

**BRAIN INTERNATIONAL SCHOOL**  
**INFORMATICS PRACTICES**  
**SAMPLE PAPER - 1**

**Time: 03:00 Hrs**

**CLASS - XI**

**Maximum Marks: 70**

General Instructions:

1. This Question paper contains five sections, Section A to E.
2. All Qs are compulsory.
3. Section A has 18 Qs carrying 01 mark each.
4. Section B has 07 Very Short Answer type Qs carrying 02 marks each,
5. Section C has 05 Short Answer type Qs carrying 03 marks each.
6. Section D has 02 Qs carrying 04 marks each.
7. Section E has 03 Qs carrying 05 marks each.
8. All programming Qs are to be answered using Python Language only.

**Section-A**

**Section A consists of 18 Questions of 1 mark each.**

**Q1.** In ..... memory, once the program or data is written, it cannot be changed? [1]

- (A) EEPROM (B) PROM  
(C) EPROM (D) None of these

**Q2.....** is a network of devices that have an embedded hardware and software to communicate (connect and exchange data) with other devices on the same network. [1]

- (A) DBMS (B) IoT  
(C) SaaS (D) NLP

**Q3.** CPU memory is also called: [1]

- (A) High speed memory (B) Cache  
(C) Both (A) & (B) (D) None of these

Answer:

- (C) Both (A) & (B)

**Q4.** The Describe command: [1]

- (A) Creates a table (B) Shows structure of a table  
(C) Adds a record (D) Deletes a record

**Q5.** The ..... clause is used to arrange records of a table. [1]  
(A) Alter (B) Order  
(C) Structure (D) Order by

**Q6.....** is a system that allows a group of connected computers to maintain a single updated and secure ledger which is updated only after all the nodes in the network authenticate the transaction. [1]  
(A) P2P (B) Client Server  
(C) DBMS (D) Blockchain

**Q7.** Which one of the following is not a keyword in Python language? [1]  
(A) Pass (B) Eval  
(C) Assert (D) Nonlocal

**Q8.** A condition or check applicable on a field or set of fields [1]  
(A) Constraint (B) Keyword  
(C) Clause (D) None of these

**Q9.** Which of the following is not a feature of MySQL: [1]  
(A) Free (B) Portable  
(C) Case sensitive (D) Supports query language

**Q10.** Which of the following is true for variable names in Python? [1]  
(A) Underscore and ampersand are the only two special characters allowed  
(B) Unlimited length.  
(C) All private members must have leading and trailing underscores.  
(D) None of the mentioned

**Q11.** A table can have maximum of primary keys : [1]  
(A) 1 (B) 2  
(C) 3 (D) Multiple

**Q12.** What will be the output of the following code : [1]  
162//55 + 78%4 + 12\*\*2  
(A) 149 (B) 147  
(C) 142 (D) 148

**Q13.** Which of the following is not an example of robotics? [1]  
(A) Sophia (B) Drone  
(C) CRAY (D) Both A & B

**Q14.** A key that links multiple tables is called? [1]  
(A) Foreign key (B) Primary key  
(C) Candidate key (D) Alternate key

**Q15.** Which of the following can be used as valid variable identifiers in python and why? [1]  
(A) Total (B) > sumNum  
(C) IQ (D) Addition-2

**Q16.**..... is designed to solve a specific problem or to do a specific task. [1]  
(A) Application Software (B) System Software  
(C) Utility Software (D) User

**Directions (Q17 and Q18): In the following Questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice.**

**Q17.** Assertion (A): A computer can process all instructions that are programmed in it and can is superior to humans in executing them.

Reason (R): Human beings can think and program, the machine cannot think. [1]

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is NOT the correct explanation of A
- (C) A is true but R is false
- (D) A is false and R is true

Answer:

- (B) Both A and R are true but R is NOT the correct explanation of A

**Q18.** Assertion (A): Operator is a type of Token.

Reason (R): Identifier starts with alphabet or underscore. [1]

- (A) Both A and R are true and R is the correct explanation of A
- (B) Both A and R are true but R is NOT the correct explanation of A
- (C) A is true but R is false
- (D) A is false and R is true

Answer:

- (B) Both A and R are true but R is NOT the correct explanation of A

### Section-B

**Section B consists of 7 Questions of 2 marks each.**

**Q19.** Write the advantage and disadvantage of script mode. [2]

**OR**

Differentiate between interactive mode and script mode..

