SANT ISHAR SINGH JI MEMORIAL PUBLIC SCHOOL,KARAMSAR RARA SAHIB

HOLIDAYS HOMEWORK
CLASS-12TH

Dear Parents,

"We should live everyday like it is a holiday, being thankful and spending time with family and looking hopefully to the future".

There is no doubt that vacations are the most appropriate time for the students to refresh and rejuvenate themselves to showcase their performance more enthusiastically. Children have ample energy which needs to be channelized in the right direction to get the best out of them.

Keeping this in mind the holidays homework has been designed to make them more observant and confident. Students must remember to complete all their Homework and submit it to the respective teachers upon their arrival at the school after vacations. **School will re-open on 1st July 2024.**

General Instructions:-

1. Get up early in the morning and go out for a walk daily.
2. Listen to news daily and read the news headlines.
3. Watch "National Geographic, History and Discovery channels to enrich yourgeneral knowledge.
4. Subject based questions must be done in Holidays Homework Notebooks.
5. Show your best creativity and make colorful projects. Use good quality sketch pens or glitter pens for writing headings only, text should be handwrittenwith blue or black pen.
6. Time Table must be made. Holidays Homework must be done over the period of one month. Don't consider Holidays Homework as burden.

SUBJECT -PHYSICAL EDUCATION

1. Practical file :- a) Game volleyball
    b) Fitness tests
    c) Two Asanas for each lifestyle
       disease.
2. Art Integration Activity
   Body Mass Index (BMI)
3. Revision (Theory)
Chapter 1 Management of Sports Event
Chapter 2 Children and Women in sports
Chapter 3 Yoga as preventive measure for lifestyle disease.
Chapter 4 Physical Education and sports for CWSN

Subject- Economics
Make projects as assigned according to Roll numbers and discussed in class.
Art integration Activity- Need to integrate the following subjects
Economics, Political Science and Business Studies
Topic- Small and medium enterprises
Economics- The Impact of Government Policies on Small and Medium Enterprises (SMEs) in India"
This topic integrates the three subjects as follows:

Economics:

1. Analyze the economic environment for SMEs in India.
2. Contribution of SMEs to the GDP and employment.
3. Economic impact of policies such as Make in India, Startup India, and the Micro, Small, and Medium Enterprises Development (MSMED) Act.
Political Science:
1. Investigate the role of government in the business sector.
2. Explore how political decisions and stability affect SMEs.

Business Studies:
1. Examine the business environment for SMEs.
2. Assess the strategies SMEs use to comply with and benefit from government policies.

(**Note**- Arts students will integrate Economics and political science and commerce students will integrate Economics and Business studies)

Subject -English Core

1. **PROJECT WORK**

TOPIC: The effects of Education on the life of different aged people

Follow the given guidelines:

1. Conduct interviews of different people (children, teenagers, adults, parents and grandparents)
2. Prepare a questionnaire. You may include the following questions-
- Name
- Age
- Gender
- Educational qualification
- What do you mean by education?
- What changes you feel are there in society or in your life due to education?
- Does education affect the understanding \& compromising level of an individual?
- What changes do you expect in society/country?
- What should be the compulsory level of education?
- Are we more educated than the people at the time of 'Gurukuls'?
- (add more questions accordingly)
3. Separate pages to be made for each interview.
4. Compile all the interviews and write a Report presenting the whole view in 600 – 800 words

The Project-Portfolio must include the following:

● Cover page, with title of project, school details/details of students.
● Statement of purpose/objectives/goals
● Certificate of completion under the guidance of the teacher.
● Action plan for the completion of assigned tasks.
● Materials such as questionnaire for interview, survey-reports and other material evidence of learning progress and academic accomplishment.
● The 600-800 words Report.
● Photographs that capture the positive learning experiences.
● List of resources/bibliography.
● Viva will also be taken on the research based project.
● This project and viva comprises of 10 marks for the Internal assessment.

Instructions to be followed:

● All the work should be done on A4 sheets.

2. Activity :Cartooning On Cultural Festivities of Punjab and Odisha.

3. Select any poem from the syllabus and write an essay analyzing its themes, imagery, and poetic devices.

4. You are Suresh Surabhi Gupta, the Principal of Goodwill Public School Akash Nagar. Your school is organising an inter school economics seminar on critical analysis of the financial budget 23-24. Send a formal letter of invitation to the finance secretary of your state to be the chief guest. Invent necessary details.

