



Sri Guru Harkrishan Public School,

Dugri Road Ludhiana

HOLIDAYS HOMEWORK

Relax ♥

Explore ☀

Learn 📖

Have Fun 😊

“Holidays
are the
perfect time
to relax,
explore,
and
grow. ♥

Come back
refreshed,
recharged and
ready to *shine!* ”

Use this time to do what makes
your *soul happy* and your future bright. ♥

KEEP LEARNING, KEEP GROWING, KEEP SMILING!



SRI GURU HARKRISHAN PUBLIC SCHOOL, LUDHIANA
SUMMER VACATION HOMEWORK 2026
CLASS-XII SCIENCE

SUBJECT: MATHEMATICS

WORKSHEET-1

SECTION – A

Questions 1 to 10 carry 1 mark each.

1. The value of $\tan^{-1}(\sqrt{3}) + \cos^{-1}\left(-\frac{1}{2}\right)$ corresponding to principal branches is
 (a) $\frac{\pi}{12}$ (b) 0 (c) π (d) $\frac{\pi}{3}$
2. The value of $\sin^{-1}\left(\cos\frac{\pi}{9}\right)$ is
 (a) $\frac{\pi}{9}$ (b) $\frac{5\pi}{9}$ (c) $\frac{-5\pi}{9}$ (d) $\frac{7\pi}{18}$
3. The domain of the function defined by $\sin^{-1}\sqrt{x-1}$ is
 (a) [1, 2] (b) [-1, 1] (c) [0, 1] (d) none of these
4. The value of $\tan^2(\sec^{-1}2) + \cot^2(\operatorname{cosec}^{-1}3)$ is
 (a) 5 (b) 11 (c) 13 (d) 15
5. The value of $\tan^{-1}\left(\sin^{-1}\frac{3}{5} + \tan^{-1}\frac{3}{4}\right)$ is
 (a) $\frac{7}{24}$ (b) $\frac{24}{7}$ (c) $\frac{3}{2}$ (d) $\frac{3}{4}$
6. If $\alpha \leq 2\sin^{-1}x + \cos^{-1}x \leq \beta$, then
 (a) $\alpha = \frac{-\pi}{2}, \beta = \frac{\pi}{2}$ (b) $\alpha = 0, \beta = \pi$ (c) $\alpha = \frac{-\pi}{2}, \beta = \frac{3\pi}{2}$ (d) $\alpha = 0, \beta = 2\pi$
7. If $\sin^{-1}x + \sin^{-1}y = \frac{\pi}{2}$, then the value of $\cos^{-1}x + \cos^{-1}y$ is
 (a) $\frac{\pi}{2}$ (b) 0 (c) π (d) $\frac{2\pi}{3}$
8. If $3\tan^{-1}x + \cot^{-1}x = \pi$, then x equals
 (a) 0 (b) 1 (c) -1 (d) 1/2

For Q9 and Q10, a statement of assertion (A) is followed by a statement of reason (R). Choose the correct answer out of the following choices.

- (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 but R is true.

9. **Assertion (A):** Range of $\cot^{-1}x$ is $(0, \pi)$
Reason (R): Domain of $\tan^{-1}x$ is R.

10. **Assertion (A):** Principal value of $\tan^{-1}(-\sqrt{3})$ is $\frac{\pi}{3}$

Reason (R): $\tan^{-1}: \mathbb{R} \rightarrow \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$ so for any $x \in \mathbb{R}$, $\tan^{-1}(x)$ represents an angle in $\left(-\frac{\pi}{2}, \frac{\pi}{2}\right)$

SECTION – B

Questions 11 to 14 carry 2 marks each

11. Find the value of $\sin^{-1}\left(\cos\left(\frac{33\pi}{5}\right)\right)$

12. Find the domain of $\sin^{-1}(x^2 - 4)$

13. Find the value of $\sin^{-1}\left(\sin\left(\frac{13\pi}{7}\right)\right)$

14. Find the value of $\cos^{-1}\left(\cos\frac{7\pi}{6}\right)$

SECTION – C

Questions 15 to 17 carry 3 marks each

15. Find the values of $\tan^{-1}(1) + \cos^{-1}\left(-\frac{1}{2}\right) + \sin^{-1}\left(-\frac{1}{2}\right)$

16. Prove that $\tan^{-1}\left(\frac{\sqrt{1+x}-\sqrt{1-x}}{\sqrt{1+x}+\sqrt{1-x}}\right) = \frac{\pi}{4} - \frac{1}{2}\cos^{-1}x$