**Q20.** Write the following mathematical equation as Python expressions. [2]

(i)  $3x^3 + 4x^2 + 5x + 7$

(ii)  $Y = a + b + c^3$

**Q21.** What is the original purpose of SQL? [2]

**Q22.** Give the output of the following with justification : [2]

```
x = 3
```

```
x + = x - x
```

```
print (x)
```

**Q23.**What is a public cloud? Give few examples of Public cloud. [2]

**Q24.** Write a code in python to input a list of names from the user and display the names whose length is more than 5. [2]

**Q25.** What are Python data types? [2]

### Section-C

Section C consists of 5 Questions of 3 marks each.

**Q26.** Consider the table Accessories given below and write SQL queries:

[3]

**TABLE: ACCESSORIES**

No	Name	Price	Id
A01	Mother Board	12000	S01
A02	Hard Disk	5000	S01
A03	Keyboard	500	S02
A04	Mouse	300	S01
A05	Mother Board	13000	S02
A06	Keyboard	400	S03
A07	LCD	6000	S04
T08	LCD	5500	S05
T09	Mouse	350	S05
T10	Hard Disk	4500	S03

- (i) Display name and price of all accessories in ascending order of their price.
- (ii) To display names of accessories whose name ends with "d" and price is above 1000.
- (iii) To increase the price of accessories by 200 whose name has "b" somewhere in between.

**OR**

Write queries with respect to the table Hospital given below :

**Table : Hospital**

PatId	Pname	Dept	Charges
P01	Amit	ENT	5600
P02	Sunil	Eye	7000
P03	Rina	Ortho	2500
P04	Akash	Ortho	9000
P05	Amitabh	ENT	4000
P06	Preeti	Ortho	5000

- (i) Display details of "Ortho" department patient in descending order of names.
- (ii) Add a new column Docname varchar(20) to the table.
- (iii) Delete records of patients whose name starts with "A"

**Q27.** What will be the output of the following statements? [3]

(i) list1 = [12,32,65,26,80,10]

list1.sort( )

print (list1)

(ii) list1 = [1,2,3,4,5]

list1 [len (list1) -1]

(iii) list1 = [1,2,3,4,5,6,7,8,9,10]

list1 [::-2]

list1 [1:3] + list1 [3:]

**Q28.** Differentiate Alter and Update commands in SQL. [3]

Answer:

Alter	Update
1. It belongs to DDL category	1. It belongs to DML category
<b>Q29.</b> Explain the use of order by clause. It changes the structure of the table.	2. It modifies data of the table. [3]
3. Columns can be added, modified, deleted, etc. Write most appropriate data types for the following columns of a Book table in a database storing data of books.	<b>OR</b> 3. Data can be changed, updated with values and expressions.

(A) Bookname

(B) Date of publication

(C) Price

**Q30.** Write a program to input Roll and name of as many students and create a dictionary from the details entered. Each entry should have roll as key and name as value. Also display the dictionary. [3]

### Section-D

Section D consists of 2 Questions of 4 marks each.

**Q31.** Write SQL queries for the table given below:

[4]

CID	CNAME	GENDER	SID	AREA
1001	R SHARMA	FEMALE	101	NORTH
1002	MR TIWARY	MALE	102	SOUTH
1003	MK KHAN	MALE	103	EAST
1004	AK SINGH	MALE	102	EAST
1005	S SEN	FEMALE	101	WEST
1006	R DUBEY	MALE	104	NORTH
1007	M AGARWAL	FEMALE	104	NORTH
1008	S DAS	FEMALE	103	SOUTH
1009	RK PATIL	MALE	102	NORTH
1010	N KRISHNA MURTY	MALE	102	SOUTH

- (i) Display Name and SID of "Male" customers.
- (ii) Display details of customers of NORTH area whose name ends with "A"
- (iii) Update the table to change AREA to SOUTH for all FEMALE customers
- (iv) Remove records of customers having Sid) 104.

