Sample Question Paper

Subject:<u>Informatics Practices</u>

Class: XII

Session 2016-17

Ti	me: 3 I	Hrs. M.M. – 70	0
1	(-)	A.C	1
1	(a)	After realizing the issues with proprietary software, Ms. Sunita has decided to use only Open Source Software. Suggest any one suitable open source software to her, for each of the following categories: i. Operating System ii. Browser	1
	(b)	Expand the following: i. ODF ii. PPP	1
	(c)	What is Domain Name Resolution?	1
	(d)	How a Phonetic text entry is different from Keymap based text entry?	1
	(e)	Which of the following activity can be termed as Eavesdropping:	2
		 i. If Jack sets up an unauthorized parallel telephone line to capture the data. ii. If Jill has stolen his friend's keyboard. iii. If Martina installs some receiver hardware to capture the data while on its way. iv. If Kim gets someone's login information by casually watching what he/she is typing. Select the best suitable option from the following: i. Option i only ii. Option i and ii both iv. Option i and iii both How Eavesdropping is different from snooping by mentioning any one activity which will be termed as snooping? 	
	(f)	It's an era of networking! Almost everyone and everything is connected through one way or the other, hats off to the technology. We have never been so much linked as we are today. Daniel has just started his hands on practice of networking. Help him in the following: I. He has just connected 10 computers of his resource room to establish a network. Name the network (LAN/MAN/PAN/WAN) which will be formed. Mention any two main benefits which Daniel could achieve by establishing a network. II. Help him in identifying the correct topology which has following	4

		1	
		characteristics: Its very easy to diagnose the fault in this topology. Failure of central hub/switch leads to failure of the entire network.	
		Depict the topology by drawing the diagram showing 4 interconnected computers through central hub/switch.	
2	(a)	Shalini is learning Java programming language, as it allows developers to write code that can run on any machine, regardless of architecture or platform. Help her in finding solutions of her problems: I. She wants to compare two integer values for equality in her java code. Out of (=) and (= =), which operator she should use and why? II. Help her in writing Java code to initialize two integer variables named num1 and num2 with values 5 and 10 respectively. Increase the value of num1 by 5 and decrease the value of num2 by 5.	4
	(b)	Mr. Sahil, a programmer in a VISA processing company, has written the following code:	2
		<pre>int ch=Integer.parseInt(jTextField1.getText()); switch(ch) { case 1: jTextField2.setText("Short Term Single Entry Visa Granted"); case 2: jTextField2.setText("Short Term Multiple Entry Visa Granted"); case 3: jTextField2.setText("Long Term Single Entry Visa Granted"); case 4: jTextField2.setText("Long Term Multiple Entry Visa Granted"); default: jTextField2.setText("Invalid Entry"); }</pre>	
		No matter what value is being entered in the text field jTextField1, this program always give a message "Invalid Entry". Help Mr. Sahil in identifying the problem and its reason. Also suggest him a suitable correction in the code.	
	(c)	Realizing the importance of the Internet, Ms. Shikha a Mathematics teacher, has decided to use Internet as a medium to teach her students Mathematics in an interesting way.	4

I. She wants to design a webpage as shown below to create a mathematics tutorial on the topic "Shapes" using HTML.

	pes using ITTVIL.
Mathema	atics in a fun way
Shapes	Images
Circle	
Square	

She has written following HTML code for the same but she is not getting the desired output. Help her in identifying the error(s) and suggest the suitable corrections:

```
<html>
<head><title>Shapes</title></head>
<body>
Mathematics in a fun way
Shapes
Images
Circle
<img source="circle.jpg">
Square
<img source="square.jpg">
</body>
</html>
```

II. Help her in matching Column A with suitable statements of Column 'B'

		Column A	Column B	
		XML	We use predefined tags to design	
			webpages.	
		It is designed to store	HTML	
		and transport data		
		Tags are not case	XML	
		sensitive		
		HTML	Elements must have a closing tag.	
3	(a)	In today's digitized world w	with a need to store data electronically, it is very	4
	(4)		n the databases. SQL is used to interact with the	
		Database Management Syst		
			mmands according to their type :(DDL/DML)	
		i. INSERT IN		
		I =	use with Select to achieve the following:	
			that match with any value in a list of specified values.	
			epeated values of a column from a table.	
			ble named Orders, she has been asked to increase the	
			alesamount by 20. She has written the following query	
		for the same.	ders Add salesamount =salesamount+20;	
		After table Of	dels Add salesamount –salesamount+20,	
		Is it the correct query?Justif	îv.	
		1 3	•	
	(b)	I. Name any one Sing	le row function and any one Aggregate function. Also	4
			erence in their working.	
		II. Explain why the fo	ollowing queries give different outputs on execution:	
		· GELEGE GO	NINE/ENLANE) EDOM EMD	
			OUNT(ENAME) FROM EMP;	
		Output:		
		5		
		ii SELECT Co	ount(*) FROM EMP;	
		Output:	with Trom Em,	
		8		
	(c)	_	able "Customer" in the database "Test". Immediately	2
			n of the database, she wrote the Rollback command to	
L			le. Did she execute rollback successfully? Explain.	
4	(a)		understand the statement "Java is a case sensitive	1
			derstanding the above mentioned statement by giving	
		suitable example.		
	(b)		frame in Netbeans in which she has used four Radio	1
			t that only one radio button out of four should be	
		selected at a time. Which	property of the Radio Button should be selected to	

