1	Observe Table:	e the follow Product	ing table a	nd answe	er the par	ts(i) and(ii	i) acc	ordingly	
		Pno	Name		Qty	P	urcha	seDate	
		101	Pen		102	1	2-12	-2011	
		102	Pencil		201	2	21-02	-2013	
		103	Eraser		90	(9-08	-2010	
		109	Sharpene	r	90	3	31-08	-2012	
		113	Clips		900	1	2-12	-2011	
	Write th candida What is	te names of te keys.	most appr	opriate co	olumns, v	which can	be co	onsidered as	
Ans	Candida	ate Kev. Pn	o Name	anty of th					
1 1115	Degree:	:4	<i>s</i> , i vanie						
	Cardina	lity:5							
2	Write S	QL queries	for (i) to (iv) and fi	nd outpu	ts for SQL	. quei	ries (v) to (vi	ii), which are
	based of	n the tables							
	TRAIN	IER							
	TID	TNAME	C	CITY		HIREDA	TE	SALARY]
	101	SUNAINA	A N	/UMBAI		1998-10-	15	90000]
	102	ANAMIK	A E	DELHI		1994-12-	24	80000	
	103	DEEPTI	C	HANDI	GARG	2001-12-	21	82000	
	104	MEENAK	SHI D	DELHI		2002-12-	25	78000	
	105	RICHA	N	IUMBAI		1996-01-	12	95000	
	106	MANIPRA	ABHA C	HENNA	I	2001-12-	12	69000	
	COUR	SE							
	CID	CNAN	IE FI	EES	START	DATE	TID)	
	C201	AGDO	CA 12	2000	2018-0	7-02	101		
	C202	ADCA	15	5000	2018-0'	7-15	103		
	C203	DCA	10	0000	2018-10	0-01	102		
	C204	DDTP	90	000	2018-09	9-15	104		
	C205	DHN	20	0000	2018-08	8-01	101		
	C206	O LEV	/EL 18	3000	2018-0	7-25	105		
	Display	the Trainer	[•] Name, Ci	ty & Sala	ary in des	cending o	rder (of their Hired	late.

	To display the TNAME and CITY of Trainer who joined the Institute in the month of December 2001.
	To display TNAME, HIREDATE, CNAME, STARTDATE from tables TRAINER and COURSE of all those courses whose FEES is less than or equal to 10000.
	To display number of Trainers from each city.
	SELECT TID, TNAME, FROM TRAINER WHERE CITY NOT IN('DELHI', 'MUMBAI');
	SELECT DISTINCT TID FROM COURSE;
	SELECT TID, COUNT(*), MIN(FEES) FROM COURSE GROUP BY TID HAVING COUNT(*)>1;
	SELECT COUNT(*), SUM(FEES) FROM COURSE WHERE STARTDATE< '2018-09-15';
Ans	SELECT TNAME, CITY, SALARY FROM TRAINER ORDER BY HIREDATE;
	SELECT TNAME, CITY FROM TRAINER WHERE HIREDATE BETWEEN '2001- 12-01' AND '2001-12-31';
	SELECT TNAME, CITY FROM TRAINER WHERE HIREDATE >= '2001-12-01' AND HIREDATE<='2001-12-31';
	SELECT TNAME, CITY FROM TRAINER WHERE HIREDATE LIKE '2001-12%';
	SELECT TNAME,HIREDATE,CNAME,STARTDATE FROM TRAINER, COURSE WHERE TRAINER.TID=COURSE.TID AND FEES<=10000;
	SELECT CITY, COUNT(*) FROM TRAINER GROUP BY CITY;
	TID TNAME
	103 DEEPTI 106 MANIPRABHA
	DISTINCT TID
	103
	102