5. Read the book issued by the school library and write the book review of it on library note book.

Subject: Accountancy

Question 1: Revise all chapters covered in the class-

Chapter 1 – Fundamentals of Partnership

2 - Valuation and Accounting for Goodwill.

3 – Change in Profit sharing ration among existing Partners

4 – Admission of a Partner

5 – Retirement of a Partner

Question 2: Solve the questions from T.S Grewal from the following chapters:

a) Admission of a Partner

b) Retirement of a Partner

Subject: Business Studies

Question 1: Revise all chapters covered in the class-

Chapter - 1. Nature and significance of management.

2. Principles of management.

3. Business environment.

4. Planning.

5. Organising

Question 2: Revise the MCQ's and Case studies of the chapter 1 to 5.

Subject- *(Physics)*

- Revise theory of Unit I(Electrostatics) , II (Current Electricity), III (Magnetic Effects of Current and Magnetism), IV (Electromagnetic Induction and Alternating Currents).
- Solve numericals (solved examples, frequently asked questions and Hots)
- Art integrated Activity:
  Title: To study natural and man made form, human figures, birds, animals vegetation and other objects like house hold items, buildings or as desired by students. (Chose minimum 5 items around you, these items can be from ones mentioned in the title or others. Give the name of physical phenomenon involved, simple construction and working involved. Try including the topics from your syllabus)

Subject: Chemistry

First Assignment
Chapter Solution
Q1. Heptane and octane form an ideal solution. At 373 K, the vapour pressures of the two Liquid components are 105.2 kPa and 46.8 kPa respectively. What will be the vapour Pressure of a mixture of 26.0 g of heptane and 35 g of octane?
Q2. Calculate the mass of a non-volatile solute (molar mass 40 g mol−1) which should be dissolved in 114 g octane to reduce its vapour pressure to 80%.
Q3. A solution containing 30 g of non-volatile solute exactly in 90 g of water has Vapour pressure of 2.8 kPa at 298 K. Further, 18 g of water is then added to the Solution and the new vapour pressure becomes 2.9 kPa at 298 K. Calculate: Molar mass of the solute and Vapour pressure of water at 298K.
Q4. Two elements A and B form compounds having formula AB_2 and AB_4. When dissolved in 20 g of benzene (C_6H_6), 1 g of AB_2 lowers the freezing point by 2.3 Kwhereas 1.0 g of AB_4 Lowers it by 1.3 K. The molar depression constant for benzene is 5.1 Kkg mol−1. Calculate atomic masses of A and B.
Q5. Vapour pressure of water at 293 K is 17.535 mm Hg. Calculate the vapour pressure of Water at 293 K when 25 g of glucose is dissolved in 450 g of water.
Second Assignment
Chapter Electrochemistry
Electrochemistry Class 12 MCQs Questions

Assignment
Question 1.
If 96500 coulomb electricity is passed through $CuSO_4$ solution, it will liberate
(a) 63.5 gm of Cu
(b) 31.76 gm of Cu
(c) 96500 gm of Cu
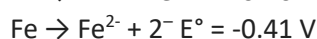(d) 100 gm of Cu _____Question 2.
Fused NaCl on electrolysis gives...............on cathode.
(a) Chlroine
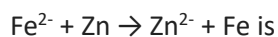(b) Sodium
(c) Sodium amalgam
(d) Hydrogen

n 3.
The standard electrode potentials for the half cell reactions are:

$Zn \rightarrow Zn^{2-} - 2e^- \quad E° = 0.76\ V$

$Fe \rightarrow Fe^{2-} + 2^- \quad E° = -0.41\ V$

The emf of the cell reaction

$Fe^{2-} + Zn \rightarrow Zn^{2-} + Fe$ is

(a) -0.35 V
(b) +0.35 V
(c) -1.17 V
(d) +1.17

n 4.
Which of the following is a secondary cell?
(a) Leclanche cell
(b) Lead storage battery
(c) Concentration cell
(d) All of these

n 5.
For a certain redox reaction, E° is positive. This means that
(a) ΔG° is positive, K is greater than 1
(b) ΔG° is positive, K is less than 1
(c) ΔG° is negative, K is greater than 1
(d) ΔG° is negative, K is less than 1

n 6.
Cell reaction is spontaneous, when
(a) E°cell is negative
(b) ΔG° is negative
(c) E°cell is Positive
(d) ΔG° is positive

n 7.
Equilibrium constant K is related to Ecell and not E°cell because
(a) Ecell is easier to measure than E°cell

(b) Ecell becomes zero at equilibrium point but E°cell remains constant under all conditions
(c) at a given ttemperature, E°cell changes hence value of K can't be measured
(d) any of the terms Ecell or E°cell can be used

n 8.