	achieve the same?	
(c)	What will be displayed in jTextArea1 after the following code is executed:	1
	int i;	
	for(i=10;i<50;i=i+30)	
	{ i=i+15;	
	jTextArea1.append(""+i);	
	}	
(1)	jTextArea1.append("\n"+i);	4
(d)	Do as directed:	4
	I. Find the output of the following Java code snippet after execution of each java statement labelled as Stmt 1, Stmt 2, Stmt 3, Stmt 4:	
	String str1="VASUDHAIVA",str2="KUTUMBAKAM";	
	jTextArea1.append((str1.substring(0,4))); //Stmt 1	
	jTextArea1.append((str2.substring(4))); //Stmt 2	
	jTextArea1.setText(jTextArea1.getText()+jTextArea1.getText().length());//Stmt 3 jOptionPane1.showMessageDialog(null,jTextArea1.getText().length()); //Stmt 4	
	II. Rewrite the following code using do while loop:	
	int num=Integer.parseInt(jTextField1.getText());	
	while(num<=40)	
	{ jOptionPane1.showMessageDialog(null,num);	
	num=num*20;	
)	
(e)	jOptionPane1.showMessageDialog(null,"Bye Bye"); The following code has error(s). Rewrite the correct code underlining all the	2
(0)	corrections made:	_
	value1=1, value2=2;	
	while(value1 <value2)< td=""><td></td></value2)<>	
	jTextArea1.append ("\n"+value1*value2; value1++	
	}	
(6)		
(f)	Mr. Ashish works as a programmer in "Universal Technologies Pvt. Ltd.". He has designed a Library software to generate the member ship fee depending upon the membership type considering discount eligibility as well. A screenshot of the same is shown below:	

Read More, Learn More....

Help him in writing the code to do the following:

i. After selecting appropriate Radio Button, when 'Check Fee' button is clicked, fee should be displayed in the respective text field according to the following criteria:

Membership Type	Fee
Monthly	500
Quarterly	1000
Yearly	1500

ii. After selecting appropriate Radio Button, when 'Check Discount' button is clicked, appropriate discount should be displayed in the respective text field according to the following criteria:

Discount Eligibility	Discount
Students	200
Other	100

6

_ 🗆 ×

		iii. When 'Calculate' button is clicked, Net Fee should be calculated a displayed in the respective text field as per the given formula:							
		iv. When	Net Fee = Fee – Discount When 'Clear All' button is clicked, All the text fields should be cleared.						
5	(a)	Write the output of the following SQL queries: SELECT POW(INSTR('My_Database','_'),2);							
	(b)			(zero) same? Jusify your answer.					
	(c)			wing questions:					
		PanNo		Name		Phoneno	Address		
		CIZPW	123A	Rajesh Kumar		9599123456	WZ11 – Rajouri Garden, Delhi		
		ABWQ	2341B	Hemant Kuma	r	9812345678	Modern Apartments, Pitampura, Delhi		
		DERA9	786T	Naveen Sharm	a	7868654235	CA 22, Sector 21 Rohini,Delhi		
		PARD3	457L	Sourabh Verm	a	8933217645	JD 61, Sector20,Gurgaon		
		GDTF8	762P	Nishant Kuma	r	NULL	Modern Apartments, Pitampura, Delhi		
		MERT2	2376G	Hemant Kuma	r	9811110891	F40, Sector 19, Rohini, Delhi		
		i. N		e column that mi	ight have	a Primary Ke	ey constraint. Justify your		
		ii. N	nswer. [ame the nswer.	e column that m	ight have	e a Unique cor	nstraint. Justify your		
	(d)	ar ii. N ar	ame the	owing table:		e a Unique con	nstraint. Justify your		
	(d)	ar ii. N ar	ame the	owing table:		-	PharmacyLocation		
	(d)	ii. N ar Consider	ame the nswer. the following	owing table:	Table: P	harmaDB Pharmacy Name			
	(d)	ii. N ar Consider	ame the nswer. the foll Drug	owing table: DrugName	Table: P	harmaDB Pharmacy Name Rx	PharmacyLocation		
	(d)	ii. N ar Consider RxID R1000	Drug ID 5476	owing table: DrugName Amlodipine	Table: P	Pharmacy Name Rx Pharmacy Raj	PharmacyLocation Pitampura, Delhi Bahadurgarh,		
	(d)	ii. N ar Consider RxID R1000 R1001	Drug ID 5476	Owing table: DrugName Amlodipine Paracetamol	<u>Table: P</u> Price 100.00 15.00	Pharmacy Name Rx Pharmacy Raj Medicos MyChemi st	PharmacyLocation Pitampura, Delhi Bahadurgarh, Haryana Rajouri Garden,		