17. Express $\tan^{-1}\left(\frac{\cos x}{1-\sin x}\right)$, $-\frac{\pi}{2} < x < \frac{\pi}{2}$ in the simplest form.

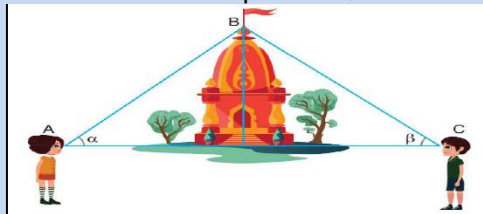
SECTION – D (Questions 18 carry 5 marks.)

18. Prove that $\cot^{-1}\left(\frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}}\right) = \frac{x}{2}$, $x \in \left(0, \frac{\pi}{4}\right)$

SECTION – E (Case Study Based Questions)

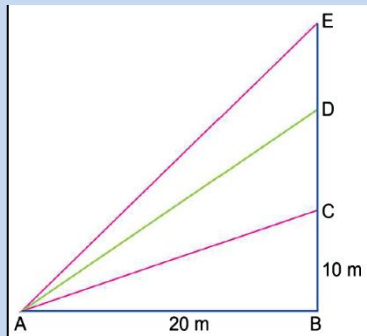
Questions 19 to 20 carry 4 marks each.

19. Two men on either side of a temple of 30 metres high from the level of eye observe its top at the angles of elevation α and β respectively. (as shown in the below figure). The distance between the two men is $40\sqrt{3}$ metres and the distance between the first person A and the temple is $30\sqrt{3}$ metres.



- (i) Find the measure of $\angle CAB$ in terms of \sin^{-1} and \cos^{-1} . (ii) Find the measure of $\angle ABC$.

20. The Government of India is planning to fix a hoarding board at the face of a building on the road of a busy market for awareness on COVID-19 protocol. Ram, Robert and Rahim are the three engineers who are working on this project. "A" is considered to be a person viewing the hoarding board 20 metres away from the building, standing at the edge of a pathway nearby. Ram, Robert and Rahim suggested to the firm to place the hoarding board at three different locations namely C, D and E. "C" is at the height of 10 metres from the ground level. For the viewer A, the angle of elevation of "D" is double the angle of elevation of "C" The angle of elevation of "E" is triple the angle of elevation of "C" for the same viewer. Look at the figure given and based on the above information answer the following:



(i) Find the measure of $\angle DAB$.

(ii) Find the measure of $\angle EAB$

WORKSHEET- 2

SECTION – A (Questions 1 to 10 carry 1 mark each)

21. If A is a square matrix such that $A^2 = A$, then $(I + A)^2 - 3A$ is
 (a) I (b) $2A$ (c) $3I$ (d) A

22. The diagonal elements of a skew symmetric matrix are
 (a) all zeroes (b) are all equal to some scalar $k(\neq 0)$
 (c) can be any number (d) none of these

23. If $A = \begin{bmatrix} 5 & x \\ y & 0 \end{bmatrix}$ and $A = A'$ then
 (a) $x = 0, y = 5$ (b) $x = y$ (c) $x + y = 5$ (d) $x - y = 5$

24. If $2 \begin{bmatrix} 1 & 3 \\ 0 & x \end{bmatrix} + \begin{bmatrix} y & 0 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 8 \end{bmatrix}$, then write the value of x and y .
 (a) $x = 3, y = 3$ (b) $x = 3, y = 2$ (c) $x = 2, y = 2$ (d) $x = 2, y = 3$