Molar conductivity of 0.15 M solution of KCl at 298 K, if its conductivity of 0.0152 S cm^{-1} w ill be

(a) 124 Ω^{-1} cm² mol^{-1}

(b) 204 Ω^{-1} cm² mol^{-1}

(c) 101 Ω^{-1} cm² mol^{-1}

(d) 300 Ω^{-1} cm² mol^{-1}

n 9.

Electrical conductance through metals is called metallic or electronic conductance and is due to the movement of electrons. The electronic conductance depends on

(a) the nature and structure of the metal

(b) the number of valence electrons per atom

(c) change in temperature

(d) all of these

n 10.

The specific conductivity of N/10 KCl solution at 20°C is 0.0212 ohm^{-1} cm^{-1} and the resistance of the cell containing this solution at 20°C is 55 ohm. The cell constant is

(a) 3.324 cm^{-1}

(b) 1.166 cm^{-1}

(c) 2.372 cm^{-1}

(d) 3.682 cm^{-1}

n 11.

Faraday's law of electrolysis is related to

(a) Atomic number of cation

(b) Speed of cation

(c) Speed of anion

(d) Equivalent weight of electrolyte

n 12.

The molar conductivity is maximum for the solution of concentration

(a) 0.004 M

(b) 0.002 M

(c) 0.005 M

(d) 0.001 M

n 13.

Units of the properties measured are given below. Which of the properties has been not matched correctly?
(a) Molar conductance = $Sm^2\ mol^{-1}$
(b) Cell constant = m^{-1}
(c) Specific conductance of = $S\ m^2$
(d) Equivalence conductance = $S\ m^2\ (g\ eq)^{-1}$

n 14.
How long would it take to deposit 50 g of Al from an electrolytic cell containing Al_2O_3 using a current of 105 ampere?
(a) 1.54 h
(b) 1.42 h
(c) 1.32 h
(d) 2.15 h

n 15.
The charge required for reducing 1 mole of $MnO-4$ to Mn^{2-} is
(a) 1.93×10^5 C
(b) 2.895×10^5 C
(c) 4.28×10^5 C
(d) 4.825×10^5 C

n 16.
How much electricity in in terms of Faraday is required to produce 100 g of Ca from molten $CaCl_2$?
(a) 1F
(b) 2F
(c) 3F
(d) 5F

n 17.
If a current of 1.5 ampere flows through a metallic wire for 3 hours, then how many electrons would flow through the wire?
(a) 2.25×10^{22} electrons
(b) 1.13×10^{23} electrons
(c) 1.01×10^{23} electrons
(d) 4.5×10^{23} electrons

n 18.
How many coulombs of electricity is required to reduce 1 mole of Cr2O3 in acidic medium?
(a) 4×96500 C
(b) 6×96500 C

(c) 2 × 96500 C
(d) 1 × 96500 C

n 19.
A current of 1.40 ampere is passed through 500 mL of 0.180 M solution of zinc sulphate for 200 seconds. What will be the molarity of Zn^{2+}ions after deposition of zinc?
(a) 0.154 M
(b) 0.177 M
(c) 2 M
(d) 0.180 M

n 20.
How much time is required to deposit 1×10^{-3} cm thick layer of silver (density of 1.05 g cm^{-3}) on a surface of area 100 cm² by passing a current of 5 A through $AgNO_3$ solution?
(a) 125 s
(b) 115 s
(c) 18.7 s
(d) 27.25 s

Third Assignment

Chapter Chemical Kinetics

Q1 A reaction is of first order in reactant A and of second order in reactant B. How is the rate of this reaction affected when (i) the concentration of B alone is increased to three times (ii) the concentrations of A as well as B are doubled?