6	(e)	ii. To display a iii. To display "Gurgad iv. To display records On the basis of the following queries: i. SELECT R IN ("Rx ii. SELECT Pl	the price of "Amball those medicines the Maximum price on" the Drug ID, Drug in descending order Table Pharma, write the Parmacy", "Raj MarmacyName, COMACY NAME	odipine" by s whose price offered by Name and their price the output Price from I Medicos");	ce is in the roy pharmacy Pharmacy Norice. Put(s) produce PharmaDB v	y located in Name of all the red by executing the where PharmacyName naDB GROUP BY	2
	(u)	Field name J_Code J_Description J_Chg_Hr J_Lastupdate		Size Size Size Size	Constraint Primary Ko Not Null		
	(b)	Consider the table referential integrity	:	ch are linke	ed with each	other and maintains	
		SAPID	ItemCode	ItemN	ame	ItemStorage Location	
		S1001	1001	Receiv	ver	W12-B3-R24	
		S1002	1002		onder	W13-B7-R87	
		S1003	1003	-	y Bank	W21-B1-R87	
		S1004	1004	Invert		W21-B11-R2	
		S1005	1005	Gense		W22-B15-R16	
			Ta	ble : Store			
		StoreID	ItemCode	StoreI	Location	ReceivedDate	
		1201	1001	Hauz	Khas	2016/05/20	
		1202	1002	Rajou	ri Garden	2016/06/14	
		1203	1003	Rohin	i	2016/05/06	
		1204	1004	Hauz	Khaas	2016/07/15	
		1205	1005	Rajeno	dra Place	2016/05/27	
		With reference to the	he above given tab	les, write c	ommands in	SQL for (i) and (ii)	6
		and output for (iii)					
		i. To display the Ite	emCode,ItemName	and Recei	vedDate of	all the items .	

		ii. To display SAPID, ItemName, ItemStorageLocation of all the items whose Received date is after 2 nd May 2016.					
		iii. SELECT SAPID,ItemName,STOREID FROM SAP,Store WHERE					
		SAP.ItemCode=Store.ItemCode AND StoreLocation = "Hauz Khas"					
	(c)	What will	be the degree and cardinality of t	he cartesian product formed while	1		
			g both the above given tables 'SA				
	(d)	Sangeeta i	s not able to add a new record in	the table 'Store' through the following	g 1		
		query:					
			store values (1206,1006,'Karol I	Bagh', '2016/07/25');			
L_			e error if there is any.				
7	(a)			lentify the category it belongs out of e-	1		
			ce/e-Business/e-Learning:				
			MAZON: www.amazon.in				
		ii. PMO(Prime Minister's office): www.pmo.gov.in					
	(b)	Mention any one social and economic benefit of ICT.					
	(c)	wishes to for the spe	design a Flight booking page. He	'Plan My Trip' travel company. Shelp her in choosing appropriate control el, Radio button, Check box, List box olumn.	s		
		S. No.	Control used to	Control			
		1	Traveler's Name				
		2 Source City/Destination City					
		Trip Type (One Way Trip / Round Trip / Multi City or Stop Over)					
		4	Booking Class (Economy/Premium Economy/Business)				

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Ti	me: 3 I	Hrs. M.M. – 70	0
1	(a)	After realizing the issues with proprietary software, Ms. Sunita has decided to use only Open Source Software. Suggest any one suitable open source software to her, for each of the following categories: i. Operating System ii. Browser	1
	Ans	i. Linux or Google Chrome OS or any other open source OS (½ Mark for correct answer) ii. Mozilla Firefox or Google Chrome or any other open source browser (½ Mark for correct answer)	
	(b)	Expand the following: i. ODF ii. PPP	1
	Ans	i. Open Document Format ii. Point to Point Protocol (½ Mark for each correct answer)	
	(c)	What is Domain Name Resolution?	1
	Ans	Domain Name Resolution is the process of getting corresponding IP address from a domain name. (1 Mark for correct answer)	
	(d)	How a Phonetic text entry is different from Keymap based text entry?	1
	Ans	Phonetic text entry is different from keymap based text entry as in the keymap based text entry keyboard keys are mapped to specific characters using a keymap whereas in phonetic text entry text translation is done by some software based on probable pronunciation of the entered text. (1 Mark for correct difference)	
	(e)	Which of the following activity can be termed as Eavesdropping:	2
		 i. If Jack sets up an unauthorized parallel telephone line to capture the data. ii. If Jill has stolen his friend's keyboard. iii. If Martina installs some receiver hardware to capture the data while on its way. iv. If Kim gets someone's login information by casually watching what 	