**Q32. (i)** What will be the output for the following Python statement?

[4]

```
L = [10, 20, 30, 40, 50]
```

```
L = L + 5
```

```
print(L)
```

(ii) What will be the output of the following python code?

```
L =[10, 20]
```

```
L1 = [30, 40]
```

```
L2 = [50,60]
```

```
L.append(L1)
```

```
L.extend(L2)
```

```
print(L)
```

**(iii)** Find the output  
>>>11 = [1, 2, 3, 4]  
>>>12= [2, 3, 4, 5]  
>>>11 > 12

**OR(Option for iii only)**

Predict output of the following:

```
L = [10,12,2,22,19,40]
L[2] = 14
L.insert(3, 11)
del L[4:5]
print(L)
```

### Section-E

**Section E consists of 3 Questions of 5 marks each.**

**Q33.** Write SQL query for the Qs that follow based on given **table Worker**

[5]

Worker_ID	Name	Salary	Joining_Date	Department
001	Monika	10000	2014-02-20	HR
002	Shikha	8000	2014-06-11	Admin
003	Arun	30000	2014-02-20	HR
004	Nishant	15000	2014-02-20	Admin
005	Vivek	15000	2014-06-11	Admin
006	Santosh	20000	2014-01-20	Accountant
007	Naresh	7500	2014-04-11	Accountant

- (i)** To display Name and joining date of workers whose salary is greater than 10000.
- (ii)** To display details of those workers whose name started with 'N'.
- (iii)** To display all workers details from worker table order by Name ascending.
- (iv)** To display Name and Salary of those workers who work in 'HR' or 'Admin Department.
- (v)** To display the total number of workers who work in Accountant department.



**OR**

Consider the **table Hospital** storing details of patients as follows :

<b>PatId</b>	<b>Pname</b>	<b>Dept</b>	<b>Charges</b>	<b>DtofAdm</b>
P1	Varun	PAED	700	2021-09-02
P2	Sunita	PAED	900	NULL
P3	Samarpan	ENT	1000	2020-08-09
P4	Rishabh	ORTHO	500	1995-06-05
P5	Bineeta	ORTHO	450	2012-03-04

Write SQL commands for (i) – (v)

- (i) To create the table with appropriate data types.
- (ii) To display only the names and departments of patients of "ENT".
- (iii) To increase the charges of all departments by 20%.
- (iv) To add a new column Phone of type integer.
- (v) Remove the entire table.

**Q34.** What are the major components of a computer system? How do different components of a computer communicate with each other ? [5]

**Q35.** Write a program to input a sentence and using a list display the words that have even number of vowels. [5]

**OR**

Write a Python program to find the list of words that are longer than n from a given list of words.

# BRAIN INTERNATIONAL SCHOOL

## INFORMATICS PRACTICES

### SAMPLE PAPER - 2

Time: 03:00 hrs

CLASS - XI

Maximum Marks: 70

#### General instructions:

- This question paper contains five sections, Section A to E.
- All questions are compulsory.
- Section A has 18 questions carrying 01 mark each.
- Section B has 07 Very Short Answer type questions carrying 02 marks each.
- Section C has 05 Short Answer type questions carrying 03 marks each.
- Section D has 02 questions carrying 04 marks each.
- Section E has 03 Long Answer type questions carrying 05 marks each
- All programming questions are to be answered using Python Language only.

SECTION - A		
1	The primary memory (also called main memory) of a personal computer consists of ..... (A) RAM only (B) ROM only (C) both RAM and ROM (D) Cache memory	1
2	Robots that resemble humans are known as (A) Cyborg (B) Humanoids (C) Drone (D) None of the these	1
3	What is the full form of ROM? (A) Register Only Memory (B) Readable Only Memory (C) Read-Only Memory (D) Random Only Memory	1
4	The Alter command belongs to the category- (A) DDL (B) DML (C) TCL (D) DCL	1
5	The CHANGE clause of Alter command can be used to rename a column and a column. (A) Add (B) Modify (C) Delete (D) Reindex	1
6	What is the process of examining data sets in order to draw conclusions about the information they contain? (A) Data Entry (B) Database Management System	1

