DELHI PRIVATE SCHOOL L.L.C.
Affiliated to C.B.S.E., DELHI
(Approved & Recognized By Ministry of Education - United Arab Emirates)

EEE CONSORTIUM
PRE BOARD EXAMINATION (2021-22)

INFORMATICS PRACTICES (Code: 065)   **GRADE 12**

Maximum Marks: 35   **Time: 2 hours**

General Instructions
1. The question paper is divided into 3 sections – A, B and C
2. Section A, consists of 7 questions (1-7). Each question carries 2 marks.
3. Section B, consists of 3 questions (8-10). Each question carries 3 marks.
4. Section C, consists of 3 questions(11-13). Each question carries 4 marks.
5. Internal choices have been given for question numbers – 1 , 3,7, 8 and 12.

SECTION – A
Each question carries 2 marks

1. Ms. Vineeta Singh, General Manager of Sugar cosmetics recently discovered that the communication between her company's accounts office and HR office is extremely slow and signals drop quite frequently. These offices are 125 meters away from each other and connected by an Ethernet cable. What kind of network is formed and also explain by clearly differentiating between LAN and MAN on at least on two points?   2

    OR

    What is meant by Topology? What are the factors that must be considered before making a choice for the Topology?

2. **i)** Which protocol is used to upload files to webserver for creating websites.   1

    ii) Explain the purpose of a router.   1

3. Help Mr.Rao in Predicting the output of the following: 2
    (i) mysql> SELECT LENGTH(instr('Republic Day'," "));;
    (ii) mysql>SELECT MID('information',3,2);

    OR
    Briefly explain the purpose of the given function
    (i) Upper( ) or UCASE( )
    (ii) LEFT( )

4. Briefly explain about Modem and Gateway.   2

5. Give the output of following commands   2
    a)SELECT ROUND(3234.343,1);
    b) SELECT ROUND(654.67152) +ROUND(152.4146,2) ;

6. Differentiate between group by and order by clause in SQL.   2

7. Mr. Kunal, a HR Manager in a multinational company "Star-X world" has created the following table.   2

Relation: INSURANCE

Company	Type	Years	Name	Coverage	Dt_of_Policy
CUF	Car	15	Care safe	80000	2008-08-09
LIT	Life	40	Insured Life policy	200000	2010-04-12
HC	House	25	House Secure policy	550000	2015-03-10
URFree	Life	35	Life Insurance	750000	2018-03-12
Care	Child	25	Future Child	500000	2020-12-12

Predict the output for the following queries.

i) Select min (year (Dt_of_Policy)) from INSURANCE;

ii) Select Company, Name from INSURANCE where month(Dt_of_Policy)=03;

OR

Based on the table given above, help Mr. Kunal writing queries for the following task:

i) To display the name of oldest Company and its date of policy.

ii) To display the name and date of policy of the August month.

SECTION – B
Each question carries 3 marks

8. Consider a string "AS YOU know MORE"   3

Write the queries for the following tasks.

(i) Write a command to display "Know".

(ii) Write a command to display number of characters in the string.

(iii)What will be the output of the following queries

Select pow(instr('informatics practices','atic'),2);

OR

Table: CLUB

COACH_ID	COACH NAME	AGE	SPORTS	DATA OF APP	PAY	SEX
1	KUKREJA	35	KARATE	1996-03-27	1000	M
2	RAVINA	34	KARATE	1998-01-20	1200	F
3	KARAN	34	SQUASH	1998-02-19	2000	M
4	TARUN	33	BASKETBALL	1998-01-01	1500	M
5	ZUBIN	36	SWIMMING	1998-01-12	750	M
6	KETAKI	36	SWIMMING	1998-02-24	800	F
7	ANKITA	36	SQUASH	1998-02-20	2200	F
8	ZAREEN	37	KARATE	1998-02-22	1100	F
9	KUSH	41	SWIMMING	1998-01-13	900	M
10	SHAILYA	37	BASKETBALL	1998-02-19	1700	M

Give the output of the following SQL statements:

(i) select lcase(SPORTS) from CLUB;

(ii) select mod(age,5) from CLUB where SEX='F';

(iii) select pow(3,2) from CLUB where SPORTS='KARATE';

9.   Lehar is working using MySQL functions of MySQL. Explain her following: 3

    i.   What is the purpose of dayname () function?

    ii.   How it is different from dayofweek () function?

    iii.   What is the general format of its return type?