	he/she is typing.	
	Select the best suitable option from the following: i. Option i only	
	ii. Option ii only	
	iii. Option i and ii both	
	iv. Option i and iii both	
	How Eavesdropping is different from snooping by mentioning any one activity which will be termed as snooping?	
Ans	iv. Option i and iii both	
	(1 Mark for correct answer)	
	Snooping refers to gaining unauthorized access to another person's or organisation's data: For e.g. Reading the files on someone's computer in an unauthorized manner.	
	(1 Mark for correct answer)	
(f)	It's an era of networking! Almost everyone and everything is connected through one way or the other, hats off to the technology. We have never been so much linked as we are today. Daniel has just started his hands on practice of networking. Help him in the following: I. He has just connected 10 computers of his resource room to establish a network. Name the network (LAN/MAN/PAN/WAN) which will be formed. Mention any two main benefits which Daniel could achieve by establishing a network. II. Help him in identifying the correct topology which has following characteristics: Its very easy to diagnose the fault in this topology. Failure of central hub/switch leads to failure of the entire network. Depict the topology by drawing the diagram showing 4 interconnected computers through central hub/switch	4
Ans	 i. LAN (1 Mark for correct answer) Benefits of Networking: Resource sharing Cost saving (½ Mark for each correct benefit) ii. Star Topology (1 Mark for correct answer)	

		(1 Mark for correct diagram)	
2	(a)	Shalini is learning Java programming language, as it allows developers to write code that can run on any machine, regardless of architecture or platform. Help her in finding solutions of her problems: I. She wants to compare two integer values for equality in her java code. Out of (=) and (= =), which operator she should use and why? II. Help her in writing Java code to initialize two integer variables named num1 and num2 with values 5 and 10 respectively. Increase the value	4
	Ans	I. = = operator As = operator is assignment operator which will be used to assign the values to any variable/constant while = = is comparison operator for equality. (1 Mark for correct answer) (1 Mark for correct explanation) II. int num1=5, num2=10; num1=num1+5; num2=num2-5; (½ Mark for each correct statement)	
	(b)	Mr. Sahil, a programmer in a VISA processing company, has written the following code: int ch=Integer.parseInt(jTextField1.getText()); switch(ch) { case 1: jTextField2.setText("Short Term Single Entry Visa Granted"); case 2: jTextField2.setText("Short Term Multiple Entry Visa Granted"); case 3: jTextField2.setText("Long Term Single Entry Visa Granted"); case 4: jTextField2.setText("Long Term Multiple Entry Visa Granted"); default:	2

¡TextField2.setText("Invalid Entry"); No matter what value is being entered in the text field jTextField1, this program always give a message "Invalid Entry". Help Mr. Sahil in identifying the problem and its reason. Also suggest him a suitable correction in the code. In absence of break 'fall through' condition occurs. As a result control will not Ans be able to come out of the switch block after first matching. So all the messages will be overwritten by the last message i.e. "Invalid Entry" due to setText() method. He should use break statement in each case. (1 Mark for correct identification of the problem and reason) (1 Mark for correct correction) Realizing the importance of the Internet, Ms. Shikha a Mathematics teacher, has (c) decided to use Internet as a medium to teach her students Mathematics in an interesting way. I. She wants to design a webpage as shown below to create a mathematics tutorial on the topic "Shapes" using HTML. Mathematics in a fun way Shapes **Images** Circle Square She has written following HTML code for the same but she is not getting the desired output. Help her in identifying the error(s) and suggest the suitable corrections: <html> <head><title>Shapes</title></head> <body> Mathematics in a fun way

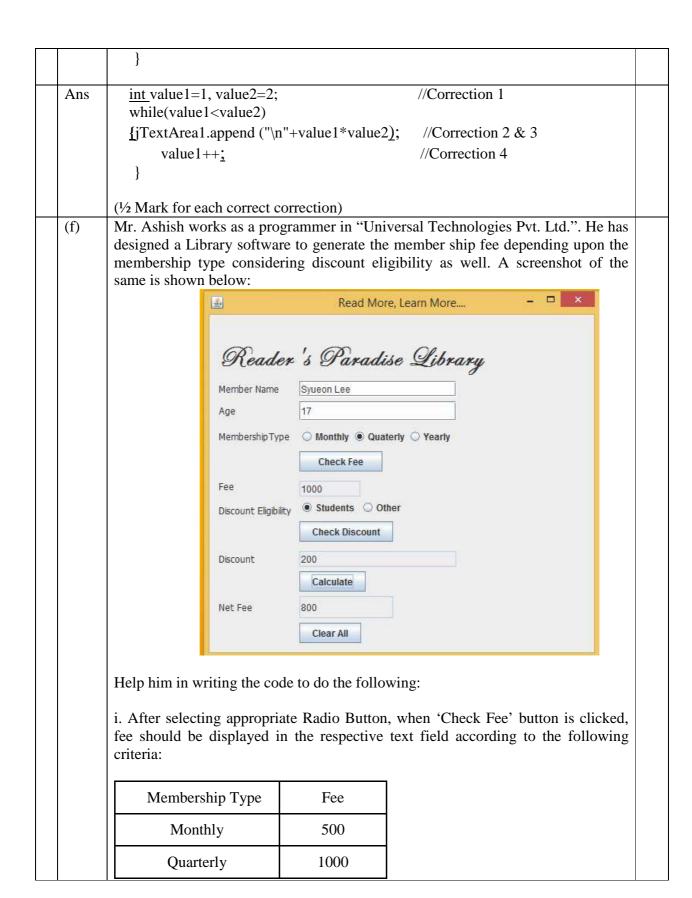
	Shapes					
	Images					
	Circle					
	 <	:/td>				
	Square					
	<pre>source="square.jpg"></pre>					
	//tr>					
	3					
	II Halp har in matching Column	A with suitable statements of Colu	mn 'R'			
	II. Help her in materning Column 2	A with suitable statements of Colu	IIIII D			
	Column A	Column B	7			
	XML		-			
	AWIL	We use predefined tags to design				
	Tr. 1 1 1 1 1	webpages.				
	It is designed to store and	HTML				
	transport data	VD 67	_			
	Tags are not case sensitive	XML	_			
	HTML	Elements must have a closing				
		tag.				
Ans						
	<html></html>					
	<head><title>Shapes</title><td>ead></td><td></td></head>	ead>				
	<body></body>					
		//Corre	ction 1			
	Mathematics in a	<u>1 fun way</u> //Corr	ection 2 & 3			
		-				
	Shapes					
	Images					
	Circle					
		> //Correc	etion 4			
	<pre></pre> <pre><</pre>	// Conc.				
l I	Square					