	(C) Data Filter	(D) Data analytics	
7	Which of the following is not a core data type in Python programming? (A) Tuples (C) Class		(B) Lists (D) Dictionary
8	The data type that does not required a size to be specified is: (A) float (C) char		(B) varchar (D) date
9	The format for time in MySQL is: (A) MM:HH:SS (C) SS:MM:HH		(B) HH:MM:SS (D) SS:DD:HH
10	What is the maximum possible length of an identifier? (A) 31 characters (C) 79 characters		(B) 63 characters (D) None of these
11	A table "Electronics" has 12 attributes and 10 tuples, what will be the degree of table 'Electronics'. (A) 12 (C) 120		(B) 10 (D) 22
12	What will be the output of the following code : 82%7+ 12/7-16**0.5 (A) 2.71 (C) 3.91		(B) 2.51 (D) 14.5
13	A ..... is an unmanned aircraft which can be remotely controlled or can fly autonomously through software-controlled flight plans in their embedded systems, working in conjunction with onboard sensors and GPS. (A) Drone (C) Humanoids		(B) Cyborg (D) None of the these
14	If a table has 3 columns carrying NOT NULL and UNIQUE values, the maximum number of Candidate keys can be (A) 2  (C) 1		(B) 3  (D) 0

15	What do you call a program in execution? (A) Command (B) Process (C) Task (D) Instruction	1
16	Which of the following is not an operating system? (A) Windows (B) Linux (C) Oracle (D) DOS	1
<p><b>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as</b></p> <p><b>(A) Both A and R are true and R is the correct explanation for A</b></p> <p><b>(B) Both A and R are true and R is not the correct explanation for A</b></p> <p><b>(C) A is True but R is False</b></p> <p><b>(D) A is false but R is True</b></p>		
17	Assertion (A): Information technology is fast becoming a very important field of activity in India. Reason (R): Software is one of the major exports of India and further India has a very strong base in hardware. (A) Both A and R are true and R is the correct explanation for A (B) Both A and R are true and R is not the correct explanation for A (C) A is True but R is False (D) A is false but R is True	1
18	Assertion (A): An operating system is the hardware component of the computer system. Reason (R): The operating system decides which process gets the processor, when and for how much time. (A) Both A and R are true and R is the correct explanation for A (B) Both A and R are true and R is not the correct explanation for A (C) A is True but R is False (D) A is false but R is True	1
<b>SECTION - B</b>		
19	Out of the following find those identifiers, which can be used for naming variables or functions in a Python program: Days*Rent, For, A_price, Grand Total, do, 2 clients, Participant1, _Mycity <p style="text-align: center;"><b>OR</b></p> What are literals? Name the types of literals.	2

20	Find the errors in following code: (i) marks = 90 print mark (ii) a = 20 b = a + 10 print a and b	2																																										
21	Write few advantages of SQL.	2																																										
22	Predict the output: x = 15 y = i z = 15 print (x == y) print (x > z) print (z < y)	2																																										
23	Write different types of cloud computing.	2																																										
24	Write a module to calculate and display the sum of all odd numbers in a list.	2																																										
25	What do you mean by an operator? Name any four operators used in queries.	2																																										
<b>SECTION - C</b>																																												
26	Consider the table STUDENT given below and write answer for (i) and SQL commands for (ii) to (iii)	3																																										
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Student_No</th> <th>Class</th> <th>Name</th> <th>Game</th> <th>G_Grade</th> <th>Section</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>7</td> <td>Rahul</td> <td>Swimming</td> <td>B</td> <td>A</td> <td>99</td> </tr> <tr> <td>02</td> <td>8</td> <td>Sameer</td> <td>Tennis</td> <td>A</td> <td>B</td> <td>20</td> </tr> <tr> <td>03</td> <td>10</td> <td>Dushyant</td> <td>Football</td> <td>C</td> <td>C</td> <td>87</td> </tr> <tr> <td>04</td> <td>12</td> <td>Kapil</td> <td>Tennis</td> <td>D</td> <td>C</td> <td>90</td> </tr> <tr> <td>05</td> <td>6</td> <td>Ravinder</td> <td>Cricket</td> <td>A</td> <td>B</td> <td>97</td> </tr> </tbody> </table>			Student_No	Class	Name	Game	G_Grade	Section	Marks	01	7	Rahul	Swimming	B	A	99	02	8	Sameer	Tennis	A	B	20	03	10	Dushyant	Football	C	C	87	04	12	Kapil	Tennis	D	C	90	05	6	Ravinder	Cricket	A	B	97
Student_No	Class	Name	Game	G_Grade	Section	Marks																																						
01	7	Rahul	Swimming	B	A	99																																						
02	8	Sameer	Tennis	A	B	20																																						
03	10	Dushyant	Football	C	C	87																																						
04	12	Kapil	Tennis	D	C	90																																						
05	6	Ravinder	Cricket	A	B	97																																						
(i) What is the degree and cardinality of the table. (ii) Display Student_No and G_Grade of all students from table STUDENT. (iii) List the Name from table STUDENT whose Student_No is 04 or 05 or 02.																																												

