NAAHAR PUBLIC SCHOOL (CBSE) SENIOR SECONDARY, VILLUPURAM ACADEMIC YEAR (2022-2023)

FULL REVISION – I

CLASS: XII

SUB: INFORMATICS PRACTICES (065)

SUB TEACHER: Mrs.DHIVYA.N

ANSWER KEY

DUR: 3 Hrs

DATE: 30.11.2022

General Instructions:

- 1. This question paper contains five sections, Section A to E.
- 2. All questions are compulsory.
- 3. Section A have 18 questions carrying 01 mark each.
- 4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
- 5. Section C has 05 Short Answer type questions carrying 03 marks each.
- 6. Section D has 03 Long Answer type questions carrying 05 marks each.
- 7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part c only.
- 8. All programming questions are to be answered using Python Language only.

	SECTION – A	
1	Which is called a smart HUB a. HUB with high speed ports b. Switch c. Router d. All of the Above	1
2	Which device is used to transfer Communication Signal to Long Directions	1
3	a. Amplifier b. Repeater c. Router d. All of the Above What is the address size of IPv6?	1
3	what is the address size of iPvo:	1
	a) 32 bit	
	b) 64 bit	
	c) 128 bit	
	d) 256 bit	
4	is not a complete program and so is used to add only a particular functionality to the browser.	1
	a. Add-ons b. Plug-in	
	c. Software	
	d. None of the above	
5	Name a device which convert analog signal to digital and vice versa.	1
	a. Router	
	b. Modem	
	c. Hub	
	d. Gateway	
6	We can disable cookies by changing the settings from in Mozilla Firefox browser	1
	a. General Panel	
	b. Privacy and Security Panel c. Home Panel	
	d. Search Panel	
7	If a node from one network wants to communicate with a node of a foreign network, data packet	1
	will pass through	1
	a. Hub	
	b. Gateway	
	c. Ethernet Card	
	d. None of the above	
8	In topology each device is directly connected with the central device.	1
	a. Bus	
	b. Ring c. Star	
	d. Tree	

9	Asends the request to	1
	a. Web server, Web browser	
	b. Web browser, Web server	
	c. Web browser , Web site d. Web server , Web site	
	u. Web server, Web site	
10	Write the output of the following SQL command.	1
	SELECT ROUND(458.46,1);	
	i) 458	
	ii) 458.5	
	iii) 459 iv) 458.6	
11	The statement in SQL which allows to change the definition of a table is	1
11	(a) UPDATE	1
	(b) ALTER	
	(c) INSERT	
	(d) SELECT	
12	Write the ouput	1
	SELECT MOD(14,3)	
13	Ans: 2 Write the ouput of the following SQL query	1
1.3	SELECT POW(INSTR('My Database', ''),2);	1
	Ans. 9	
14	Which of the following function count all the values except NULL?	1
	(a) COUNT(*) (b) COUNT(column name)	
	(c) COUNT(NOT NULL) (d) COUNT(NULL)	
15	What is the meaning of "GROUPBY" clause in MySQL?	1
	(a) Group data by columnvalues	
	(b) Group data by rowvalues	
	(c) Group data by column and row values(d) None of the mentioned	
16	10. Whatisthe significance of the statement "HAVING COUNT (emp. id)>2" in the	1
10	following MySQL statement?	1
	SELECT name, COUNT (emp id),emp no FROM department	
	GROUP BY name HAVING COUNT (emp_id)>2;	
	(a) Filter out all rows whose total emp_id below 2	
	(b) Selecting those rows whose total emp_id>2	
	(c) Both (a) and (b) (d) None of thementioned	
017	and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as	<u> </u>
_	th A and R are true and R is the correct explanation for A	
	oth A and R are true and R is not the correct explanation for A	
	is True but R is False	
iv. A	is false but R is True	
17	Assertion (A): - There is a centralized control in case of Star topology.	1
	Reasoning (R):- A hub can transfer data packets only to the intended node in a network.	
18	Assertion (A): DDI Data Definition I anguage SOI next language that facilitates defining	1
10	Assertion (A): - DDL Data Definition Language. SQL part-language that facilitates defining creation/ modification etc. of database objects such as tables, indexes, sequences etc.	
	Reasoning (R):- DML Data Manipulation Language. SQL part-language that facilitates	
	manipulation (addition/ deletion/ modification) of data residing in database object.	
	Ans:II	
	SECTION – B	
19	Q6. Ruhani wants to edit some privacy settings of her browser. How can she accomplish her	2
	task?	
	And the congression has took by nonfermine fellowing stone	
	Ans. She can accomplish her task by performing following steps Step 1 Open your web browser.	
	Step 2 Open browser settings.	
	Step 3 Look for Privacy and Security settings. If not directly	
	found, click on Advanced settings.	
	Step 4 After reaching Privacy and Security settings she can	
	edit their setting.	
	(OR)	
	(OR) What do you mean by URL?	
1	THE SO YOU INVENT OF CIVIT.	1