			//Correction 4				
			,, 2 3333 1333				
		· · · · · · · · · · · · · · · · · · ·					
		(½ Mark for each correct correction)					
		п.					
		Column A	Column B				
		XML	Elements must have a closing tag.				
		It is designed to store and transport data	XML				
		Tags are not case sensitive	HTML				
		HTML	We use predefined tags to design				
			webpages.				
		(½ Mark for each correct matching)					
	()		1 . 1				
3	(a)	In today's digitized world with a need to st	· · · · · · · · · · · · · · · · · · ·	4			
		important to store the data in the databases.	. SQL is used to interact with the				
		Database Management System.					
		I Classify the following commands accord	ing to their type (DDI /DMI)				
		I. Classify the following commands accord i. INSERT INTO ii. Al	LTER TABLE				
		II. Which clause would you use with Select					
			an any value in a list of specified values.				
		ii. Used to display unrepeated values of III. Chhavi has created a table named Orde					
		value of a column named salesamount by 2					
		for the same.	co. She has written the following query				
		Alter table Orders Add salesa	amount —salesamount⊥20·				
		Titel table Orders rad salest	amount –saicsamount 120,				
		Is it the correct query? Justify.					
	Ans:	I.					
		i. INSERT INTO : DML command					
		ii. ALTER TABLE: DDL command					
		(1/2 Mark for each correct arguer)					
		(½ Mark for each correct answer) II.					
		a. IN					
		b. Distinct					
		o. Distinct					
		(½ Mark for each correct answer)					

	III. No, Alter command is used to make changes to the structure of the table, but Chhavi has to make changes in the data stored in the table. Hence, she should write the following query:	
	Update Orders set salesamount =salesamount+20;	
	(1 Mark for the justification)	
	(1 Mark for the correct query)	
(b)	I. Name any one Single row function and any one Aggregate function. Also mention the difference in their working.	4
	II. Explain why the following queries give different outputs on execution:	
	i. SELECT COUNT(ENAME) FROM EMP; Output: 5	
	ii. SELECT Count(*) FROM EMP; Output: 8	
Ans:	I.	
THIS.	Single row function: Length() (any single row function) Aggregate Function: Max() (any other aggregate function)	
	A single row functions works on every row of the table and hence gives output for each row in the table.	
	An Aggregate function also known as Multiple row function works on a group of rows and returns only 1 output.	
	(1 Mark for the writing any 1 valid Single row and Aggregate function) (1 Mark for writing the difference in their working)	
	II.	
	Aggregate functions ignore NULL values. The first query counts the Not Null values in the column ENAME hence the output is 5.	
	But the second query counts all the records present in the table EMP which gives the output as 8.	
	Hence this implies that there are 8 rows in the table and the Ename column contains the name of only 5 employees. 8-5 = 3, i.e. 3 names have been left blank. This means that there are 3 null values in the column ENAME.	
	(1 Mark for giving individual explanation of the queries)	