25. A is a skew-symmetric matrix and a matrix B such that $B'AB$ is defined, then $B'AB$ is a:
 (a) symmetric matrix (b) skew-symmetric matrix
 (c) Diagonal matrix (d) upper triangular symmetric

26. If $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \begin{bmatrix} 3 & 1 \\ 2 & 5 \end{bmatrix} = \begin{bmatrix} 7 & 11 \\ k & 23 \end{bmatrix}$, then write the value of k .
 (a) 17 (b) -17 (c) 13 (d) -13

27. If $x \begin{bmatrix} 2 \\ 3 \end{bmatrix} + y \begin{bmatrix} -1 \\ 1 \end{bmatrix} = \begin{bmatrix} 10 \\ 5 \end{bmatrix}$, find the value of x .
 (a) 1 (b) 2 (c) 3 (d) 4

28. The matrix $A = \begin{bmatrix} 0 & 2b & -2 \\ 3 & 1 & 3 \\ 3a & 3 & -1 \end{bmatrix}$ is a symmetric matrix. Then the value of a and b respectively are:
 (a) $\frac{-2}{3}, \frac{3}{2}$ (b) $\frac{-1}{2}, \frac{1}{2}$ (c) -2, 2 (d) $\frac{3}{2}, \frac{1}{2}$

For Q9 and Q10, Choose the correct answer out of the following choices.

- (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 but R is true.

29. **Assertion (A):** Let $A = \begin{bmatrix} 1 & 4 \\ 2 & 5 \\ 4 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 3 & 6 \\ 7 & 8 & 9 \\ 5 & 1 & 2 \end{bmatrix}$, product of the matrices A and B is not defined.
Reason (R): The number of rows in B is not equal to number of columns in A .

$$\begin{bmatrix} 0 & -1 & -2 \\ 1 & 0 & -3 \\ 2 & 3 & 0 \end{bmatrix}$$

30. Assertion (A): The matrix $A = \begin{bmatrix} 0 & -1 & -2 \\ 1 & 0 & -3 \\ 2 & 3 & 0 \end{bmatrix}$ is a skew symmetric matrix.

Reason (R): For the given matrix A we have $A' = A$.

SECTION – B (Questions 11 to 14 carry 2 marks each.)

$$\begin{bmatrix} a-b & 2a+c \\ 2a-b & 3c+d \end{bmatrix} = \begin{bmatrix} -1 & 5 \\ 0 & 13 \end{bmatrix}$$

31. Find the value of a, b, c and d from the equation:

32. Find X and Y , if $X + Y = \begin{bmatrix} 5 & 2 \\ 0 & 9 \end{bmatrix}$ and $X - Y = \begin{bmatrix} 3 & 6 \\ 0 & -1 \end{bmatrix}$

$$\begin{bmatrix} x+y+z \\ x+z \\ y+z \end{bmatrix} = \begin{bmatrix} 9 \\ 5 \\ 7 \end{bmatrix}$$

33. Find the values of x, y and z , if

34. Find the values of x and y from the following equation:

$$2 \begin{bmatrix} x & 5 \\ 7 & y-3 \end{bmatrix} + \begin{bmatrix} 3 & -4 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 7 & 6 \\ 15 & 14 \end{bmatrix}$$

SECTION – C (Questions 15 to 17 carry 3 marks each.)

$$A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$$

35. If $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$, prove that $A^3 - 6A^2 + 7A + 2I = 0$

$$A = \begin{bmatrix} 0 & -\tan \frac{\alpha}{2} \\ \tan \frac{\alpha}{2} & 0 \end{bmatrix}$$

36. If $A = \begin{bmatrix} 0 & -\tan \frac{\alpha}{2} \\ \tan \frac{\alpha}{2} & 0 \end{bmatrix}$ and I is the identity matrix of order 2, show that

$$I + A = (I - A) \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$$

$$B = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$$

37. Express the matrix $B = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$ as the sum of a symmetric and a skew symmetric matrix.