				W OI KSHCCI	<u> 190 - C</u>	4		
	1	.04						
	1	.05						
	-							
	I 1	TID COUNT(*) MIN(FEI	ES)				
	1	.01 2	12000)				
	C		CIM/EEEC)					
	4		50M(FEES) 65000					
3	Ľ	Differentiate be	tween DDL &	DMLcomma	nds. Ide	entify Dl	DL & DML co	mmands from
	tł	he following:-				•		
	()	UPDATE, SEL	LECT, ALTER	, DROP)				
Ans	D	DDL stands for	Data Definitio	n language ar	nd comp	prises of	commands wh	nich will
	c	hange the struc	ture of databas	se object.				
	L	OML stands for	Data Manipul	ation Langua	ge and o	comprise	es of command	ls which
	a	re used to inser	t, edit, view &	delete the da	ta store	d in a da	atabase object.	
		DDL Command	S: ALTER, DE	ROP				
4		DML Command	is: UPDATE, S	SELECI	4 a 4 9 1	Ashile C	ha altr	
4		Lonsider the for	lowing relation	MobileMaster	ster & r	viodiles	IOCK:-	
		M_Id	M_Company	M_Name	M_l	Price	M_Mf_Date	
		MB001	Samsung	Galaxy	4	500	2013-02-12	
			Samsung	Guinny				
		MB003	Nokia	N1100	2	250	2011-04-15	
		MB003 MB004	Nokia Micromax	N1100 Unite3	2	250 500	2011-04-15 2016-10-17	
		MB003 MB004 MB005	Nokia Micromax Sony	N1100 Unite3 XperiaM	2: 4: 7:	250 500 500	2011-04-15 2016-10-17 2017-11-20	
		MB003 MB004 MB005 MB006	Nokia Micromax Sony Oppo	N1100 Unite3 XperiaM SelfieEx	2: 4: 7: 8:	250 500 500 500	2011-04-15 2016-10-17 2017-11-20 2010-08-21	
		MB003 MB004 MB005 MB006	Nokia Micromax Sony Oppo	N1100 Unite3 XperiaM SelfieEx <u>MobileStock</u>	2: 4: 7: 8:	250 500 500 500	2011-04-15 2016-10-17 2017-11-20 2010-08-21	
		MB003 MB004 MB005 MB006	Nokia Micromax Sony Oppo M_Id	N1100 Unite3 XperiaM SelfieEx <u>MobileStock</u> M_Q	22 43 73 83 ty	250 500 500 500 M_	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier	
		MB003 MB004 MB005 MB006 S_Id S001	Nokia Micromax Sony Oppo M_Id MB004	N1100 Unite3 XperiaM SelfieEx <u>MobileStock</u> M_Q 45	22 42 72 82 82 ty	250 500 500 500 M_ Ne	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision	
		MB003 MB004 MB005 MB006 S_Id S001 S002	Nokia Micromax Sony Oppo M_Id MB004 MB003	N1100 Unite3 XperiaM SelfieEx <u>MobileStock</u> M_Q 450	2: 4: 7: 8: ty	250 500 500 500 M_ Ne Prav	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision een Gallery	
		MB003 MB004 MB005 MB006 S_Id S001 S002 S003	Nokia Micromax Sony Oppo M_Id MB004 MB003 MB001	N1100 Unite3 XperiaM SelfieEx MobileStock M_Q 450 300	2: 4: 7: 8: ty	250 500 500 500 M_ Ne Prav Classic	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision een Gallery Mobile Store	
		MB003 MB004 MB005 MB006 S_Id S001 S002 S003 S004	Nokia Micromax Sony Oppo M_Id MB004 MB003 MB001 MB006	N1100 Unite3 XperiaM SelfieEx MobileStock M_Q 450 300 150	22 43 73 83 ty	250 500 500 500 M_ Ne Prav Classic A-o	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision een Gallery Mobile Store ne Mobiles	
		MB003 MB004 MB005 MB006 S_Id S001 S002 S003 S004 S005	Nokia Micromax Sony Oppo M_Id MB004 MB003 MB001 MB006 MB003	N1100 Unite3 XperiaM SelfieEx MobileStock M_Q 450 300 150 150	22 43 73 83 ty	250 500 500 500 M_ Ne Prav Classic A-o Th	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision een Gallery Mobile Store ne Mobiles	
		MB003 MB004 MB005 MB006 S_Id S001 S002 S003 S004 S005 S006	Nokia Micromax Sony Oppo M_Id MB004 MB003 MB006 MB003 MB006	N1100 Unite3 XperiaM SelfieEx MobileStock M_Q 450 250 300 150 50	2) 4: 7: 8: ty	250 500 500 500 M_ Ne Prav Classic A-o Th Mol	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision een Gallery Mobile Store ne Mobiles he Mobile	
	V	MB003 MB004 MB005 MB006 S_Id S001 S002 S003 S004 S005 S006 Vrite the SQL o	Nokia Nokia Micromax Sony Oppo M_Id MB004 MB003 MB001 MB006 MB003 MB006 Query for quest	N1100 Unite3 XperiaM SelfieEx MobileStock M_Q 450 250 300 150 50 ions from (i)	22 43 73 83 ty 0 0 0 0 0 0 0	250 500 500 500 500 M_ Ne Prav Classic A-o Tl Mol & write t	2011-04-15 2016-10-17 2017-11-20 2010-08-21 Supplier ew Vision een Gallery Mobile Store ne Mobiles he Mobile bile Centre the output of S	QL command

	(i) Dis	play the Mobile co	mpany, l	Mobile nan	ne & price in de	escending order of
	their m	anufacturing date.				
	(ii) Lis	t the details of mol	oile who	se name sta	arts with "S".	
	(iii) Di	splay the Mobile s	upplier &	& quantity	of all mobiles e	xcept ,,MB003".
	(iv) To	display the name	of mobil	e company	having price b	etween 3000 & 5000.
	(v) SE	LECT M_Id, SUM	(M_Qty)) FROM M	IobileStock GR	OUP BY M_Id;
	(vi) SE	ELECT MAX(M_M	If_Date)	, MIN(M_	Mf_Date) FRO	M MobileMaster;
	(vii) Sl	ELECT M1.M_Id,	M1.M_1	Name, M2.	M_Qty, M2.M_	_Supplier FROM
	Mobile	Master M1, Mobil	eStock N	M2 WHER	E M1.M_Id=M	2.M_Id AND
	M2.M	_Qty>=300;				
	(viii) S	ELECT AVG(M_	Price) FI	ROM Mobi	ileMaster;	
Ans	(i) SEI	LECT M_Compnay	v, M_Na	me, M_Pri	ce FROM Mob	ileMaster
	ORDE	R BY M_Mf_Date	DESC;			
	(½ mai	rk for correct SELE	ECT)			
	(1⁄2 mai	rk for correct ORD	ER BY)			
	(ii) SE	LECT * FROM M	obileMa	ster WHEF	RE M_Name LI	KE "S%";
	(½ mai	rk for correct SELH	ECT)			
	(½ mai	rk for correct WHE	RE clau	se)		
	(iii) SE	ELECT M_Supplier	r, M_Qty	y FROM M	IobileStock WF	IERE M_Id <>
	"MB00)3";	- ~`			
	(¹ /2 mai	rk for correct SELF	ECT)	,		
	(¹ /2 mai	rk for correct WHE	RE clau	se)		
	(1V) SE	CLECT M_Compar	iy FRON	/I MobileM	laster WHERE	M_Price
	BETW	EEN 3000 AND 5	000;			
	(½ mai	rk for correct SELE	ECI)	1 \		
	(1/2 mai	rk for correct BET	WEEN C	lause)		
	(1)	ŀ			1	
		M_Id	SUM(M	_Qty)		
		MB004	450			
		MB003	400			
		MB001	300			
		MB006	200			
	(vi)					
		MAX(M_Mf_Da	ate)	MIN(M_	Mf_Date)	
		2017-11-20		2010-08-2	21	