(2 Marks for giving individual explanation of the queries along with the reason for difference in the output)				
(c) Geetanjali had created a table "Customer" in the database "Test". Immediately after the successful creation of the database, she wrote the Rollback command to undo the creation of the table. Did she execute rollback successfully? Explain. Ans: A table in MYSQL is created using CREATE TABLE command which is a DDL command. A DDL command cannot be rolled back hence she needs to use the DROP TABLE command to remove the table. (2 Marks for the correct answer) (½ mark only for suggesting the use of DROP TABLE command) Ms. Meena is not able to understand the statement "Java is a case sensitive language". Help her in understanding the above mentioned statement by giving suitable example. Ans Java is a case sensitive language as java distinguish between uppercase and lowercase very strictly. For example: int num1, Num1; Although both variable have same name in the above statement but java will treat them two different variables due to first character in different case. (1 Mark for correct answer) (b) Ms. Rachel is designing a frame in Netbeans in which she has used four Radio Button controls. She want that only one radio button out of four should be selected at a time. Which property of the Radio Button should be selected to acheive the same? Ans buttonGroup (1 Mark for correct answer) (c) What will be displayed in jTextAreal after the following code is executed: int i; for(i=10;i<50;i=i+30) { i=i+15; jTextArea1.append(""+i); } jTextArea1.append(""+i); }				
(c) Geetanjali had created a table "Customer" in the database "Test". Immediately after the successful creation of the database, she wrote the Rollback command to undo the creation of the table. Did she execute rollback successfully? Explain. Ans: A table in MYSQL is created using CREATE TABLE command which is a DDL command. A DDL command cannot be rolled back hence she needs to use the DROP TABLE command to remove the table. (2 Marks for the correct answer) (½ mark only for suggesting the use of DROP TABLE command) Ms. Meena is not able to understand the statement "Java is a case sensitive language". Help her in understanding the above mentioned statement by giving suitable example. Ans Java is a case sensitive language as java distinguish between uppercase and lowercase very strictly. For example: int num1, Num1; Although both variable have same name in the above statement but java will treat them two different variables due to first character in different case. (1 Mark for correct answer) (b) Ms. Rachel is designing a frame in Netbeans in which she has used four Radio Button controls. She want that only one radio button out of four should be selected at a time. Which property of the Radio Button should be selected to acheive the same? Ans buttonGroup (1 Mark for correct answer) (c) What will be displayed in jTextAreal after the following code is executed: int i; for(i=10;i<50;i=i+30) { i=i+15; jTextArea1.append(""+i); } jTextArea1.append(""+i); }			(½ Mark for identifying the error)	
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<pre>int i; for(i=10;i<50;i=i+30) { i=i+15; jTextArea1.append(""+i); } jTextArea1.append("\n"+i);</pre>				
for(i=10;i<50;i=i+30) { i=i+15; jTextArea1.append(""+i); } jTextArea1.append("\n"+i);		(c)	What will be displayed in jTextArea1 after the following code is executed:	1
{ i=i+15; jTextArea1.append(""+i); } jTextArea1.append("\n"+i);				
i=i+15; jTextArea1.append(""+i); } jTextArea1.append("\n"+i);				
} jTextArea1.append("\n"+i);				
			jTextArea1.append(""+i);	
			jTextArea1.append("\n"+i);	
		Ans		

	55	
	(½ Mark for each correct output)	
(d)	Do as directed:	4
	I. Find the output of the following Java code snippet after execution of each java statement labelled as Stmt 1, Stmt 2, Stmt 3, Stmt 4:	
	String str1="VASUDHAIVA",str2="KUTUMBAKAM"; jTextArea1.append((str1.substring(0,4))); //Stmt 1 jTextArea1.append((str2.substring(4))); //Stmt 2 jTextArea1.setText(jTextArea1.getText()+jTextArea1.getText().length());//Stmt 3 jOptionPane1.showMessageDialog(null,jTextArea1.getText().length()); //Stmt 4	
	II. Rewrite the following code using do while loop: int num=Integer.parseInt(jTextField1.getText()); while(num<=40)	
	jOptionPane1.showMessageDialog(null,num); num=num*20; }	
	jOptionPane1.showMessageDialog(null,"Bye Bye");	
Ans	I. VASU VASUMBAKAM VASUMBAKAM10 12	
	(½ Mark for each correct output)	
	II. int num=Integer.parseInt(jTextField1.getText()); do {	
	jOptionPane1.showMessageDialog(null,num); num=num*20; } while(num<=40);	
	jOptionPane1.showMessageDialog(null,"Bye Bye");	
(e)	(2 Mark for correct code in do while) The following code has error(s). Rewrite the correct code underlining all the	2
(6)	corrections made : value1=1, value2=2; while(value1 <value2)< td=""><td>2</td></value2)<>	2
	jTextArea1.append ("\n"+value1*value2; value1++	