SECTION – D (Questions 18 carry 5 marks.)

$$\begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$$

$$\begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$$

38. Given $A = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$, verify that $BA = 6I$, how can we use the result to find the values of x, y, z from given equations $x - y = 3, 2x + 3y + 4z = 17, y + 2z = 17$

SECTION – E (Case Study Based Questions)

Questions 19 to 20 carry 4 marks each.

39. To promote the usage of house toilets in villages, especially for women, are organisations tried to generate awareness among the villagers through (i) house calls (ii) letters, and (iii) announcements.



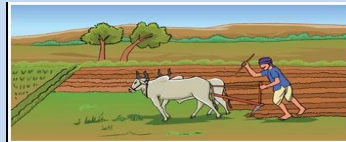
The cost for each mode per attempt is given . (i) ₹ 50 (ii) ₹ 20 (iii) ₹ 40
 The number of attempts made in villages X, Y, and Z is given below:

	(i)	(ii)	(iii)
X	400	300	100
Y	300	250	75
Z	500	400	150

The chance of making toilets corresponding to one attempt of given modes is: (i) 2% (ii) 4% (iii) 20.
 Let A, B, and C be the cost incurred by organisation in three villages respectively.

- Form a required matrix on the basis of the given information. [1]
- From a matrix, related to the number of toilets expected in villagers X, Y, and Z after the promotion campaign. [1]
- What is the total amount spent by the organisation in all three villages X, Y, and Z? [2] **OR**
 What is the total no.of toilets expected after the promotion campaign? [2]

40. Two farmers Ankit and Girish cultivate only three varieties of pulses namely Urad, Masoor and Mung. The sale (in Rs.) of these varieties of pulses by both the farmers in the month of September and October are given by the following matrices A and B.



September sales (in Rs.)

$$A = \begin{pmatrix} \text{Urad} & \text{Masoor} & \text{Mung} \\ 10000 & 20000 & 30000 \\ 50000 & 30000 & 10000 \end{pmatrix} \begin{matrix} \text{Ankit} \\ \text{Girish} \end{matrix}$$

October sales (in Rs.)

$$B = \begin{pmatrix} \text{Urad} & \text{Masoor} & \text{Mung} \\ 5000 & 10000 & 6000 \\ 20000 & 30000 & 10000 \end{pmatrix} \begin{matrix} \text{Ankit} \\ \text{Girish} \end{matrix}$$

- Find the combined sales of Masoor in September and October, for farmer Girish. [1]
- Find the combined sales of Urad in September and October, for farmer Ankit. [1]
- Find a decrease in sales from September to October. **OR.** (iii) If both the farmers receive 2% profit on gross sales, then compute the profit for each farmer and for each variety sold in October. [2]

Subject - Physics

INVESTIGATORY PROJECT - As per C.B.S.E Guidelines

Scientific investigations involving laboratory testing and collecting information from other sources.

Project must cover the following:-

- Cover page
- Certificate
- Acknowledgement
- Index
- Objective of project
- Content
- Experiments
- **Bibliography/Webliography**

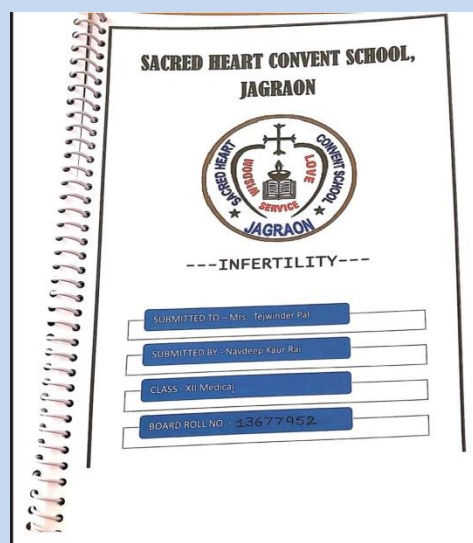
Guidelines for Project :-

1. Project work should be done on A-4 project sheets in project file.
2. Text should be handwritten supported with relevant figures/ pictures/ diagrams etc.
3. Figures / Pictures etc should be on left side.
4. Starting from first page to concluding page , every related information should be presented in order.
5. There should be atleast 10-12 pages in project excluding title (cover page), certificate, acknowledgement, index , bibliography.
6. Try to incorporate creativity and innovation.
7. Ensure timely submission of project work.
8. Prepare your project file on topic as assigned you according to your Roll nos.