	(vii)		-		•		
		M_Id	M_Name	M_Qty	M_8	Supplier	1
		MB004	Unite3	450	New	v_Vision	-
	'	MB001	Galaxy	300	Cla	assic Mobile Store	<u> </u>
5	Observe	e the following	g tables VII	DEO and M	EMBER ca	arefully and write the	name of
	the RD	BMS operation	n out of (i)	SELECTIO	N (ii) PRO	JECTION (iii) UNIO	N (iv)
	Also, fi	nd the Degree	and Cardin	ality of the	final result	t.	wil below,
	TABLE:	VIDEO					
	VNO	VNAME		TYPE			
	F101	The Last	Battle	Fiction			
	C101	Angels an	d Devils	Comedy			
	A102	Daredevil	.s	Adventu	re		
	TABLE:	MEMBER					
	MNO	MNAME					
	M101	Namish Gu	pta				
	M102	Sana Shei	kh				
	M103	Lara Jame	s				
	FINAL F	RESULT					
	VNO	VNAME	r	YPE	MINO	MNAME	
	F101	The Last B	attle H	liction	M101	1 Namish Gupta	
	F101	The Last B	attle F	liction	м102	2 Sana Sheikh	
	F101	The Last B	attle F	liction	M103	3 Lara James	
	C101	Angels and	Devils C	Comedy	M101	l Namish Gupta	
	C101	Angels and	Devils	Comedy	M102	2 Sana Sheikh	
	C101	Angels and	Devils C	Comedy	M103	3 Lara James	
	A102	Daredevils	P	dventure	M101	1 Namish Gupta	
	A102	Daredevils	Z	dventure	M102	2 Sana Sheikh	
	A102	Daredevils	P	dventure	м103	3 Lara James	
Ans	CARTE	ESIAN PROD	UCT				
	OR Opt	tion (iv)					
	DEGRE	EE = 5					
	CARDI	$\mathbf{INALIII} = 9$					

XII- Computer Science New (0	<u>83)</u>
Worksheet 3- SQL	

ANC	ANAME			ADDRESS		
101	Nirja S	Singh		Bangalore		
102	Rohan (Gupta		Chennai		
103	Ali Re:	za		Hyderabad		
104	Rishabl	h Jain		Chennai	1	
105	Simran	Kaur		Chandigarh	1	
Table:	TRANSACT				•	
TRNO	ANO	AMOUNT	TYPE	DOT		
T001	101	2500	Withdraw	2017-12-21		
т002	103	3000	Deposit	2017-06-01		
т003	102	2000	Withdraw	2017-05-12		
т004	103	1000	Deposit	2017-10-22		
т005	101	12000	Deposit	2017-11-06		
(i)	To display o	letails of all	transactions of	TYPE Deposit from Table	e TRANSACT.	
Ans	SELECT *	FROM TR	ANSACT WHER	E TYPE = 'Deposit	:';	
(ii)	To display month of Oc	the ANO ar ctober 2017	nd AMOUNT of from table TRA	all Deposits and Withd	rawals done ir	
Ans (iii)	SELECT A WHERE DO OR SELECT A WHERE DO To display Accounts ha	NO, AMOUN T >= '20 NO, AMOUN T BETWEE the last dat wing ANO as	T FROM TRAN 17-10-01' A T FROM TRAN N '2017-10- te of transactions s 103.	NSACT ND DOT <= '2017- NSACT -01' AND '2017-10 on (DOT) from the table	10-31'; -31'; e TRANSACT fo	
Ans	SELECT M	AX (DOT)	FROM TRANS	ACT WHERE ANO = 1	03;	
	1					

XII- Computer Science New (083) Worksheet 3- SQL

(1V)	TRANSACT who have done transactions less than or equal to 3000.
Ans	SELECT ACCOUNT.ANO, ANAME, DOT FROM ACCOUNT, TRANSACT WHERE
	ACCOUNT.ANO=TRANSACT.ANO AND AMOUNT <=3000;
	OR
	SELECT A.ANO, ANAME, DOT FROM ACCOUNT A, TRANSACT T WHERE
	A.ANO=T.ANO AND AMOUNT <= 3000;
(v)	SELECT ANO, ANAME FROM ACCOUNT
	WHERE ADDRESS NOT IN ('CHENNAI', 'BANGALORE');
Ans	ANO ANAME
	103 Ali Reza
	105 Simran Kaur
	OP
	ANO ANAME
	102 Pohan Cunta
	102 Rohan Gupta
	104 Bishabh Jain
	105 Simran Kaur
(vi)	SELECT DISTINCT ANO FROM TRANSACT;
Ans	DISTINCT ANO
	101
	102
	103
(vii)	SELECT ANO, COUNT(*), MIN(AMOUNT) FROM TRANSACT GROUP BY ANO HAVING COUNT(*)> 1:
Ans	ANO COUNT (*) MIN (AMOUNT)
	101 2 2500
	103 2 1000
(1)	
(viii	WHERE DOT <= '2017-06-01';
Ans	COUNT (*) SUM (AMOUNT)

