KENDRIYA VIDYALAYA JAMALPUR
AUTUMN BREAK HOMEWORK
CLASS XII

Holiday HW of Chemistry of XII for Autumn Break

1-Solve CBSE Q.paper 2023 main Exam

2-Solve CBSE Q.paper 2023 Supplementary Exam

3-Solve three sample paper of Chemistry issued by CBSE to make good practise for incoming 2024 Exam.

4-Learn the diff b/n

Min & Max boiling azeotroes

Primary & secondary cell

Order & Molecularity

Molarity & Molality

Outer orbital complex & Inner orbital complex

5-Write equation for distinction test b/n

Methanol & Ethanol

Pentanone-2 & Pentanone-3

Phenol & Benzoic acid

CH_3CHO & CH_3COCH_3

6-Write short notes on

Stephen Reduction

Clemmensen Reduction

Wolf Kushner Reduction

Reimer Tiemann Reaction

Williamson synthesis

Gatterman Koch reaction

Hoffman Bromamide Reaction

Carbyl amine reaction

Iodoform Test

Cannizzaro Reaction

Rosenmund Reduction

Friedel craft acylation

7-Write definition

a. Non ideal solution

b. Kohlrausch's Law

c. Henry's Law

d. Faraday Ist and2nd Law

CLASS - XII

1. Define the term Domain with respect to RDBMS. Give one example to support your answer.
2. Write the difference between degree and cardinality.
3. In a table in the MYSQL database, an attribute X of data type varchar(20) has the value “AMIT”. The attribute Y of data type char(20) has value “AMRITA”. How many characters are occupied by attribute X and attribute Y?
4. Write SQL commands in (i) to (ii)
   Table name: Coaching

ID	NAME	AGE	CITY	FEE	PHONE
P1	SAMEER	34	DELHI	45000	9811076656
P2	ARYAN	35	MUMBAI	54000	9911343989
P4	RAM	34	CHENNAI	45000	9810593578
P6	PREMLATA	36	BHOPAL	60000	9910139987
P7	SHIKHA	36	INDORE	34000	9912139456
P8	RADHA	33	DELHI	23000	8110668888

(ii) Delete the record of students who have age less than 35

5. Write given commands for the student table.

Student

Roll	Name	City	Fee
1	Rohan	Allahabad	500
2	Nitya	Patna	300
3	shree	Mumbai	500

a. To display only name and roll whose fee is less than 300.

b. To display all the records of students whose city is Patna and fee is more than 300.

c. To display the city of a student whose last letter is n.

d. Show the records of students in ascending order according to their name.

6. Write the output of given query:

a. SELECT COUNT(DISTINCTfee)FROMSTUDENT;

b. SELECT NAME, Roll FROM student WHERERoll<3 ANDNAMELIKE"%an";

c.

SELECTRoll,City,FeeFROMstudentWHERname="nitya"ANDfeeB

ETWEEN100AND 500;

7. Write the differences between Count(column name) and count(*) function.
8. Give one difference between alternate key and candidate key.
9. Which of the following statements is FALSE about keys in a relational database?

   Any candidate key is eligible to become a primary key.

   A primary key uniquely identifies the tuples in a relation.

   A candidate key that is not a primary key is a foreign key.

   A foreign key is an attribute whose value is derived from the primary key of another relation.
10. Ms. Shalini has just created a table named “Employee” containing columns Ename,

    Department and Salary.

    After creating the table, she realized that she had forgotten to add a primary key column in the table. Help her

    in writing an SQL command to add a primary key column EmpId of integer type to the table Employee.

    Thereafter, write the command to insert the following record in the table:

    EmpId- 999

    Ename- Shweta Department: Production Salary:

    26900

CLASS - XII

SUBJECT INFORMATICS PRACTICES

1. Predict the output of the following query:

SELECT MOD (9,0);

i. 0

ii. NULL

iii. NaN

iv. 9

2. Which of the following SQL functions does not belong to the Math functions category?
i. POWER()
ii. ROUND()
iii. LENGTH()
iv. MOD()

3. CSV stands for:
i. Column Separated Value
ii. Class Separated Value
iii. Comma Separated Value
iv. Comma Segregated Value

4.Briefly explain the basic concepts of a web server and web hosting.

5. Rati is doing a course in networking. She is unable to understand the concept of URL. Help her by explaining it with the help of suitable example.

6.Differentiate between the active digital footprint and passive digital footprints.

7.What are aggregate functions in SQL? Name any two.

8. Mention any three health hazards associated with inappropriate and excessive use of gadgets.

9. Write suitable SQL queries for the following: i. To calculate the exponent for 3 raised to the power of 4.
ii. To display current date and time.
iii. To round off the value -34.4567 to 2 decimal place.
iv. To remove all the probable leading and trailing spaces from the column userid of the table named user.
v. To display the length of the string 'FIFA World Cup'.
10. Richa, recently started using her social media account. Within a few days, she befriends many people she knows and some that she does not know. After some time, she starts getting negative comments on her posts. She also finds that her pictures are being shared online without her permission.
Based on the given information, answer the questions given below.
i. Identify the type of cybercrime she is a victim of.
ii. Under which act, she can lodge a complaint to the relevant authorities?
iii. Suggest her any two precautionary measures which she should take in future while being online to avoid any such situations.