Topic	Roll no
Electromagnetic Induction (Faraday's Law)	1, 14, 27
Transformers	2, 15
A.C generator	3, 16
EM waves	4, 17
Capacitor in series and parallel	5, 18
Photoelectric Effect Study emission of electrons Concept: Quantum nature of light	6, 19
Kirchhoff's Laws Verification	7, 20
Determine internal resistance Concept: EMF, terminal voltage relation	8, 21
Half -wave rectifier	9, 22
Full-wave rectifier	10, 23
Young double slit experiment	11, 24
Diffraction from a single slit	12, 25
Semiconductors	13, 26

- **Cover page should be like the sample shared above (add school logo and your school name)**

- **Project report should be compiled in spiral binding.**
- **This project is for your FINAL EXAMS So, KINDLY PREPARE IT WITH MATCHING STANDARDS AND FULL DEDICATION .**
- **REVISE THE CHAPTERS TILL DONE & DO PRACTICE OF NUMERICALS.**
- **SOLVE THE ASSIGNMENTS THAT ALREADY SHARED IN CLASS GROUP.**



Subject - Chemistry

INVESTIGATORY PROJECT - As per C.B.S.E Guidelines

Scientific investigations involving laboratory testing and collecting information from other sources.

Project must cover the following:-

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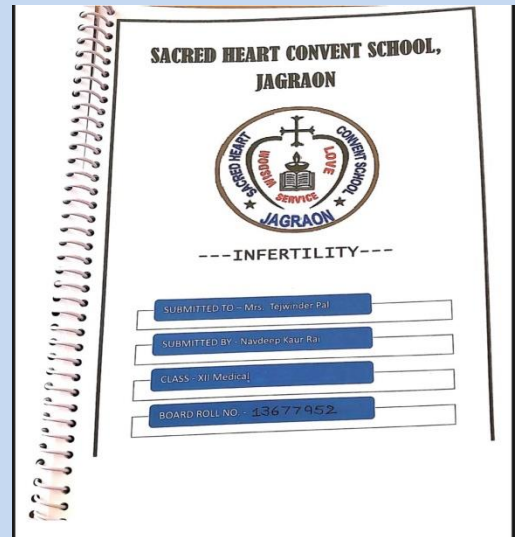
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6. Try to incorporate creativity and innovation.
7. Ensure timely submission of project work.
8. Prepare your project file on topic as assigned you according to your **Roll nos.**

Topic	Roll no
Study of common food adulterants in fats, oil, butter, sugar, turmeric powder, chilli powder and pepper.	1, 14, 27
Study of presence of oxalate ions in guava fruit at different stages of ripening.	2, 15
Extraction of essential oils present in Saunf (aniseed), Ajwain(carum), Illaichi (cardamom).	3, 16
Neutralizing ability of various antacids available in the market.	4, 17
Study of quantity of casein present in different samples of Milk.	5, 18
Study of digestion of starch by salivary amylase and effect of pH and temperature on it.	6, 19
Study of effect of Potassium Bisulphite as a food preservative.	7, 20
Measuring the amount of an acetic acid in vinegar by titration with an indicator solution.	8, 21
Preparation of Soyabean milk and its comparison with natural milk with respect to curd formation, effect of temperature etc.	9, 22
Comparative study of the Rate of fermentation of following materials: Wheat flour, gram flour, potato flour, carrot juice etc.	10, 23
Determination of Caffeine in tea samples.	11, 24
Presence of insecticides and pesticides in fruits and vegetables.	12, 25
Report on Discovery of cis platin and how it is used as Anti-tumor agent.	13, 26

- **Cover page should be like the sample shared above (add school logo and your schoolname).**

- **Project report should be compiled in spiralbinding.**
- **This project is for your FINAL EXAMS So, KINDLY PREPARE IT WITH MATCHING STANDARDS AND FULL DEDICATION .**
- **REVISE THE CHAPTERS TILL DONE & DO PRACTICE OF NUMERICALS.**
- **SOLVE THE ASSIGNMENTS THAT ALREADY SHARED IN CLASS GROUP.**



Subject – Biology

INVESTIGATORY PROJECT - As per C.B.S.E Guidelines

Scientific investigations involving laboratory testing and collecting information from other sources.