	of	the RI	OBMS operation out of	(i) SI	ELE	CTIOI	N (ii) P	ROJECTI	ON (iii) U	INION
	(iv	v) CAR	TESIAN PRODUCT,	which	n has	been	used to	produce t	he output	as
	sn	own in	TABLE: BO	ok	egre	e and	Cardina	anty of the	RESUL	1.
	[BNO	BNAME		TYF	E		1		
		c101	Red Scorpion		Соп	ic		1		
		F101	The Last Wish		Fiction			-		
		L102	French in a we	ek	Lit	erat	ure	1		
	I		TABLE: MEMB	ER]		
	-	MNO	MNAME]		
		M101	Ritu Oberoi]		
		M102	Fatima]		
		M1 03	Jenny DeSouza							
			TAI	BLE:	RES	ULT		•		
		BNO	BNAME	TYPE	3		MNO	MNAME		
		c101	Red Scorpion	Comi	ic		м101	Ritu Ob	eroi	
	ļ	C101	Red Scorpion	Comi	le		M102	Fatima		
		c101	Red Scorpion	Comi	le		M103	Jenny D	eSouza	
		F101	The Last Wish	Fict	tior	1	м101	Ritu Ob	eroi	
		F101	The Last Wish	Fict	tior	1	M102	Fatima		
		F101	The Last Wish	Fict	tior	1 I	м103	Jenny D	eSouza	
	ļ	L102	French in a week	Lite	erat	ure	M101	Ritu Ob	eroi	
		L102	French in a week	Lite	erat	ure	м102	Fatima		
		L102	French in a week	Lite	erat	ure	м103	Jenny D	eSouza	
8	W wl	rite SQ hich are	L queries for (i) to (iv) e based on the tables. TABLE	and and a constant of a consta	find STOP	output	ts for S	QL queries	s (v) to (v	iii),
		CNO	CNAME			ADDR	ESS			
		101	Richa Jain			Delh	i			
		102	Surbhi Sinha			Chen	nai			
		103	Lisa Thomas			Bang	alore			
		104	Imran Ali			Delh	i			
		105	Roshan Singh			Chen	nai			

			TABLE	TRANSACTION	1	
	TRNO	CNO	AMOUNT	TYPE	DOT]
	т001	101	1500	Credit	2017-11-23	-
	T002	103	2000	Debit	2017-05-12	-
	T 003	102	3000	Credit	2017-06-10	-
	T004	103	12000	Credit	2017-09-12	-
	т005	101	1000	Debit	2017-09-05	-
(i)) To displ	lay details	of all transacti	ons of TYPE Cre	dit from Table TR	⊐ ANSACTION
Se (ii th (iv	eptember ii) To disj ie custom v) To disj	2017 fron play the la er having play all CN	n table TRANS st date of trans CNO as 103. NO, CNAME a	SACTION. action (DOT) fro	om the table TRAN	SACTION for
See (iii th (iv C) tra (v W	eptember ii) To disple custom v) To disple USTOMI ansaction 7) SELEC /HERE D	2017 from play the la er having play all CN ERS from s more tha T COUNT POT >= '20	n table TRANS st date of trans CNO as 103. NO, CNAME a tables CUSTO in or equal to 2 F(*), AVG(AM)17-06-01';	SACTION. action (DOT) fro and DOT (date of MER and TRAN 000. IOUNT) FROM	om the table TRAN (transaction) of tho (SACTION who hat TRANSACTION	SACTION for
See (iii th (iv C) tra (v W (v W (v G)	 ii) To disple custom iv) To disple custom v) To disple custom v) To disple custom v) To disple custom v) SELEC 	2017 from play the la er having play all CN ERS from s more tha T COUNT OT >= '20 CT CNO, 0 Y CNO H	n table TRANS st date of trans CNO as 103. NO, CNAME a tables CUSTO in or equal to 2 F(*), AVG(AM)17-06-01'; COUNT(*), M AVING COUN	ACTION. action (DOT) fro and DOT (date of MER and TRAN 000. IOUNT) FROM AX (AMOUNT) NT(*)> 1;	om the table TRAN (transaction) of tho (SACTION who hat TRANSACTION FROM TRANSAC	SACTION for se we done
See (iii th (iv C ¹ tra (v W (v W (v W (v W (v W W)	 ii) To disple custom ii) To disple custom v) To disple custom v) To disple custom v) To disple custom v) SELEC v) SELEC vii) SELEC vii) SELE vii) SELE vii) SELE 	2017 from play the later having play all CN ERS from s more that T COUNT POT $>=$ '20 CT CNO, 0 Y CNO H CT CNO, DDRESS	n table TRANS st date of trans CNO as 103. NO, CNAME a tables CUSTO in or equal to 2 F(*), AVG(AM)17-06-01'; COUNT(*), M AVING COUN CNAME FRO NOT IN ('DEI	ACTION. action (DOT) fro and DOT (date of MER and TRAN 000. IOUNT) FROM AX (AMOUNT) NT(*)> 1; M CUSTOMER LHI', 'BANGALO	om the table TRAN (transaction) of tho (SACTION who hat TRANSACTION FROM TRANSAC	SACTION for se we done
See (iii th (iv Cl tra (v W (v W (v W (v W (v W (v W (v) (v) (v))))))))))	eptember ii) To disple custom v) To disple custom v) To disple custom (v) To disple custom v) SELEC v) SELEC	2017 from play the later having play all CN ERS from s more that T COUNT OT $>=$ '20 CT CNO, ON Y CNO H CT CNO, DDRESS ECT DIST	n table TRANS st date of trans CNO as 103. NO, CNAME a tables CUSTO in or equal to 2 F(*), AVG(AM)17-06-01'; COUNT(*), M AVING COUN CNAME FRO NOT IN ('DEI <u>INCT CNO FF</u>	ACTION. action (DOT) fro and DOT (date of MER and TRAN 000. IOUNT) FROM AX (AMOUNT) NT(*)> 1; M CUSTOMER LHI', 'BANGALO ROM TRANSAC	om the table TRAN Transaction) of tho SACTION who ha TRANSACTION FROM TRANSAC	SACTION for se we done

