"> <thead> <tr> <th>S.No.</th> <th>Control Name</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Textfield</td> </tr> <tr> <td>2</td> <td>Textfield</td> </tr> <tr> <td>3</td> <td>ListBox/CheckBox</td> </tr> <tr> <td>4</td> <td>Radiobutton/ Combobox</td> </tr> </tbody> </table> <p><i>(½ mark for each correct answer)</i></p>	S.No.	Control Name	1.	Textfield	2	Textfield	3	ListBox/CheckBox	4	Radiobutton/ Combobox	
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