Project must cover the following:-

- Cover page
- Index
- Certificate
- Acknowledgement
- Objective of project
- Content
- Experiments
- **Bibliography/Webliography**

Guidelines for Project:-

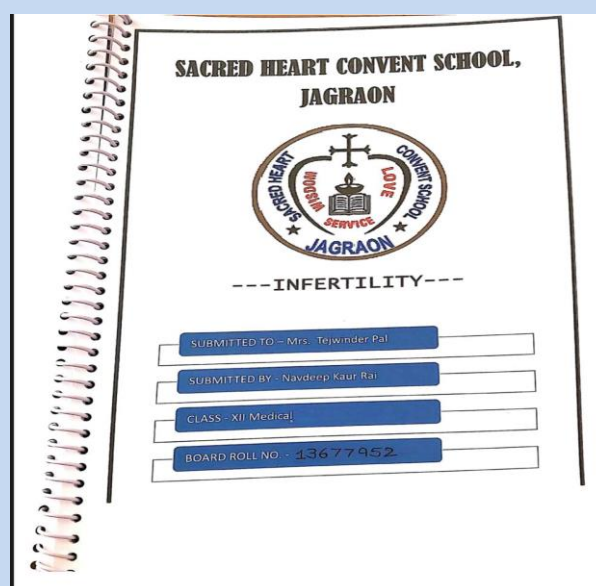
1. Project work should be done on A-4 project sheets in project file.
2. Text should be handwritten supported with relevant figures/ pictures/ diagrams etc.
3. Figures /Pictures etc should be on left side.
4. Starting from first page to concluding page , every related information should be presented in order.
5. There should be at least 10-12 pages in project excluding title (cover page), certificate, acknowledgement, index , bibliography.
6. Try to incorporate creativity and innovation.
7. Ensure timely submission of project work after reopening of the school.
8. Prepare your project file on topic as assigned below

Topic	Name
Drug abuse	Nirvika
Twins	Taran
Pollination	Arsh
Addiction (tea and coffee)non alcoholic drinks	Palak
"Sugar a sweet enemy"(discuss about use of sugar causing various issues such as autism,nonalcoholic fatty liver etc)	Jaspreet kaur
Vaccine for cancer	Mehakpreet
Biomagnification:Presence of insecticides and pesticides in fruits and	Rahul

vegetables.	
Ecological pyramids	Abhirami
Paleontology: introduction,How are they formed, types,discusspetoskey as an example	Meenakshi
Immunisation	Charan
DNA fingerprinting , Applications of biotechnology	Kiran roll no 5
Immunity	Kiran roll no 6
Medicinal plants and their uses:- Local medicinal plants and their traditional uses	Jaskaran
Cancer	Rasleen

• Cover page should be like the sample shared (add school logo and your school name).

- Project report should be compiled in spiral binding.
- This project is for your final exams.
- Kindly prepare it with full matching standards and full dedication.



Subject : Information Technology

Multiple Choice Questions

1. A each tuple is unique in a relation.

(a) Rows (b) Key (c) Attributes (d) Fields

is a property of the entire relation, which ensures through its value that

2. A relational database can have how many type of keys in a table?

(a) Candidate Key (b) Primary Key (c) Foreign Key (d) All of these

3. Which one of the following uniquely identifies the tuples / rows in a relation.

(a) Secondary Key (b) Primary Key (c) Composite Key (d) Foreign Key

4. The Primary key is selected from the set of .

(a) Composite Key (b) Determinants (c) Candidates Key (d) Foreign Key

5. Which of the following is a group of one or more attributes that uniquely identifies a row?

(a) Key (b) Determinant (c) Tuple (d) Relation

6. Which of the following attributes cannot be considered as a choice for Primary Key ?

(a) Id (b) License number (c) Dept Id (d) Street

7. An attribute in a relation is a foreign key if it is the relation.

(a) Candidate (b) Primary (c) Super (d) Sub

8. Consider the table with structure as :

Student(ID, name, dept_name, tot_cred)

In the above table, which attribute will form the primary key?