	Ans. URL stands for Uniform Resource Locator. It is a unique identifier used to locate a				
	resource on the Internet. It is also referred as a web address.				
	■ URL protocols include HTTP(HyperText Transfer Protocol) and HTTPs (HTTP Secure) for web resources, mail for email addresses, FTP for files on a file Transfer				
	Protocol server and telnet for a session to access remote computers.				
20	Sahil, a Class X student, has just started understanding the basics of Internet and web technologies. He is a bit confused in between the terms "World Wide Web" and "Internet". Help him in understanding both the terms with the help of suitable examples of each.	2			
	Ans. World Wide Web is a set of programs, standards and protocols that allows the multimedia and				
	hypertext files to be created, displayed and linked on the Internet. e.g. www.microsoft.com, www.amazon.com, etc.				
	Internet is a computer-based world wide communications network, which is composed of large number of smaller interconnected networks. e.g. Web, E-mails, Social media, etc. While Internet is a collection of computers or networking devices connected together; WWW is a collection of documents, linked via special links called hyperlinks. WWW forms a large part of				
21	Internet but is not the Internet. Q11. XYZ consultancy is planning to link its branch office in Delhi to its head office in London.	2			
	Write one way to connect. What type of network (out of LAN/WAN/MAN) will be formed.				
	Ans. (i) Satellite communication (iii) WAN (Wide Area Network)				
22	Anjali writes the following commands with respect to a table employee having fields, empno, name, department, commission.	2			
	Command1: Select count(*) from employee;				
	Command2: Select count(commission) from employee; She gets the output 4 for the first command but get an output 3 for the second command.				
	She gets the output 4 for the first command but get an output 3 for the second command. Explain the output with justification. Ans:				
	The Count(*) function returns the total number of records in the table while count() will return the count of non-null values in the given field and this is the reason for the different results by				
	the given queries above				
	. The field commission must be containing a NULL value and thus count(commission) returned the count of non-null values and count(*) return total number of records (Irrespective of NULL values in the field).				
23	Consider the following SQL string: 'Preoccupied'. Write commands to display: (a) 'occupied' (b) 'cup'	2			
	Ans: (a) SELECT substr(''Preoccupied', 4);				
	OR SELECT substring('Preoccupied',4);				
	Or				
	SELECT mid(''Preoccupied', 4); (b) SELECT substr(''Preoccupied', 6,3); OR				
	SELECT substring('Preoccupied',6,3); Or				
	SELECT mid("Preoccupied", 6,3);				
	(OR) What is the difference between CURDATE() and DATE() functions?				
	Ans. CURDATE() DATE()				
	It return the current date. It extract the date part of time expression				
	• e.g. SELECT CURDATE('2021-01-20'				
	CURDATE(); 03:16:45);				
	Output 2021-01-20 21-01-20				
	2021 01 20				
24	Shanya Khanna is using a table Employee. It has the following columns: Admno, Name, Agg, Stream [Column Agg contain Aggregate marks] She wants to display the highest Agg obtain in	2			