	<b>OR</b>	
	<p>(i) Write a query to display Name and Section for those students whose Marks lies between 85 to 100</p> <p>(ii) Display Game and Marks for those students whose name started with an alphabet 'D'.</p> <p>(iii) Display details of "Cricket" and "Swimming" students from the table.</p>	
<b>27</b>	<p>What result will be produced after executing the following code:</p> <pre>list1 = ['Delhi', 'Meerut', 'Hapur', 'Agra'] list2 = list1 list3 = list1 [:] list2[1] 'Mumbai' list3[3] = 'Chandigarh' sum=0 for i in (list1, list2, list3):     if i [1] == 'Mumbai':         sum += 5     if i [3] == 'Chandigarh':         sum += 10 print(sum)</pre>	<b>3</b>
<b>28</b>	<p>Differentiate between the following commands:</p> <p>(i) ALTER and UPDATE</p> <p>(ii) DELETE and DROP</p>	<b>3</b>
<b>29</b>	<p>What are the different categories of SQL commands. Write two example commands of each category.</p> <p style="text-align: center;"><b>OR</b></p> <p>Write names of commands for the following:</p> <p>(A) To show all available database.</p> <p>(B) To add records to the table.</p> <p>(C) To create table in a database.</p>	<b>3</b>
<b>30</b>	Write a program to calculate the average and total of 5 numbers in a list.	<b>3</b>
	<b>SECTION - D</b>	
<b>31</b>	Write SQL queries for (i) to (iv) on the basis of table College-Students :	<b>4</b>

**Table : College-Students**

No	Name	Fee	Gender	C_ID	JoinYear
11	Jeevan	30000	M	A01	2012
12	Rohit	25000	M	A02	2009
13	Ekant	30000	M	A02	2011
14	Arunava	30000	M	A03	2009
15	Geeta	40000	F	A02	NULL
16	Ekta	40000	F	A05	2010

- (i) To display Name, Fee, Gender, Join Year about the College-Students, who have joined before 2010.
- (ii) To display the names of College-Students, who are paying Fee more than 30000.
- (iii) To display the names of all College-Students in ascending order of their joinyear.
- (iv) To display the Name and Fee of Male college-students.

**32** Consider the following list mylist. What will be the elements of mylist after each of the following operations?

mylist = [10,20,30,40]

- (i) mylist.append [(50,60)]
- (ii) mylist.extend ([80,90])
- (iii) mylist.insert(2,45)

**OR(Option for (iii) only)**

What will be the output of the statement (Considering the original list): print(mylist[-1: :-1])

**SECTION - E**

**33** Consider the table ABC given below, write commands in SQL for (i) to (v)

PID	Name	Gender	City	Pincode	Basic_Salary
1	Geet	F	Udhamwara	132141	50000
2	Surinder	M	Kupwara Nagar	193421	75000
3	Peter	M	Bhawani	434341	45000
4	Thomas	M	Ahmed Nagar	390021	50000
5	Garima	F	New Delhi	182141	35000
6	Simi	F	Udhamwara	110021	42000

- (i) Display the number of Females from ABC table.
- (ii) Display the PID, City and Pincode of ABC in descending order of Names.
- (iii) Display the name and city of all the males getting Basic Salary above 45000
- (iv) Display Name and Basic Salary of all the persons whose Name start with 'S'.
- (v) Display the details of those persons who live in New Delhi and are earning more than 30000.