(a) name (b) dept_name(c) Total_credits (d) ID

9. Which of the following is not a legal sub-language of SQL ?

(a) DDL (b) QAL(c) DML (d) TCL

10. ____ key in any other10. Which of the following is a DDL command?

(a) SELECT (b) ALTER (c) INSERT (d) UPDATE

11. In SQL, which of the following will select only one copy of each set of

duplicate rows

from a table.

(a) SELECT UNIQUE

(b) SELECT DISTINCT

(c) SELECT DIFFERENT

(d) All of these.

12. Which of the following keywords will you use in the following query to

display the unique

values of the column dept_name?

SELECT dept_name FROM COMPANY;

(a) All (b) From(c) Distinct (d) Name

13. The result that

satisfy a specified condition.

(a) where (b) from (c) having (d) like

clause of SELECT query allows us to select only those rows in the

14. Which operator can take wild card characters for query condition?

(a) BETWEEN (b) LIKE (c) IN (d) NOT

15. Which operator checks a value against a range of values?

(a) BETWEEN (b) LIKE (c) IN (d) NOT

16. Which of the following SQL commands retrieves data from table(s) ?

(a) UPDATE (b) SELECT (c) Union (d) All of these

17. Which of the following queries contains an error ?

(a) Select * from emp where empid=10003;

(b) Select empid from emp where empid=10006;

(c) Select empid from emp;

(d) Select empid where empid=10009 and lastname= 'GUPTA';

18. Consider the following table namely Employee :

Employee_id Name Salary

1001 Misha 6000

1009 Khushi 4500
1018 Japneet 7000

Which of the names will not be displayed by the below given query ?

SELECT name from Employee WHERE employee_id>1009;

(a) Misha, Khushi (b) Khushi, Japneet (c) Japneet (d) Misha, Japneet

19. Which operator perform pattern matching ?

(a) BETWEEN (b) LIKE (c) IN (d) NOT

20. Consider the following query

SELECT name FROM class WHERE Subject LIKE ' Informatics Practices';

Which one of the following has to be added into the blank space to select the subject which has informatics practices as its ending string?

(a) \$(b) _ (c) || (d) %

21. Which operator tests a column for the absence of data(i.e. NULL value) ?

(a) Exist Operator (b) NOT Operator (c) IS Operator (d) None of these

22. Which clause is used to sort the query result ?

(a) Order By (b) Sort By (c) Group By (d) Arrange By

23. By default ORDER BY clause list the result in (a) Descending (b) Any(c) Same (d) Ascending

24. Consider the following query

SELECT * FROM employee ORDER BY salary , name ;

To display the salary from greater to smaller and name in alphabetical order which of the following options should be used ?

(a) Ascending, Descending

(b) Asc, Desc

(c) Desc, Asc

(d) Descending, Ascending

25. What is the meaning of Remark LIKE "%5%5%";

- (a) Column Remark begin with two 5s
- (b) Column Remark ends with two 5s
- (c) Column Remark has more than two 5s
- (d) Column Remark has two 5s in it, at any position

26. In SQL, which command(s) is/are used to change a table's order.structure/characteristics?

- (a) ALTER TABLE (b) MODIFY TABLE (c) CHANGE TABLE (d) All of these

27. Which of the following is/are the DDL Statement ?

- (a) Create (b) Drop (c) Alter (d) All of these

28. A Table can have

- (a) Many primary keys and many unique keys.
- (b) One primary key and one unique key
- (c) One primary key and many unique keys.
- (d) Many primary keys and one unique key.