				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
	-		MEMBI	ER						
		NO	MNAME	s	TR	EAM				
		M001	JAYA	s	CI	ENCE				
		M002	ADITYA	Н	HUMANITIES					
		M003	HANSRAJ		SCIENCE					
		M004	SHIVAK	c	OM	MERCE				
			RESUL	т						
		NO	MNAME		SI	REAM				
		M002	ADITYA		но	MANITIES				
10	V to	Vrite SQL o (viii), wl	, queries for (i) to hich are based on DV	(iv) and t the tables D	finc s.	l outputs for S	SQL qu	eries (v)	
		DCODE	DTITLE		D	TYPE				
		F101	Henry Martin	1	F	olk				
		c102	Dhrupad		с	lassical				
		c101	The Planets		Classical					
		F102	Universal So	ldier	F	olk				
		R102	A day in lif	e	R	ock				
			ME	MBER						
		MID	NAME	DCODE		ISSUEDATE				
		101	AGAM SINGH	R102		2017-11-3	0			
		103	ARTH JOSEPH	F102		2016-12-1	3			
		102	NISHA HANS	c101		2017-07-2	4			
1	1	-		-		-				

	(i) To dis order of	splay all c ISSUEDA	letails from ATE.	n the table M	EMBER in descendir	ng
	(ii) To diffrom the	isplay the table DV	DCODE : D.	and DTITLE	of all Folk Type DVI	Ds
	(iii) To c from the	lisplay the table DV	e DTYPE D.	and number o	of DVDs in each DTY	ΈE
	(iv) To d from the (i.e., ISS	lisplay all table ME UEDATH	NAME an EMBER w E) in the ye	nd ISSUEDA ho have DVD ear 2017.	TE of those members is issued	
	(v) SELI (vi) SEL (vii) SEI FROM I (viii) SE WHERE	ECT MIN ECT DIS LECT D.I DVD D, N LECT DT DTYPE	(ISSUED. TINCT D DCODE, N MEMBER FITLE FR NOT IN (ATE) FROM TYPE FROM JAME, DTIT M WHERE I OM DVD "Folk", "Clas	MEMBER; DVD; LE D.DCODE=M.DCOD sical");	νE;
6	Write SC) Juneria	a for (i) to	(iv) and find	outputs for SOL and	ing (y) to (yiii) which
	are based Table: A	d on the ta	ables.	(IV) and find		
	are based Table: A ANO	d on the ta	ables.		ADDRESS	les (v) to (viii), which
	are based Table: A ANO 101	ANAME	ables.		ADDRESS Bangalore	
	are based Table: A ANO 101 102	d on the ta CCOUNT ANAME Nirja S Rohan G	s for (f) to ables. Singh Supta		ADDRESS Bangalore Chennai	
	are based Table: A ANO 101 102 103	d on the ta CCOUNT ANAME Nirja S Rohan G Ali Rez	s for (f) to ables. Singh Gupta		ADDRESS Bangalore Chennai Hyderabad	
	are based Table: A ANO 101 102 103 104	ANAME Rohan G Ali Rez	Singh Supta Jain		ADDRESS Bangalore Chennai Hyderabad Chennai	
	are based Table: A ANO 101 102 103 104 105	Ali Rez Rishabh Simran	Singh Supta Jain Kaur		ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh	
	are based Table: A ANO 101 102 103 104 105 Table: T	ANAME ANAME Nirja S Rohan G Ali Rez Rishabh Simran	Singh Gupta a Kaur		ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh	
	are based Table: A ANO 101 102 103 104 105 Table: T TRNO	ANAME ANAME Nirja S Rohan G Ali Rez Rishabh Simran RANSACT ANO	Singh Singh Supta a Jain Kaur AMOUNT	(IV) and find	ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh	
	are based Table: A ANO 101 102 103 104 105 Table: T TRNO T001	ANAME ANAME Nirja S Rohan G Ali Rez Rishabh Simran RANSACT ANO 101	Singh Singh Supta a Jain Kaur AMOUNT 2500	(IV) and find TYPE Withdraw	ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh DOT 2017-12-21	
	are based Table: A ANO 101 102 103 104 105 Table: T TRNO T001 T002	ANAME ANAME Nirja S Rohan G Ali Rez Rishabh Simran RANSACT ANO 101 103	Singh Singh Supta za Jain Kaur AMOUNT 2500 3000	(IV) and Hind TYPE Withdraw Deposit	ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh DOT 2017-12-21 2017-06-01	
	are based Table: A ANO 101 102 103 104 105 Table: T TRNO T001 T002 T003	ANAME ANAME Nirja S Rohan G Ali Rez Rishabh Simran RANSACT ANO 101 103 102	Singh Singh Supta a AMOUNT 2500 3000 2000	(IV) and Hind TYPE Withdraw Deposit Withdraw	ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh 2017-12-21 2017-06-01 2017-05-12	
	are based Table: A ANO 101 102 103 104 105 Table: T TRNO T001 T002 T003 T004	ANAME ANAME Nirja S Rohan G Ali Rez Rishabh Simran RANSACT ANO 101 103 102 103	Singh Singh Supta 2a AJain Kaur AMOUNT 2500 3000 2000 1000	(IV) and Hind TYPE Withdraw Deposit Withdraw	ADDRESS Bangalore Chennai Hyderabad Chennai Chandigarh DOT 2017-12-21 2017-06-01 2017-05-12 2017-10-22	