OR

Write SQL queries for the table Spare given below :

Table: Spare

PartId	Pathname	Mfg	Mfgdate
P1	Mouse	Compaq	2011-03-09
P2	IC	HCL	2012-09-01
P3	Motherboard	Asus	NULL
P4	HDD	Asus	2020-09-01
P5	SMPS	Technet	2005-04-03

- (i) Create the table with suitable data types
- (ii) Display names of parts manufactured by "Asus"
- (iii) Display partnames and manufacturing dates of all spares
- (iv) Add a new column Cost float(8,2)
- (v) Add a new record "P6", "Keyboard", "Asus", "2012-09-03"

34 Draw the block diagram of a computer system. Briefly write about the functionality of each component. 5

35 Write a program to input total number of sections and class teacher's name in 11th class and display all information on the output screen. 5

OR

Write a code in python to input a list of numbers and find the cumulative sum of the elements.



**BRAIN INTERNATIONAL SCHOOL**

**INFORMATICS PRACTICES**

**SAMPLE PAPER - 3**

**Time: 03:00 hrs**

**CLASS - XI**

**Maximum Marks: 70**

**General instructions:**

- This question paper contains five sections, Section A to E.
- All questions are compulsory.
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<b>SECTION - A</b>		
<b>1</b>	The components of a computer are called hardware. (A) Physical (B) Logical (C) Application (D) None of these	<b>1</b>
<b>2</b>	The superimposition of computer generated perceptual information over the existing physical surroundings is called as ..... (A) Immersive Experiences (B) Virtual Reality (C) Augmented Reality. (D) Machine Learning.	<b>1</b>
<b>3</b>	.....refers to a logical structure of a computer describing how its components are connected to one another. (A) Functional system (B) Operational system (C) Computer organization (D) None of these	<b>1</b>
<b>4</b>	The full form of DDL is ..... (A) Distributed Data Language (B) Data Definition Language (C) Definition Database Language (D) None of these	<b>1</b>
<b>5</b>	For which attribute fixed length string is suitable? (A) Salary (B) City (C) Gender (D) Age	<b>1</b>

<b>6</b>	Example of Artificial Intelligence is : (A) Google Now (C) Alexa	(B) Cortana (D) All of these	<b>1</b>
<b>7</b>	Which of the following is used to define a block of code in Python language? (A) Indentation (C) Brackets	(B) Key (D) All of these	<b>1</b>
<b>8</b>	MySQL is a/an ..... (A) Programming Language (C) Database Management System	(B) Operating System (D) None of these	<b>1</b>
<b>9</b>	Which operator is used to compare a value with a specified list of values? (A) IN (C) BETWEEN	(B) LIKE (D) ALL	<b>1</b>
<b>10</b>	List can contain values of these types: (A) Integers (C) Tuples	(B) Lists (D) All of these	<b>1</b>
<b>11</b>	To remove duplicate rows from the results of an SQL SELECT statement, the ..... included. (A) UNIQUE (C) ONLY	(B) DISTINCT (D) SINGLE	<b>1</b>
<b>12</b>	What will be the output of the following code : $2 * 3 * 2 + 625 ** 0.5 + 7 // 2$ (A) 542.50 (C) 539	(B) 540.0 (D) 541.0	<b>1</b>
<b>13</b>	The ..... providers can offer different kinds of computing infrastructure, such as servers, virtual machines (VM), storage and backup facility, network components, operating systems or any other hardware or software. (A) SaaS (C) IaaS	(B) PaaS (D) Both (A) and (B).	<b>1</b>
<b>14</b>	Which of the following statements is correct regarding Alternate key : An Alternate key can be defined as: (A) An attribute which is a primary key (C) A candidate key	(B) An attribute which is not a primary key (D) An attribute which is a foreign key	<b>1</b>