29. Which of the following types of table constraints will prevent the entry of duplicate rows?

- (a) Unique (b) Distinct (c) Primary Key (d) Null

30. Consider the following SQL Statement. What type of statement is this ?

INSERT INTO instructor VALUES (10211, 'SHREYA', 'BIOLOGY', 69000);

- (a) Procedure (b) DML (c) DCL (d) DDL

31. Which of the following statements will delete all rows in a table namely my table without deleting the table's structure.

- (a) DELETE FROM mytable;
- (b) DELETE TABLE mytable;
- (c) DROP TABLE mytable;
- (d) None of these.

32. Which of the following query will drop a column from a table ?

- (a) DELETE COLUMN column_name;
- (b) DROP COLUMN column_name;
- (c) ALTER TABLE table_name DROP COLUMN column_name;
- (d) None of these

33. Logical operator used in SQL are:

(a) AND, OR, NOT (b) &&, ||, ! (c) \$, |, ! (d) None of these

34. Which of the following requirement can be implemented using a CHECK constraint?

(a) Student must be greater than 18 years old._

(b) Student must be form a BRICS Country (Brazil, Russia, India, China, South Africa)

(c) Student's roll number must exist in another table(say, namely Eligible)

(d) None of these

35. An attribute in a relation is termed as a foreign key when it reference the of another relation.

(a) Foreign Key (b) Primary Key (c) Unique Key (d) Check Constraint

36. Data integrity constraints are used to :

(a) Control the access and rights for the table data.

(b) Ensure the entry of unique records in a table.

(c) Ensure the correctness of the data entered in the table as per some rule or condition etc.

(d) Make data safe from accidental changes.

37. A relationship is formed via that relates two tables where one table references other table's key.

(a) Candidate Key (b) Primary Key (c) Foreign Key (d) Check Constraint

38. What is the maximum value that can be stored in NUMERIC (4,2)?

(a) 9999.99 (b) 99.9999 (c) 99.99 (d) 9.99

39. What should be the data type for the column Pricestoring values less thanRs.1000 e.g. 200.21

(a) VARCHAR (50) (b) NUMBER (c) NUMBER(5,2) (d) NUMBER(6)

40. What is anamein the following SQL Statement ?

SELECT aname FROM table1 UNION SELECT aname FROM table2;

(a) row name (b) column Name (c) table name (d) database name

41. Data manipulation language (DML) includes statements that modify the of the tables of database.

(a) Structure (b) Data (c) User (d) Size

42. All aggregate functions ignore NULLs except for the function.

(a) Distinct (b) Count(*) (c) Average() (d) None of these

43. Which of the following are correct aggregate functions in SQL 1

(a) AVERAGE() (b) MAX() (c) COUNT() (d) TOTAL()

44. Identify the correct INSERT queries from the following :

(a) INSERT INTO Persons('xxx1', 'yyy1');

(b) INSERT INTO Persons(LastName, FirstName) Values ('xxx', 'yyy');

(c) `INSERT INTO Persons Values('xxx1' , 'yyy1');`

(d) `INSERT INTO Persons Value('xxx1' , 'yyy1');`

45. Aggregate functions can be used in the select list or the clause of the select statement.

They cannot be used in a clause.

(a) Where, having (b) Having, where (c) Group by, having (d) Group by where

46. What is the meaning of "HAVING" clause in SELECT query.

(a) To filter out the summary groups.

(b) To filter out the column groups.

(c) To filter out the row and column values.

(d) None of the mentioned.

47. Which of the following is not a text function?

(a) TRIM () (b) TRUNCATE() (c) LEFT() (d) MID ()

48. What will be returned by the given query ?

`SELECT INSTR('INDIA', 'DI');`

(a) 2 (b) 3 (c) -2 (d) -3

49. What will be returned by the given query ?

`SELECT ROUND(153.669,2);`

(a) 153.6 (b) 153.66 (c) 153.67 (d) 153.7

50. What will be returned by the given query?

`SELECT month('2020-05-11');`

(a) 5 (b) 11 (c) May (d) November

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•E-Business

•E-learning

(a) Each case study should be done on A4 coloured sheets

(b) Each case study should be of atleast 4 pages.

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Subject, Class, Name of student)**

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