Ans	(i)	To display details of all transactions of TYPE Deposit from Table TRANSACT.						
	Ans	SELECT * FROM TRANSACT WHERE TYPE = 'Deposit';						
	(ii)	To display the ANO and AMOUNT of all Deposits and Withdrawals done in the month of October 2017 from table TRANSACT.						
	Ans	SELECT ANO, AMOUNT FROM TRANSACT WHERE DOT >= '2017-10-01' AND DOT <= '2017-10-31'; OR SELECT ANO, AMOUNT FROM TRANSACT						
	(iii)	WHERE DOT BETWEEN '2017-10-01' AND '2017-10-31'; To display the last date of transaction (DOT) from the table TRANSACT for the Accounts having ANO as 103.						
	Ans	SELECT MAX(DOT) FROM TRANSACT WHERE ANO = 103;						
	(iv)	To display all ANO, ANAME and DOT of those persons from tables ACCOUNT and TRANSACT who have done transactions less than or equal to 3000.						
	Ans	SELECT ACCOUNT.ANO,ANAME,DOT FROM ACCOUNT,TRANSACT WHERE ACCOUNT.ANO=TRANSACT.ANO AND AMOUNT <=3000; OR SELECT A.ANO,ANAME,DOT FROM ACCOUNT A,TRANSACT T WHERE A.ANO=T.ANO AND AMOUNT <=3000:						
	(v)	SELECT ANO, ANAME FROM ACCOUNT WHERE ADDRESS NOT IN ('CHENNAI', 'BANGALORE');						
	Ans	ANO ANAME 103 Ali Reza 105 Simran Kaur OR ANO ANAME 101 Nirja Singh 102 Rohan Gupta 103 Ali Reza 104 Rishabh Jain						
		105 Simran Kaur						

			<u>XII- Co</u>	<u>mpute</u>	er Science New (08	<u>33)</u>				
	(vi) SELECT DISTINCT ANO FROM TRANSACT;									
	Ans	DIST	STINCT ANO							
		101								
		102								
		103	03							
((vii)	SELE	ELECT ANO, COUNT(*), MIN(AMOUNT) FROM TRANSACT ROUP BY ANO HAVING COUNT(*)> 1;							
	Ans	ANO	COUNT (*)	MIN(AMOUNT)					
		101	2	250	0					
		103	2	100	0					
	(viii)	SELE	CT COUNT(*), S	UM (AM	OUNT) FROM TRAN	NSACT				
		WHEF	RE DOT <= '2017	-06-0	1';					
_	Ans	COUN	NT (*) SUM (AMO	UNT)						
		2	5000							
C	Observ	e the f	Collowing tables BC	OOK ar	nd MEMBER caref	fully and write the name				
0	of the F	RDBM	S operation out of	(i) SEI	LECTION (ii) PRC	DJECTION (iii) UNION				
(i	iv) CA		SIAN PRODUCT,	which]	has been used to pr	roduce the output as				
S	hown	in RES	SULT? Also, find	the De	gree and Cardinalit	ty of the RESULT.				
	BNO	F	SNAME	oon	TYPE]				
	c10	1 F	Red Scorpion		Comic	-				
	F10	1 1	The Last Wish		Fiction					
	L102		French in a w	eek	Literature	-				
	TABLE: MEMBER									
	MNO		NAME							
	M10	1 R	itu Oberoi							
	м10	2 F	atima							
	M1 0	3 Ј	enny DeSouza							
						1				

DNO	DNAME		TYDE		1010	10121	æ
C1.01	DNAME Dod Sco	mion	Comi	-	MINO	Dita	1E
C101	Red Sco	rpion	Comi	.c	MIUI M102	RIC	1 Oberol
C101	Red Sco	rpion	Comi		M102	Topy	Luia
E101	The Lee	t Wish	Fict	.c	M101	Dit:	ly Desouza
F101	The Las	t Wish	Fict	ion	M102	Fati	ima
F101	The Las	t Wieh	Fict	ion	M103	Jenr	DeSouza
1.102	French	in a week	Lite	rature	M101	Ritz	ly Desouza
1.102	French	in a week	Lite	rature	M102	Fati	ima
1.102	French	in a week	Lite	rature	M103	Jenr	v DeSouza
Vrito S	<u> </u>	For (i) to (iv)	+ nd fin	doutputa	for SOI	auari	(\mathbf{x}) to (\mathbf{x})
CNO	CNAME	TABLE: (USTON	ER ADDRESS			
101	Richa Ja	in		Delhi			
				Detut			
102	Surbhi S	inha		Chennai			
102	Surbhi S	inha		Chennai			
102 103	Surbhi S Lisa Tho	inha mas		Chennai Bangalo	re		
102 103 104	Surbhi S Lisa Tho Imran Al	inha mas .i		Chennai Bangalo Delhi	re		
102 103 104 105	Surbhi S Lisa Tho Imran Al Roshan S	inha mas i ingh		Chennai Bangalo Delhi Chennai	re		
102 103 104 105	Surbhi S Lisa Tho Imran Al Roshan S	Sinha Smas i Singh TABLE	: TRAN	Chennai Bangalo Delhi Chennai	re		
102 103 104 105 TRNO	Surbhi S Lisa Tho Imran Al Roshan S CNO	inha mas i ingh TABLE AMOUNT	: TRAN	Chennai Bangalo Delhi Chennai ISACTION	re I D	OT	
102 103 104 105 TRNC T001	Surbhi S Lisa Tho Imran Al Roshan S CNO 101	sinha mas i singh TABLE AMOUNT 1500	: TRAN T Cr	Chennai Bangalo Delhi Chennai ISACTION TYPE Tedit	re 1 2017-	00T -11-2	23
102 103 104 105 TRNO T001 T002	Surbhi S Lisa Tho Imran Al Roshan S CNO 101 103	inha mas i ingh TABLE AMOUNT 1500 2000	: TRAN T Cr De	Chennai Bangalo Delhi Chennai ISACTION TYPE Tedit	re D 2017- 2017-	-05-1	23
102 103 104 105 TRNO T001 T002 T003	Surbhi S Lisa Tho Imran Al Roshan S CNO 101 103 102	sinha mas .i Singh TABLE AMOUNT 1500 2000 3000	: TRAN T Cr De Cr	Chennai Bangalo Delhi Chennai ISACTION TYPE Sedit	re I 2017 2017	-05-1 -06-1	23 12 10
102 103 104 105 TRNO T001 T002 T003 T004	Surbhi S Lisa Tho Imran Al Roshan S CNO 101 103 102 103	sinha mas i singh TABLE AMOUNT 1500 2000 3000 12000	: TRAN T Cr De Cr	Chennai Bangalo Delhi Chennai Chennai ISACTION TYPE edit ebit edit	re D 2017- 2017- 2017- 2017-	-05-1 -06-1 -09-1	23 12 10 12

(ii) To display the CNO and AMOUNT of all Transactions done in the month of September 2017 from table TRANSACTION.

