



**EEE CONSORTIUM
PREBOARD EXAMINATION (2021-22)**

INFORMATICS PRACTICES (Code: 065)

Time: 2 hours

Maximum Marks: 35

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.
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SECTION – A

Each question carries 2 marks

1. Zara Basic is a fashion company with design unit and market unit 130 meters away from each other. The company recently connected their LANs using Ethernet cable to share the stock related information. But, after joining their LANs, they are not able to share the information due to loss of signal in between. Suggest a device out of Repeater and Router should be used for a smooth communication by clearly differentiating between Repeater and Router on at least two points. 2

OR

Lehar, a beginner in IT field has just started learning web technologies. Help her in understanding the difference between Star topology and Bus topology with the help of a suitable diagram of each.

2. (i) Shubham wants to play a video in his browser but he is not able to do so. A message on the screen instructs him to install the Adobe Flash Player plug-in. Help him to add it in his browser. 1
- (ii) What are cookies? 1
3. Give the output of the following commands: 2
 - a) select left(monthname(now()), length(day(now())));
 - b) Write a query to extract institute code from a string 'USS/23/67/09'. The first three characters tell the institute code.

OR

Give commands for the following

a) Print the firstname in upper case and last name in lower case from the relation Student.

b) Using the relation Student, print a report showing the name of the student along with the marks scored and moderated marks. Moderated marks are calculated as marks +10.

Note: The fields of the table are Rollno, FName, Lname, Marks, Result.

4. Yash is working as sale promoter in Trimax Corporation, He is right now in Sri Lanka, and wants to address to some of his subordinates. He wants to have meeting in which they can watch each other and also communicate with audio in real time Identify and explain the protocol used for this requirement. 2
5. Help Mr.Ali in Predicting the output of the following: 2
- a. SELECT ROUND(234.7894,0) *5;
- b. SELECT ROUND(234.7894,-2) *5;
6. Shewani has recently started working in MySQL. Help her in understanding how to organize similar data into cluster. 2
- Suggest suitable clause for it and properly explain its usage with the help of an example.
7. Ms. Kanan, a HR Manager in a multinational company “Star-X world” has created the following table **Infant** to store the records. 2

ItemCode	Item	DatePurchase	UnitPrice	Discount
101	Frock	2022-01-23	700	10
102	Cot	2022-09-23	5000	25
103	Soft Toy	2021-09-17	800	10
104	Baby Socks	2021-08-18	100	7
105	Baby Suit	2019-08-01	500	5

Predict the output for the following queries.

- Select Item from Infant where month (DatePurchase)=8;
- Select min(DatePurchase) from Infant;

OR

Based on the table given above, help Ms. Kanan writing queries for the following task:

- To display the items of DatePurchase which is before 2021-09-17.
- To display the ItemCode and Item whose purchase date is of month September.

SECTION – B

Each question carries 3 marks

8. Predict the output of the following queries: 3
- Select mod(power(11,3), 5);
 - Select power(mod(11,3), 5);
 - Select instr("situation",substr("examination", 7,2));

OR

Using the table given below, answer the questions that follow:

TABLE : SALESPERSON

Code	NAME	SALARY	Item
1001	TANDEEP JHA	60000	Stationery
1002	YOGRAJ SINHA	70000	Electronics
1003	TENZIN JACK	45000	clothes
1005	ANOKHI RAJ	50000	Stationery
1004	TARANA SEN	55000	Cosmetics

- Write a query to display the firstname(first part of the name before blank) of the salesperson.

- ii) Write a query to display the names of those salesperson whose name is less than 12 characters long.
- iii) Write a query to display four characters from fifth position from the item field.

9. Write the output of the following 3
- i. SELECT MONTHNAME(CURDATE());
- ii. Explain the purpose of monthname()
- iii. How many parameters does it accept.
10. While dealing with string data type in MySQL, it's observed that sometimes unnecessary space character comes, which hampers the successful execution of a string manipulation module. Name the suitable MySQL function (s) to remove leading, trailing and both type of space characters from a string. Also give MySQL queries to depict the same. 3
- i. To remove leading space characters: ltrim()
- ii. To remove trailing space characters: rtrim()
- iii. To remove both type of space characters: trim()

SECTION – C

Each question carries 4 marks

11. Using the table given below, answer the questions that follow: 4
- ‘Teacher’

T_no	Name	D_O_J	Net_sal	Grade	Subject
T098	Amita	1998/4/10	49000	PGT	Math
T023	Lalit	1992/9/22	39500	TGT	Chemistry
T193	Pankaj	1999/8/21	41000	PGT	Physics
T234	Harman	2001/12/2	28900	PRT	Physics
T077	Sadiq	1991/2/12	25000	PRT	Math
T089	Prita	2008/2/21	28900	PRT	Hindi
T290	Pooja	2010/1/10	47500	PGT	Math

- a) Display the name, net salary and subject of PGT teachers in descending order of salary.
- b) Display the total number of teachers along with the maximum salary for each subject.
- c) Display the name and number of years of experience of each teacher. Years of experience is to be calculated as the number of years the teacher has been working.
- d) Delete the record of teacher who joined before 1998.
12. Write the output for (i) to (iv) on the basis of Student table. 4

Table: Student

S_ID	SNAME	STREAM	CLASS	MARKS
1	Rohit	Arts	11	30.0
2	Anshu	Commerce	12	70.0
3	Arun	Arts	11	null
4	Babli	Commerce	11	85.0
5	Sonia	Science	12	null
6	Zubair	Science	12	90.0

- i) SELECT AVG(MARKS) FROM STUDENT;
- ii) SELECT CLASS, SUM(MARKS) From STUDENT GROUP BY CLASS;
- iii) SELECT STREAM, MAX(MARKS) FROM STUDENT GROUP BY STREAM HAVING MAX(MARKS) > 80;
- iv) SELECT SNAME, marks from student where marks between 70 and 90 order by marks DESC.

OR

Based on the above given table named 'Student', Satyam has executed following queries:

Select count(*) from student;

Select count(MARKS) from student;

Predict the output of the above given queries. Also give proper justifications of the output generated through each query.

13. ABC Corporation is planning its web based activities in Shimla, Himachal Pradesh. The different blocks and the distance between the blocks is given along with the number of computers in each block. As a network advisor, you are required to help with the set up.

4

Distance between the blocks:

Block A to Block Z	180 mts
Block A to Block Y	200 mts
Block B to Block A	80 mts
Block Y to Block B	78 mts
Block Z to Block Y	134 mts
Block B to Block Z	90 mts

Number of computers in each block is given below:

Block A	280
Block B	35
Block Y	90
Block Z	190

- i) Suggest a cable layout along with the topology to connect all the blocks together.
- ii) Suggest the placement of the server. Justify your answer.
- iii) The company is planning on connecting its head office situated in Bangalore to the office in Shimla. Suggest a way to connect and justify your answer.
- iv) Suggest a device/software to be installed in the Shimla office to take care of data security.