	each S		e wrote the following s						
			But she did not get the desired result. Rewrite the above query with necessary changes to help						
	her get the desired output								
	Ans:								
_	SELECT Stream, MAX(Agg) FROM Employee GROUP BY Stream;								
5	Write the output of the following SQL queries:							2	
	(i) SELECT RIGHT('Software',2) (ii) SELECT MID('HONESTY WINS',3,4)								
	Ans.	LECT WII	D(HONESTT WINS	,3,4)					
	(i) re								
				(ii) NE	ST				
	l			SECTIO					ı
6	Consid	der the foll	lowing tables						3
				Гable : ST(OCK				
		ICODE		DCODE	QTY	UNITPR	STKDATE		
		444	Drawing Copy	101	110	21	31-July-2010		
		445	Sharpener Camlin	102	235	3	01-Aug-2010		
		450	Eraser Natraj	101	40	2	17-Aug-2010		
		452	Gen Pen Montex	103	50	5	30-Dec-2009		
		457	Geometry Box	103	35	45	15-Nov-2009		1
		467	Parker Premium	101	60	205	27-Oct-2009		1
				102	32	25			
	~~~	469	Office File	103	32	25	13-Sep-2010		
	(i) To I (ii) To from th Give C (iii) SE	Display de display me table st Dutput ELECT CO	OUNT(DISTINCT DC	STOCK tall tems for each	ble in de h dealer	individually			
	(i) To I (ii) To I (ii) To I from the Give C (iii) SE (iv) SE Ans. (i) SEI (ii) SE (iii) CC 3	Display do display me table st Dutput ELECT MELECT MELECT DO	etails of all items in the iinimum unit price of i ock.	STOCK talk tems for each	ble in de h dealer M STOO	individually CK; ESC;	as per dealer code		
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7	(i) To I (ii) To I (ii) To I from the second	Display do display me table st Dutput ELECT COELECT MELECT DO DUNT(DISECT)	etails of all items in the inimum unit price of i ock.  DUNT(DISTINCT DC AX(SKTDATE) FROM STOCK ORDER CODE, MIN(UNITPR) STINCT DCODE)	STOCK tall tems for each tems from STOCK;	ble in de h dealer M STOO ATE DE	individually CK; ESC; OUP BY DO	as per dealer code		3
7	(i) To I (ii) To I (ii) To I from the second	Display do display me table st Dutput ELECT COELECT MELECT DO DUNT(DISECT)	etails of all items in the inimum unit price of it ock.  DUNT(DISTINCT DC AX(SKTDATE) FROM STOCK ORDER CODE, MIN(UNITPR) STINCT DCODE)	STOCK tall tems for each tems from STOCK;	ble in de h dealer M STOO ATE DE	individually CK; ESC; OUP BY DO	as per dealer code		3
7	(i) To I (ii) To I (ii) To I from the Give C (iii) SE (iv) SE (ii) SEI (ii) SE (iii) CC 3 (iv) MAX( 13-SEI What i	Display do display me table st Dutput ELECT COELECT MELECT DOOLD DUNT(DISE SKTDAT P-2010 is the difference of the differ	etails of all items in the ainimum unit price of it ock.  DUNT(DISTINCT DO AX(SKTDATE) FROM STOCK ORDER CODE, MIN(UNITPR) STINCT DCODE)  Eteroces between HAVI	STOCK tall tems for each tems from STOCK;	ble in de h dealer M STOO ATE DE	individually CK; ESC; OUP BY DO	as per dealer code CODE;		3
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7	(i) To I (ii) To I (ii) To I from the Give C (iii) SE (iv) SE (ii) SEI (ii) SE (iii) CC 3 (iv) MAX( 13-SEI What i	Display de display me table st Dutput ELECT COELECT MELECT DO DUNT(DISE SKTDAT P-2010 is the different statement of the display of the different statement of the display of the different statement of the display of the display of the different statement of the display of the	etails of all items in the ainimum unit price of it ock.  DUNT(DISTINCT DO AX(SKTDATE) FROM STOCK ORDER CODE, MIN(UNITPR) STINCT DCODE)  Elaving Clause is used for applying some the query.  Ilaving can be used without ggregate function, in that where clause. The having clause can control of the control of the price	STOCK talk tems for each CODE) FROM STOCK; R BY STKD FROM STOCK TO	M STOO  ATE DED  CK GR  Ind Ground  Tion to  Tause, in the selection was like the selection to the selection to the selection to the selection	individually  CK;  ESC;  OUP BY DO  The group by the data accolumn or r group by ca clause with  It cannot co	ause over clause is used to greater ow. on be used without hat the select statement. ontain aggregate functions of second particular ow.	oup ving tions.	3

Consider the given table