<b>15</b>	A Blue ray disc is an .....	(A) Input unit (B) Output unit (C) Memory unit (D) None of these	<b>1</b>
<b>16</b>	The Boot sector files of the system are stored in which computer memory?	(A) RAM (B) Cache (C) ROM (D) Register	<b>1</b>
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (A) Both A and R are true and R is the correct explanation for A (B) Both A and R are true and R is not the correct explanation for A (C) A is True but R is False (D) A is false but R is True		
<b>17</b>	Assertion (A): Computer use a number of special memory units called registers, which are not considered as parts of the main memory. Reason (R): All these registers have the common ability to receive the information, hold it temporarily and to pass it on as directed by the control unit.		<b>1</b>
<b>18</b>	Assertion (A): Computers perform complex tasks with incredible speed and accuracy. Reason (R): The smallest unit of memory is called a bit.		<b>1</b>
	<b>Section-B</b> <b>Section B consists of 7 questions of 2 marks each.</b>		
<b>19</b>	Python is an open source. Explain?  <b>OR</b>  Differentiate int and float data types.		<b>2</b>
<b>20</b>	Rahul wrote a code in Python. But when he tried to run the code, he got some errors. Find out the error and help him.  percent = 98 print ("WOW!!!") print ("I am very happy to got", percent,"%") print ("How much did you get ?")		<b>2</b>
<b>21</b>	What is the original purpose of DBMS?		<b>2</b>

22 Find the output for x in range (12):  
Pow1=2 \*\* x  
print(Pow1) 2

23 What do you understand by SaaS? 2

24 How can the members of a list accessed in Python ? 2

25 What is the main difference between ' BETWEEN' and ' IN' operators? 2

**Section-C**  
**Section C consists of 5 questions of 3 marks each.**

26 Read the following data:  
**Table: ITEM** 3

Item_Code	Item_Name	Price
100	Refrigerator	9000
101	Television	8000
102	Computer	12000

Write the output of the following MySQL query (i) from the table ITEM

(i) Select \* from ITEM where Price > 8000 order by Item\_Name;

Write MySQL queries for the following (table name is ITEM)

(ii) Increase the price of the item Television by 10%

(iii) Add a new column DtMfg of type date to store the date of manufacture of the products.

**OR**

Consider the following table with their fields.

Employee(Ecode/Ename,Desig,Salary,Doj)

(i) List the names, salary, PF, HRA, DA of all the employees in the Employee Table. HRA is 25% of salary, DA is 10% of salary and PF is 5% of salary. The result should be in descending order of ENAMES.

(ii) Using IN clause display details of employees whose designations are "Manager" or "Officer"

(iii) Modify the table to increase salary of all employees by 10%. [3]

```
z = y*z + 10-x print
("x =", x)
print ("y =", y)
print ("z =", z)
```

28 Define LIKE operator of SQL with an example.

3

29 Define the generally used data types in SQL.

3

**OR**

Write the situations where you will use the IN, BETWEEN and LIKE clauses.

30 Write a program to find the sum of all elements in a list.

3

**Section-D**

**Section D consists of 2 questions of 4 marks each.**

31 Consider the following table Student and write command in SQL from (i) to (iv).

4

Roll No	Name	Age	Percentage	City
2001	Abhishek Singh	20	80	Agra
2002	Amar Kumar	19	75	Mathura
2003	Chetan Shukla	21	81	Agra
2004	Deepak Nagar	19	70	Agra
2005	Raghu Yadav	19	85	Lucknow

Write the output of the following MySQL queries (i) to (iv) from the table STUDENT

(i) SELECT Name FROM Student WHERE City = 'Agra' AND Percentage > 75;

(ii) SELECT \* FROM Student WHERE Name LIKE 'A%';

(iii) SELECT Name FROM Student WHERE City NOT IN ('Lucknow');

(iv) Select Name, Percentage from Student where age >= 20;

32 What will be the output of the following statements?

4

(i) list1 = [12,32,65,26,80,10]  
list1.sort() print  
(list1)

```
print (list1)
```