(iii) To display the last date of transaction (DOT) from the table TRANSACTION for the customer having CNO as 103.

	(iv) To display all CNO, CNAME and DOT (date of transaction) of those							
	(CUSTOME	ERS from tables CUSTC	MER and TRANS	SACTION who have done			
	t	ransactions	s more than or equal to 2	2000.				
	(v) SELECT COUNT(*), AVG(AMOUNT) FROM TRANSACTION							
	WHERE DOT >= '2017-06-01';							
	((vi) SELEC	CT CNO, COUNT(*), M	AX (AMOUNT)	FROM TRANSACTION			
	(GROUP BY	Y CNO HAVING COU	NT(*) > 1;				
	((vii) SELEO	CT CNO, CNAME FRO	M CUSTOMER				
	V	WHERE A	DDRESS NOT IN ('DE	LHI', 'BANGALO	RE');			
	((viii) SELE	CT DISTINCT CNO FI	ROM TRANSACT	FION;			
9	(Observe the	e following table MEME	BER carefully and	write the name			
	C	of the RDB	MS operation out of (i)	SELECTION (ii)	PROJECTION			
	((iii) UNION	N (iv) CARTESIAN PR	ODUCT, which ha	is been used to			
	ľ	produce the	e output as shown in RE	SULT. Also, find t	he Degree and			
	(Cardinality	of the RESULT :					
			MEMBER					
			101110	CODDAN				
		NO	MNAME	STREAM				
		M001	JAYA	SCIENCE				
		M002	ΔΠΤΨΥΔ	HIMANTTIES				
		M003	HANSRAJ	SCIENCE				
		M004	SHIVAK	COMMERCE				
			RESULT					
		NO	MNAME	STREAM				
		M002	ADITYA	HUMANITIES				
10	I	Write SQL	queries for (i) to (iv) an	d find outputs for	SQL queries (v)			
	t	o (viii), wł	nich are based on the tab	les.				

DVD						
DCODE	DTITLE	DTYPE				
F101	Henry Martin	Folk				
C102	Dhrupad	Classical				
C101	The Planets	Classical				
F102	Universal Soldier	Folk				
R102	A day in life	Rock				

MEMBER

MID	NAME	DCODE	ISSUEDATE
101	AGAM SINGH	R102	2017-11-30
103	ARTH JOSEPH	F102	2016-12-13
102	NISHA HANS	c101	2017-07-24

(i) To display all details from the table MEMBER in descending order of ISSUEDATE.

(ii) To display the DCODE and DTITLE of all Folk Type DVDs from the table DVD.

(iii) To display the DTYPE and number of DVDs in each DTYPE from the table DVD.

(iv) To display all NAME and ISSUEDATE of those members

from the table MEMBER who have DVDs issued

(i.e., ISSUEDATE) in the year 2017.

(v) SELECT MIN(ISSUEDATE) FROM MEMBER;

(vi) SELECT DISTINCT DTYPE FROM DVD;

(vii) SELECT D.DCODE, NAME, DTITLE

FROM DVD D, MEMBER M WHERE D.DCODE=M.DCODE;

(viii) SELECT DTITLE FROM DVD

WHERE DTYPE NOT IN ("Folk", "Classical");

Observe the following table CANDIDATE carefully and write the name of the RDBMS operation out of (i) SELECTION (ii) PROJECTION (iii) UNION (iv) CARTESIAN PRODUCT, which has been used to produce the output as shown in RESULT. Also, find the Degree and Cardinality of the RESULT.

1	TABLE : CANDIDATE							
	NO	NAME	STREAM					
	C1	AJAY	LAW					
	C2	ADITI	MEDICAL					
	C3	ROHAN	EDUCATION					
	C4	RISHAV	ENGINEERING					

RESULT

NO	NAME
C3	ROHAN

12 Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii), which are based on the tables :

Code	BNAME	TYPE
F101	The priest	Fiction
L102	German easy	Literature
C101	Tarzan in the lost world	Comic
F102	Untold Story	Fiction
C102	War herces	Comic

TABLE : MEMBER

MNO	MNAME	CODE	ISSUEDATE
M101	RAGHAV SINHA	L102	2016-10-13
M103	SARTHAK JOHN	F102	2017-02-23
M102	ANISHA KHAN	C101	2016-06-12

(i) To display all details from table MEMBER in descending order of ISSUEDATE.

(ii) To display the BNO and BNAME of all Fiction Type books from the table BOOK.

(iii) To display the TYPE and number of books in each TYPE from the table BOOK.