Faculty_Id	First_name	Last_name	Hire_date	Salary
1102	Sulekha	Mishra	12-10-1997	25000
1203	Naveen	Vyas	23-12-1994	18000
1404	Rakshit	Soni	25-08-2003	32000
1605	Rashmi	Malhotra	18-09-2004	21000
1906	Amit	Srivastava	05-06-2007	28000

3

3

#### Write SQL commands to:

- a. To display details of those faculty members whose First_name ends with 't'.
- b. Display all records in descending order of Hire_date.

Faculty:-

c. Find the maximum and minimum salary.

Ans:

- a. Select * from Faculty where First_name like '%t';
- b. Select * from Faculty order by Hire_date desc;
- c. Select max(Salary), min(Salary) from Faculty;
- 1 mark for each correct answer

Delhi Public School in Meerut is starting up the network between its different wings. There are four building named as S, J, A and H. The distance between various buildings is as follows:

From	То	Distance
Α	S	200 m
Α	J	150 m
Α	Н	50 m
S	J	250 m
S	Н	350 m
J	Н	350 m

Number of computers in the buildings:

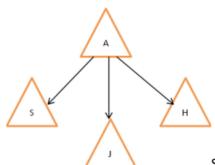
Building	No. of Computers
S	130
J	80
A	160
Н	50

- (i) Suggest the cable layout of connections between the buildings.
- (ii) Suggest the most suitable place (i.e. building) to house the server of this school, provide a suitable reason.
- (iii) Suggest the placement of the following devices with justification
  - Repeater
  - Hub/Switch

Ans:

.....

**Ans** (i)



Star Topology

- (ii) Server can be placed in the A building as it has the maximum number of computers
- (iii) Repeater can be placed between A and S buildings as the distance is more than 100 m

(or)

Rishita is working on a MySQL table named 'PRODUCTS' having following structure::

Field	Туре
pid	Varchar(5)
Pname	Varchar(20)
descp	Varchar(30)
qty	integer
Price	float

i) To fetch last 3 characters of pid whose price is

more than 30 and less than

50(both included). Select left(pid)

from PRODUCTS

Wher e Price between 30 and 50;

ii) To display the product name in upper case, removing all trailing and preceding spaces. Select upper(trim(pname))

From products;

iii) To display 5 characters from 4

th position from colum descp. Select mid(descp,4,5)

From Products

(1 mark for each)

30 Differentiate between Internet and Intranet.

Ans.

	Internet	Intranet
(i)	It is used to connect different network of	It is the type of internet which is used
	computer simultaneously.	privately.
(ii)	There are multiple users and it provides	There are limited number of users and it
	unlimited number of information to the	provide limited number of information to
	user.	its user.

Distinguish between Web Browser and Web Server.

Ans.

	Web Browser	Web Server
(i)	It requests the server for the web documents and services	Web server accept, approve ad respond to the request made by the web browser for web
	documents and services	document or services.
		document or services.
(ii)	The web browser sends an HTTP	The web server gets HTTP requests and sent
	request and gets an HTTP	HTTP responses.
	response.	

### SECTION – D

Mr. Subash, an IT Manager of "GEM Ltd." has created the following table to store the records of employees:

3

Table: Emp

Eid	EName	Department	DOB	DOJ
Star1	Ivan	Sales	1994-08-28	2020-02-14
Star2	Melinda	IT	1997-10-15	2021-11-19
Star3	Raj	Accounts	1998-10-02	2019-04-02
Star4	Michael	Sales	2000-02-17	2020-05-01
Star5	Sajal	IT	2001-12-05	2018-06-13
Star6	John	Accounts	1995-01-03	2019-07-15
Star7	Julia	Sales	1985-11-13	2020-08-19

Write SQL statements for the following:

- i. Display the names of employees in uppercase who work in the Sales dept.
- ii. Display the name of employees who joined in October.
- iii.Display the positional occurrence of "a" in the name of each employee.
- iv. Display from the name 3 characters from the 2nd position of all the employees.
- v. Display the names of employees in lowercase who work in the Sales dept.

(OR)

i.Predict the output of:

SELECT POW(INSTR("My Database"," "),2);