	Yearly	1500				
	ii. After selecting appropriate Radio Button, when 'Check Discount' button is clicked, appropriate discount should be displayed in the respective text field according to the following criteria:					
	Discount Eligibility Discount					
	Students	200				
	Other	100				
	displayed in the respective Net Fee =	text field as per	Net Fee should be calculated and the given formula: the text fields should be cleared.			
Ans	i. Code for 'Check Fee' but if (jRadioButton1.isSelected jTextField3.setText(") else if (jRadioButton2.isSed jTextField3.setText(") else if (jRadioButton3.isSed jTextField3.setText(") (2 Mark for correct code) ii. Code for 'Check Discout if (jRadioButton4.isSelected jTextField4.setText("200") else if (jRadioButton5.isSeld) jTextField4.setText("100") (2 Mark for correct code) iii. Code for 'Calculate' but int fee=Integer.parseInt(jTextField5.setText(") jint net=fee-disc; jTextField5.setText(""+net (1 Mark for correct code)) iv. Code for 'Clear All' but int fee integer integ	ed()) 500"); elected()) 1000"); elected()) 1500"); int' button d()) 0; lected()) etton extField3.getTex FextField4.getTex (t);				

		jTextField1.setT	, , ,					
		jTextField2.setT	* , , .					
		jTextField3.setT	, , ,					
		jTextField4.setT	* , , .					
		jTextField5.setText("");						
		`	(1 Mark for correct code)					
5	(a)		of the following SQ POW(INSTR('My_			1		
	Ans:	Output:						
		9						
		(1mark for the c	correct output)					
	(b)		zero) same?Jusify yo	ur answer.		1		
	Ans:				ailable, unassigned or			
	1 11151		ro is a defined value.		uniwere, uniweengmen er			
		(1 mark for the	correct answer)					
	(c)	Observe the give	en table carefully and	answer the follow	ving questions:	2		
		PanNo	Name	Phoneno	Address			
		CIZPW123A		9599123456				
		CIZP W 125A	Rajesh Kumar	9399123430	WZ11 – Rajouri Garden, Delhi			
		ABWQ2341B	Hemant Kumar	9812345678	Modern			
		AD W Q2541D	Tiemant Kumar	7012343070	Apartments,			
					Pitampura, Delhi			
		DERA9786T	Naveen Sharma	7868654235	CA 22, Sector 21			
					Rohini,Delhi			
		PARD3457L	Sourabh Verma	8933217645	JD 61,			
					Sector20,Gurgaon			
		GDTF8762P	Nishant Kumar	NULL	Modern			
					Apartments,			
					Pitampura, Delhi			
		MERT2376G	Hemant Kumar	9811110891	F40, Sector 19,			
					Rohini, Delhi			
		i. Name the	e column that might l	nave a Primary Ke	ey constraint. Justify your			
		answer.	S	·	- • • •			
		ii. Name the column that might have a Unique constraint. Justify your						
	Ans:	answer. 1. PanNo m	nust be a Primary Key	v as it contains un	ique and NOT NULL			
		values.		,	1			
			must have a Unique	constraint as it co	ntains non repeating values	S		
			ique constraint allow					
		(1 M 1 C	m a amma at 21 am 10° a 11°	on of 41 1				
	(1 Mark each for correct identification of the column and the correct reason.)							

	(1 Mark	for the	correct identific	cation of	the columns	<u>s)</u>	
(d)	Consider the following table:						4
	Table: PharmaDB						
	RxID	Drug	DrugName	Price	Pharmacy	PharmacyLocation	
		ID	-		Name		
	R1000	5476	Amlodipine	100.00	Rx	Pitampura, Delhi	
	R1001	2345	Paracetamol	15.00	Pharmacy Raj	Bahadurgarh,	
	Kiooi	2545	Taracciamor	13.00	Medicos	Haryana	
	R1002	1236	Nebistar	60.00	MyChemi	Rajouri Garden,	
	D1002			1.50.00	st	Delhi	
	R1003	6512	VitaPlus	150.00	MyChemi	Gurgaon, Haryana	
	R1004	5631	Levocitrezine	110.00	st RxPharma	South	
		3031	Levellezine	110.00	cy	Extension, Delhi	
Ans:	 i. To increase the price of "Amlodipine" by 50. ii. To display all those medicines whose price is in the range 100 to 150. iii. To display the Maximum price offered by pharmacy located in "Gurgaon" iv. To display the Drug ID, DrugName and Pharmacy Name of all the records in descending order of their price. i. Update PharmaDB set price = price+50 where DrugName = "Amlodipine"; (½ Mark for correct usage of update) (½ Mark for correct condition) 						
			from PharmaDB	-	rice between	100 and 150;	
(½ Mark for correct use of Select) (½ Mark for correct condition)							
		like"	ax(Price) from F %Gurgaon%";		B where Phar	macyLocation	
	(½ Mark for correct Select statement) (½ Mark for correct condition)						
		Price	desc;		acyName fro	om PharmaDB order by	
	(½ Mark	for ore		· 			
(e)	On the ba	asis of t	he Table Pharma	a ,write th	ne output(s) p	roduced by executing the	2