(iii) list1 = [1,2,3,4,5,6, 7,8,9,10]  
list1 [::-2]  
list1 [:3] + list1 [3:]

**OR (Option for (iii) only)**

What will be the output of the statement:

```
list1 = [1,2,3,4, 5]
```

```
list1 [len (list1) -1]
```

**Section-E**

**Section E consists of 3 questions of 5 marks each.**

**33** Write the SQL commands for the questions from (i) to (v) on the basis of table Employee.

**5**

Emp_no	E_name	Profile	Manager	Hire_date	Salary	Commission	Dept_no
8369	SMITH	CLERK	8902	1990-12-18	8000	NULL	20
8499	ANYA	SALESMAN	8698	1991-02-20	16000	300.00	30
8521	SETHI	SALESMAN	8698	1991-02-22	12500	500.00	30
8566	MAHADEVAN	MANAGER	8839	1991-04-02	29850	NULL	20
8654	MOMIN	SALESMAN	8698	1991-09-28	12500	1400.00	30
8698	BINA	MANAGER	8839	1991-05-01	28500	NULL	30
8882	SHIVANSH	MANAGER	8839	1991-06-09	24500	NULL	10
8888	SCOTT	ANALYST	8566	1991-12-09	30000	NULL	20
8839	AMIR	PRESIDENT	NULL	1991-11-18	50000	NULL	10
8844	KULDEEP	SALESMAN	8698	1991-09-08	15000	0.00	30

(i) Display Employee Name and Salary of those employees whose salary is greater than or equal to 22000?

(ii) Display details of employees those are not getting commission.

(iii) Display employee name and salary of those employees who have their salary in range of 2000 to 4000?

(iv) Display the name, profile and salary of employee(s) who doesn't have manager?

(v) Display the name of employee whose name contains "A" as fourth alphabet.

**OR**

Write SQL queries for the **table Software** given below :

Sid	Softwarename	Type	Cost	Reldate
S01	WhatsApp	Comm	0	2000-09-01
S02	Quckheal	Security	40000	2020-08-03
S03	Kaspersky	Security	25000	NULL
S04	VLCplayer	Audioplayer	10000	2011-08-03
S05	MySQL	Dbase	0	2020-02-02

- (i) Display all the records in descending order of cost
- (ii) Display structure of the table
- (iii) Display details of software released before 2020
- (iv) Add a new record "S06","Python"/"Programming",29000,NULL
- (v) Replace the cost by 20000 for software's whose cost is 0

<b>34</b>	<p><b>I) Match the following:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a) Compiler</td> <td style="width: 50%;">i) Output Device</td> </tr> <tr> <td>b) MS Office</td> <td>ii) Input Device</td> </tr> <tr> <td>c) Microphone</td> <td>iii) Application Software</td> </tr> <tr> <td>d) Plotter</td> <td>iv) System Software</td> </tr> </table> <p><b>II) Give any three point differences between Primary and Secondary memory with exapmle.</b></p>	a) Compiler	i) Output Device	b) MS Office	ii) Input Device	c) Microphone	iii) Application Software	d) Plotter	iv) System Software	(2)	<b>5</b>
a) Compiler	i) Output Device										
b) MS Office	ii) Input Device										
c) Microphone	iii) Application Software										
d) Plotter	iv) System Software										

<b>35</b>	<p>Write a program to find the largest and the second largest elements in a given list of elements.</p> <p style="text-align: center;"><b>OR</b></p> <p>Write a program to input your friend's names and their phone numbers and store them in the dictionary as the key value pair. Perform the following operations on the dictionary:</p> <ul style="list-style-type: none"> <li>(i) Display the name and phone number for all your friends.</li> <li>(ii) Add a new key value pair in this dictionary and display the modified dictionary.</li> <li>(iii) Delete a particular friend from the dictionary.</li> <li>(iv) Modify the phone number of an existing friend.</li> <li>(v) Check if a friend is present in the dictionary or not.</li> <li>(vi) Display the dictionary in sorted order of names.</li> </ul>	(3)	<b>5</b>
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