10.   Consider an EMP table(Empid, Firstname, lastname).   3

    Write the query for each of the following.

    i.   Display LastName and Firstname from emp table who have "in" in the second or third position in their first names

    ii.   Display the Firstname from emp table that are 5 chars long.

    iii.   Display the 2 letters of firstname starting from third character.

SECTION – C
Each question carries 4 marks

11.   Consider the following records in 'Garment' table and answer the given questions: 4

Table: GARMENT

GCODE	GNAME	SIZE	COLOUR	PRICE
111	Tshirt	XL	Red	1400.00
112	Jeans	L	Blue	1600.00
113	Skirt	M	Black	1100.00
114	Jacket	XL	Blue	4000.00
115	Trousers	M	Brown	1500.00
116	LadiesTop	L	Red	1200.00

i)Display total price of all the garments color wise.

ii)Display highest price size wise and colorwise.

iii)Display color and average price of each color whose average price is more than 1400.

iv)Display Gname, Size and Price in decreasing order of Price.

12.   Kaashvi, a database analyst has created the following table: 4

PERSONS

PID	SurName	FirstName	Gender	City	PinCode	BasicSalary
1	Sharma	Geeta	F	Udhamwara	182141	50000
2	Singh	Surinder	M	Kupwara Nagar	193222	75000
3	Jacob	Peter	M	Bhawani	185155	45000
4	Alvis	Thomas	M	Ahmed Nagar	380025	50000
5	Mohan	Garima	M	Nagar Coolangatta	390026	33000
6	Azmi	Simi	F	New Delhi	110021	40000
7	Kaur	Manpreet	F	Udhamwara	182141	42000

Write output for the following SQL statements.

i)SELECT SurName FROM PERSONS WHERE BasicSalary>= 50000;

ii)SELECT SUM (BasicSalary) FROM PERSONS WHERE Gender = „F";

iii) SELECT Gender, MIN (BasicSalary) FROM PERSONS GROUP BY Gender;
iv) SELECT Gender, COUNT (*) FROM PERSONS GROUP BY Gender;

OR

How is HAVING clause similar and different from WHERE clause? Explain with the help of examples of each.
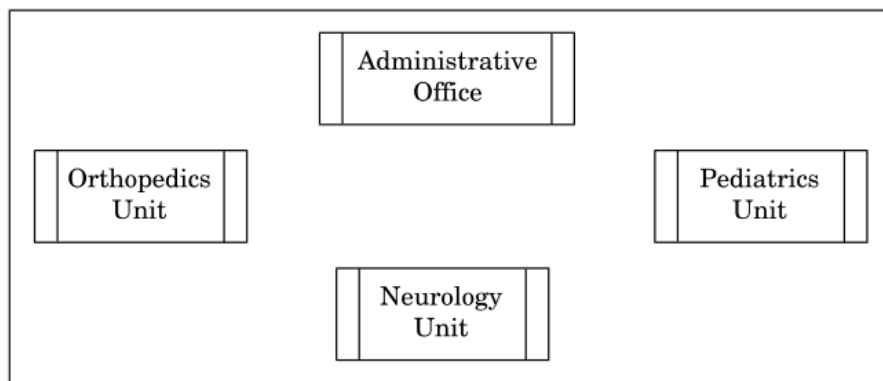
13. Ayurveda Training Educational Institute is setting up its centre in Hyderabad with four specialised departments for Orthopedics, Neurology and Pediatrics along with an administrative office in separate buildings. The physical distances between these department buildings and the number of computers to be installed in these departments and administrative office as given as follows. You as a network expert have to answer the queries as raised by them in (i) to (v).

Shortest distances between various locations in metres :

Administrative Office to Orthopedics Unit	55
Neurology Unit to Administrative Office	30
Orthopedics Unit to Neurology Unit	70
Pediatrics Unit to Neurology Unit	50
Pediatrics Unit to Administrative Office	40
Pediatrics Unit to Orthopedics Unit	110

Number of Computers installed at various locations are as follows :

Pediatrics Unit	40
Administrative Office	140
Neurology	50
Orthopedics Unit 80	80

i) Suggest a suitable layout for Networking the computer of all wings
ii) Name the wing where the server is to be installed. Justify your answer.
iii) Suggest the devices to be installed in each of these buildings for connecting computers installed within the building out of the following:
   ● Gateway
   ● Modem
   ● Switch
iv) Write the name of the type of network out of the following, which will be formed by connecting all the computer systems across the network .

***