		IN ("Rx ii. SELECT Ph	ID, DrugName, Prico Parmacy", "Raj Med armacyName, COUN ACY NAME	icos");		here PharmacyName	
	Ans	i. RxID DrugNam R1000 Amlodipi R1001 Paracetan R1004 Levocitre (1 mark for the corn ii. Pharmacy N Rx Pharm Raj Med My Cher	ne Price ne 100.00 nol 15.00 zine 110.00 rect output) ame COUNT(*) macy 2 icos 1				
6	(a)	(1 mark for the corn Write SOL query to	rect output) o create a table "Job"	with th	e following s	tructure:	2
		Field name J_Code J_Description J_Chg_Hr J_Lastupdate	Table Datatype Integer Varchar Integer Date	e: Job Size 3 25	Constraint Primary Ke Not Null	y —	
	Ans:	Create table Job (J_Code Integer(3) Primary Key, J_Description Varchar(25) Not Null, J_Chg_Hr Integer, J_Lastupdate Date); (½ Mark for create table statement) (½ Mark for all the fieldnames with datatypes) (½ Mark for correct placement of Primary key constraint) (½ Mark for correct placement of Not null constraint)					
	(b)	(b) Consider the tables given below which are linked with each other and maintains referential integrity: Table: SAP					6
		SAPID	ItemCode	ItemN	ame	ItemStorage Location	

	C1001	1001	Danima	W12 D2 D24
	S1001 S1002	1001	Receiver	W12-B3-R24
			Transponder Portrans Portr	W13-B7-R87
	S1003 S1004	1003	Battery Bank Inverter	W21-B1-R87 W21-B11-R2
				W21-B11-R2 W22-B15-R16
	S1005	1005	Genset	W22-B13-K10
		Та	able : Store	
	StoreID	Item Code	StoreLocation	ReceivedDate
	1201	1001	Hauz Khas	2016/05/20
	1202	1002	Rajouri Garden	2016/06/14
	1203	1003	Rohini	2016/05/06
	1204	1004	Hauz Khaas	2016/07/15
	1205	1005	Rajendra Place	2016/05/27
			·	
	With reference	to the above given tak	oles, write commands in	n SOL for (i) and (ii)
	and output for		,	(1) (1)
i.		` /	and ReceivedDate of al	1 the items .
Ans:		nCode,ItemName, Re		
	From SAP sa,			
	,	Code=st.ItemCode		
	(½ Mark for c	orrect usage of Select orrect From statemen e correct condition)	•	
ii.			orageLocation of all th	e items whose
		is after 2 nd May 2016.		
Ans:		D, Item N ame, Item S tor	rageLocation	
	From SAP sa,			
	Where sa.Item	Code=st.ItemCode an	d Receiveddate >"2016	5/05/02";
	`	orrect usage of Select	*	
	`	orrect From statemen	,	
	,	e correct join condition of	•	
iii.	` '	e correct condition or	n keceiveaaate) REID FROM SAP sa,S	Store et WHEDE
111.			eLocation = "Hauz Kh	
Ans:	SAPID Iten		CLOCATION - HAUZ KII	uo .
1 1113.	me	nia Storeid		
		eiver 1201		
		1201		
	G1004 T	1204		
	S1004 Inve	erter 1204		

		(1 Mark fo	r each row)			
	(c)			the cartesian product formed while	1	
			both the above given tables 'SA	P' and 'Store' ?		
	Ans:	Degree: 8				
		Cardinality	: 25			
		(½ mark fo	or each correct answer)			
	(d)			the table 'Store' through the following	1	
		query:				
			store values (1206,1006,'Karol I	Bagh', '2016/07/25');		
		Identify the error if there is any.				
	Ans:			in between both the tables, ItemCode		
			1006 cannot be inserted in the table store as there is no corresponding matching			
		entry in the table SAP.				
		(1 Mark fa	or correct error finding)			
7	(a)			lentify the category it belongs out of e-	1	
′	(4)		e/e-Business/e-Learning:	ientify the eategory it belongs out of e		
			IAZON: www.amazon.in			
		ii. PM	O(Prime Minister's office): www	w.pmo.gov.in		
	Ans:		Business			
		ii. e-G	overnance			
			ach for correct answer)			
	(b)		y one social and economic bene	fit of ICT.	2	
	Ans:	Social Ben				
				to stay in touch with their near and		
		Economic 1	dear ones.			
				as it provides transparency in the		
			process and increases accountab	* * *		
			process and increases accountac	inty.		
		(1 Mark e	each for correct Social and Eco	nomic Benefit)		
	(c)			'Plan My Trip' travel company. Sho	e 2	
				elp her in choosing appropriate control		
		_		el, Radio button, Check box, List box	.,	
		Combo box	x, Button and write in the third c	olumn.		
		S. No. Control used to Control				
		1 Traveler's Name				
		2	Source City/Destination City			
		3	Trip Type (One Way Trip / Round Trip / Multi City or Stop Over)			

	4	Booking Class (Economy/Premium Economy/Business)			
Ans			T	1	
	S. No.	Control used to	Control		
	1	Traveler's Name	Text Field		
	2	Source City/Destination City	Combo box		
	3	Trip Type (One Way Trip / Round Trip / Multi City or Stop Over)	Radio button		
	4	Booking Class (Economy/Premium Economy/Business)	Combo box/ Radio button		
	(1/2 mark	for each correct answer)	•		