Class xii

Mathematics

1.Make formula chart of differential and Integral

Calculus, vector and 3D geometry.

2. Complete Mathematics Activities.

3.Solve NCERT Exemplar problems of

a. Definite integral
b. Applications of integral
c. Differential equation

KENDRIYA VIDYALAYA JAMALPUR

CLASS – 12th (2023 – 24)

AUTUMN BREAK HOMEWORK

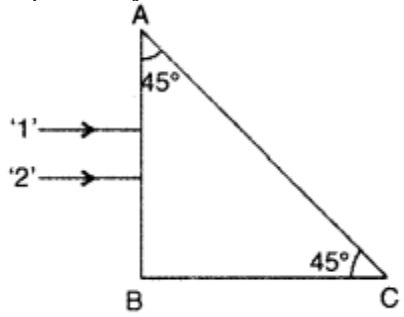
2 MARKS QUESTION:

1. A converging lens of refractive index 1.5 is kept in a liquid medium having same refractive index. What would be the focal length of the lens in this medium?
2. How does the power of a convex lens vary, if the incident red light is replaced by violet light?
3. How does the angle of minimum deviation of a glass prism of refractive index 1.5 change, if it is immersed in a liquid of refractive index 1.3?
4. You are given following three lenses. Which two lenses will you use as an eyepiece and as an objective to construct an astronomical telescope?

Lenses	Power (P)	Aperture
L_1	3D	8 cm
L_2	6D	1 cm
L_3	10D	1 cm

5. Two thin lenses of power -3D and + 2.5D are in contact. What is the focal length of the combination?
6. State the conditions for the phenomenon of total internal reflection to occur
7. Calculate the speed of light in a medium whose critical angle is 45°.
8. When light travels from a rarer to a denser medium, the speed decreases. Does this decrease in speed imply a decrease in the energy carried by the light wave? Justify your answer.
9. A biconvex lens made of a transparent material of refractive index 1.25 is immersed in water of refractive index 1.33. Will the lens behave as a converging or a diverging lens? Give reason.
10. Draw a ray diagram of a reflecting type telescope. State two advantages of this telescope over a refracting telescope.

11. The radii of curvature of the faces of a double convex lens are equal that is 5 cm. If focal length of the lens is 10 cm, find the refractive index of the material of the lens.
12. Two monochromatic rays of light are incident normally on the face AB of an isosceles right-angled prism ABC. The refractive indices of the glass prism for the two rays '1' and '2' are respectively 1.35 and 1.45. Trace the path of these rays entering through the prism.



3 Marks Question:

1. **Draw a labelled diagram of astronomical telescope when the image is formed at the least distance of distinct vision? Hence derive the expression for its magnifying power?**
2. **Drive the expression for the angle of deviation for a ray of light passing through an equilateral prism of refracting angle A?**
3. **Draw a graph to show that variation of angle of deviation δ_m with that of angle of incidence for a monochromatic ray of light passing through a glass prism of refracting angle A. hence deduce the relation?**

$$\mu = \sin\left(\frac{A+\delta m}{2}\right) \Big/ \sin\frac{A}{2}$$

4. **Draw a labelled diagram of compound microscope when the image is formed at the least distance of distinct vision? Hence derive the expression for its magnifying power?**
5. Drive lens maker's formula for a double convex lens.
6. Drive mirror formula for a concave mirror.
7. **Drive the expression for the angle of deviation for a ray of light passing through an equilateral prism of refracting angle A?**
8. **A tank isfilled with water to a height of 12.5 cm. The apparent depth of a needle lying at the bottom of the tank is measured by a microscope to be 9.4 cm. What is the refractive index of water? If water is replaced by**

a liquid of refractive index 1.63 up to the same height, by what distance would the microscope have to be moved to focus on the needle again?

9. **A compound microscope consists of an objective lens of focal length 2.0 cm and an eye piece of focal length 6.25 cm separated by a distance of 15 cm. How far from the objective should an object be placed in- order to obtain the final image at the least distance of distinct vision and also find the magnifying power of microscope in this case.**
10. **A small telescope has an objective lens of focal length 144 cm and eye piece of focal length 6.0 cm. What is the magnifying power of the telescope? What is the separation between of the objective and the eye piece?**
11. **A small telescope has an objective lens of focal length 140 cm and an eye piece of focal length 5.0 cm What is the magnifying power of the telescope for viewing distant objects when (i) the telescope is in normal adjustment (ii) the final image is formed at least distance of distinct vision.**