(iv) To display all MNAME and ISSUEDATE of those members from table MEMBER who have books issued (i.e. ISSUEDATE) in the year 2017.(v) SELECT MAX(ISSUEDATE) FROM MEMBER;

<u>XII- Computer Science New (083)</u> Workshoot 2, SOI								
(vi) SELECT DISTINCT TYPE FROM BOOK.								
	(vii) SELECT	A.CODE.BNAM	E.MNO.	MNAN	`, 1E			
	FROM BOOK A, MEMBER B WHERE A.CODE=B.CODE;							
	(viii) SELECT BNAME FROM BOOK							
	WHERE TYP	PE NOT IN ("FIC	TION'','	'COM	IC");			
13	Observe the ta	ble 'Club' given be	elow:					
		1	Club				1	
	Member_id	Member_Name	Addres	s	Age	Fee		
	M001	Sumit	New D	elhi	20	2000		
	M002	Nisha	Gurga	m	19	3500		
	M003	Niharika	New D	elhi	21	2100		
	M004	Sachin	Faridal	bad	18	3500		
Ans	 n. If a new contain contact_no has been added and three more members have joined the club then how these changes will affect the degree and cardinality of the above given table. s i. Cadinality: 4 Degree: 5 ii. Cardinality: 7 							
	Degree: 6			<i></i>		<u> </u>	<u></u>	
14	Write SQL con (viii) based on Watches	mmands for the que the tables 'Watche	eries (i) to s' and Sa) (iv) ar le give	nd outp n belov	out for (v v.) to	
	Watchid	Watch_Name	Price	Туре	;	Qty_Sto	vre	
	W001	HighTime	10000	Unis	ex	100		
	W002	LifeTime	15000	Ladi	es	150		
	W003	Wave	20000	Gent	s	200		
	W004	HighFashion	7000	Unis	ex	250		
	W005	GoldenTime	25000	Gent	S	100		
	Sale	05- 6-14				-		
	W001	10	1	anei		-		
	W001 10 W003 5					-		
	W002	20	2					
	W003	10	2			_		
	W001	20	3			-		
	W005	10	3			-		
	W003	15	4					

	i. To display all the details of those watches whose name ends with							
	'Time'							
	ii. To display watch's name and price of those watches which have price							
	range in between 5000-15000.							
	iii. To display total quantity in store of Unisex type watches.							
	iv. To display wa	tch name a	nd th	neir quantit	y sold i	n first quarter.		
	v. select max(pric	ce), min(qt	y_stc	ore) from w	atches;			
	vi. select quarter,	sum(qty_s	old)	from sale g	group b	y quarter;		
	vii. select watch_	name,price	,type	e from wate	ches w,	sale s where		
	w.watchid!=s.wa	tchid;						
	viii. select watch	_name, qty	_stor	re, sum(qty	_sold),	qty_storesum(
	qty_sold) "Stock"	" from wate	ches	w, sale s w	here			
	w.watchid=s.watc	chid group	by s.	.watchid;				
Ans	i. select * from w	vatches wh	ere	watch_nar	ne like	'%Time'		
	ii. select watch_i	name, pric	e fro	om watche	s where	e price between 5000		
	and 15000;							
	iii. select sum(qt	y_store) fi	om y	watches w	here ty	pe like 'Unisex';		
	iv. select watch_	_name,qty_	sold	from wat	ches w,	sale s where		
	w.watchid=s.wat	tchid and o	quar	ter=1;				
	v.							
	max(price)	1	nin(e	qty_store)				
	25000]	.00					
	vi.							
	quarte	ſ	S	sum(qty so	old)			
	1		15					
	2		30					
	3		45					
	4		15					
	vii.							
	watch name	price		type				
	HighFashion	7000		Unisex				
	Viii			·		•		
	watch name gtv store gtv sold				Stock			
	HighTime	100		25	75			
	LifeTime	150		40	110			
	Wave	200		30	170			
	GoldenTime	100		10	90			
15	Differentiate bety	veen cardir	ality	and degre	e of a ta	able with the help of an example.		
Ans	Cardinality is def	fined as the	num	ber of row	$\frac{1}{1}$ s in a ta	ible.		
L								

	Degree is the number of columns in a table							
	Eq:Consider the following tables:							
	Eg.Consider the following tables:							
	Table : Account							
	Acno	Cname						
	Ac100	Sheela						
	A - 101	Damb						
	Actor	Darsn						
	Ac102	Kathy						
	Cardinality of Account table is : 3							
	Degree of Account table is :2							
16	Consider the following tables FACULTY and COURSES. Write SQL commands for the							
	statements (i) to (v) and give outputs for SQL queries (vi) to (vii) FACULTY							
	F_ID	Fname	Lname	Hi	re_date	Salary		
	102	Amit	Mishra	12-	10-1998	12000		
	103	Nitin	Vyas	24-	12-1994	8000		
	104	Rakshit	Soni	18-	5-2001	14000		
	105	Rashmi	Malhotra	11-	9-2004	11000		
	106	Sulekha	Srivastava 5-6		-2006	10000		
	COURSES							
	C_ID	F_ID Cname			Fees			
	C21	102	Grid Computing		40000			
	C22	106	System Design		16000			
	C23	104	Computer Security		8000			
	C24	106	Human Biology Computer Network		15000			
	C25	102			20000			
	C26	105	Visual Basic		6000			
	 i) To display details of those Faculties whose salary is greater than 12000. where salary > 12000 ii) To display the details of courses whose fees is in the range of 15000 to 50000 (both values included). iii) To increase the fees of all courses by 500 of "System Design" Course. iv) To display details of those courses which are taught by 'Sulekha' in descending order of courses. Select COUNT(DISTINCT F_ID) from COURSES; v) Select COUNT(DISTINCT F_ID) from COURSES; 							

vi) Select MIN(Salary) from FACULTY, COURSES where COURSES.F_ID =				
FACULTY.F_ID;				
Ans: Select * from faculty				
Ans: Select * from Courses				
where fees between 15000 and 50000				
Ans: Update courses set fees = $fees + 500$				
where Cname = "System Design"				
Ans: Select * from faculty fac, courses cour				
where $fac.f_id = cour.f_id$				
and fac.fname = 'Sulekha'				
order by cname desc				
Ans: 4				
Ans: 6000				