ii. Is NULL and 0(zero) same? Justify your answer. iii.Shyam wants to insert "Sharma" in the "LastName" column of the "Emp" table as shown below, but an error is being displayed. Write the correct SQL statement. INSERT INTO Emp ('Sharma') VALUES (Lastname); iv. Write the SQL statement and display the O/P to round of 67.246 to two decimal places. v. View the Structure of the table. i.SELECT UPPER(ENAME) from EMP WHERE DEPARTMENT = "Sales"; ii. SELECT ENAME, DOB FROM EMP WHERE MONTH(DOB) = 10; Or SELECT ENAME, DOB FROM EMP WHERE MONTHNAME(DOB) = "OCTOBER"; iii.SELECT INSTR(ENAME,"a") FROM EMP; iv.SELECT MID(ENAME,2,3) FROM EMP; 1 mark for the correct statement3 v. SELECT LOWER(ENAME) from EMP WHERE DEPARTMENT = "Sales"; (OR) ii.No it's not the same as null means a value that is unavailable unassigned or unknown and zero is a defined value. iii.INSERT INTO Emp(Lastname) VALUESb("Sharma"); iv.SELECT ROUND(67.246, 2); v. Desc <Table name>; 32 RIT University has to set up its new campus at Chennai. It has four department blocks named 5 block A, B, C and D for different functionalities. The Administrative Office is currently located at New Delhi. **BLOCK A** 135 **BLOCK B** 15 BLOCK C 50 BLOCK D Distance between various blocks: Block A to Block B - 50 m Block B to Block C - 115 m Block C to Block D -1.5 km Block A to Block D - 270 m Block B to Block D - 225 m Block A to Block C - 1 km Based on the above information, answer the following questions. i. Connect the devices using a suitable topology. ii. Name the blocks where a switch should be installed. iii.Name the block where the server is to be installed. Justify your answer. iv. What is the network type formed (out of LAN, MAN, WAN) between Block A To C. v. In which block you decide to place the server computer? Justify your answer. Ans: i. 1 mark for showing the correct topology ii. Switch should be installed in all blocks as they need to communicate to each other. iii. Server should be installed in Block A, as it has the maximum number of computers. iv.LAN v. BLOCK A (It has the more number of systems) 33 5 Consider the table EXAM given below: Table : EXAM NO **NAME** STIPEND AVERAGE DIVISION **SUBJECT** KARAN 400 **ENGLISH FIRST** 68 1 2 **AMAN** 680 **MATHEMATICS** 72 **FIRST** 3 **JAVED** 500 ACCOUNTS 67 FIRST 4 **BISHAKH** 200 **INFORMATICS** 55 SECOND

5

6

**SUGANDHA** 

**SUPARNA** 

400

550

HISTORY

**GEOGRAPHY** 

35

45

THIRD

THIRD

	Write SQL command for	
	(i) To list the names of those students who have obtaind DIVISION as FIRST in the	
	ascending order of NAME.	
	(ii) To count the number of students who have either accounts or informatics as subject.	
	Give output of the following:	
	(iii) SELECT AVG(STIPEND) FROM EXAM WHERE DIVISION= 'THIRD';	
	(iv) SELECT COUNT(DISTINCT SUBJECT) FROM EXAM;	
	(v) SELECT MIN(AVERAGE) FROM EXAM WHERE SUBJECT='ENGLISH';	
	Ans.	
	(i) SELECT NAME FROM EXAM WHERE DIVISION= 'FIRST' ORDER BY NAME;	
	(ii) SELECT COUNT(*) FROM EXAM WHERE SUBJECT IN('ACCOUNTS',	
	'INFORMATICS');	
	(iii)	
	AVG(STIPEND)	
	475	
	······································	
	(iv)	
	COUNT(DISTINCT SUBJECT)	
	6	
	<u> </u>	
	(v)	
	MIN(AVERAGE)	
	68	
	SECTION - E	
34	Explain the functions with suitable example to do this:	1+1+
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	a. To find the position of specific word or character in the given text	
	b. Display the total number characters from the text	
	c. To display remainder and sum of given two numbers	
	The start of the s	
	Ans.:	
	a.instr() function is used to find the position of specific word or character in the given text.	
	Example: select instr('pre-board', 'board'); It will return 5 as output.	
	b. length() function is used to return total number of letters present in the given string.	
	Example: select length('pre-board'); It will return 9 as output.	
	1	
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Ans:
(a) LAN ,DISTANCE within 10 KM.
(b) star topology and draw the layout
(c) switch is used to connect multiple computers without sharing the bandwidth.
(d) Broadband connection