Q2 The thermal decomposition of HCO_2H is a first order reaction with a rate constant of 2.4×10^{-3} s^{-1}at a certain temperature. Calculate how long will it take for three-fourths of initial quantity of HCO_2 H to decompose. (log 0.25 = -0.6021)

Q3 A first order gas phase reaction : $A_2B_2(g) \rightarrow 2A(g) + 2B(g)$ at the temperature 400°C has the rate constant k = 2.0×10^{-4} sec^{-1}. What percentage of A_2B_2 is decomposed on heating for 900 seconds? (Antilog 0.0781 = 1.197)

Q4 How does a change in temperature affect the rate, of a reaction? How can this effect on the rate constant of a reaction be represented quantitatively?

Q5 Derive integrated rate equation for rate constant of a first order reaction.

Q6 For a decomposition reaction the values of rate constant k at two different temperatures are given below :
$k_1 = 2.15 \times 10^{-8}$ L mol^{-1} s^{-1} at 650 K
$k_2 = 2.39 \times 10^{-7}$ L mol^{-1} s^{-1} at 700 K
Calculate the value of activation energy for this reaction.(R = 8.314 J K^{-1} mol^{-1})

Q7 The rate of a reaction becomes four times when the temperature changes from 293 K to 313 K. Calculate the energy of activation (E_a) of the reaction assuming that it does not change with temperature. [R = 8.314 JK^{-1} mol^{-1}, log 4 = 0.6021]

Q8 The rate constant for a first order reaction is 60 s^{-1}. How much time will it take to reduce the initial concentration of the reactant to its l/10th value?

Q9 A first order reaction takes 20 minutes for 25% decomposition. Calculate the time when 75% of the reaction will be completed.

(Given: log 2 = 0.3010, log 3 = 0.4771, log 4 = 0.6021)

Q10 For a first order reaction, show that time required for 99% completion is twice the time required for completion of 90% reaction.

Prepare an Art integrated Activity on:

Study of natural and man-made forms, human figures, birds, animals, vegetation and other objects like house- hold items, buildings or as desired by you.

At least in two pages which also includes mathematics and physics

Additional Work

Prepare project file for class 12 annual exam as told you during class.

Subject:- (Biology)

1. Complete practical mannual.
2. Prepare an investigatory project on any relevant topic from syllabus .
3. Complete the following worksheet assignment:-

Q1 An anther with malfunctioning tapetum often fails to provide viable male gametophytes. Give one reason.

Q2 A bilobed , dithecous anther has 100 microspore mother cells per microsporangium. How Many male gametophytes this anther can produce ?

Q3 Write the functions of coleoptiles and scutellum.

Q4 Papaver and Michelia both have multicarpellary ovaries. How do they differ from each Other ?

Q5 Mention one application of pollen bank. How are pollens stored in a bank ?

Q6 Mention the pollinating agents of an inflorescence of small dull coloured flowers with well Exposed stamens and large feathery stigma. Give any one characterstics of pollen grains Produced by such flowers.

Q7 Name the type of flowers which favours cross pollination.

Q8 The following statements seems to describe the water pollinated submerged plants. Which One of these statements is incorrect :

1. The flower do not produce nectar
2. The pollen grains have mucilaginous covering
3. The brightly colored female flowers have long stalk to reach the surface

Q9 Name the type of pollination as a result of which genetically different types of pollen grains Of the same species land on the stigma.

Q10 Why are non albuminous seeds so called ?

Q11 How do flowers of Vallisneria get pollinated ?

Q12 How is it possible in Oxalis and Viola plants to produce assured seed sets even in the Absence of pollinators ?

Q13 Normally one embryo develops in one seed but when an orange seed is squeezed many Embryos of different shapes and sizes are seen . Mention how it has happened.

Q14 How many pollen grains and ovules are likely to be formed in the anther and the ovary of An angiosperm bearing 25 microspore mother cells and 25 megaspore mother cells Respectively.

4) Prepare an art integrated project as directed.

Subject-Maths

Holidays Homework
Solve ch 1 Relation and function MCQ 1 to 5
   Assertions and reasons 1 to 5
Ch 2 Inverse trigonometric functions
Solve case study 1,2 from modern abc
MCQ 1 to 10 . Solve very short questions
Ch 3 Matrices solve MCQ Q 1 to 10
Case study Q 1,2,3 modern abc
Ch 4 determinant assertion reason question
  any 5 , case study 2 from modern
Ch 5 Derivative assertion reason questions any 5

- Art activity: study of natural and ,man made forms , humans figures , words , animals , vegetation and other objects like households items building or as you desired on the selected from matrix and determinants.
- SE activity: write the given 5 activities on practical notebook

Subject-History & Political Science

GENERAL INFORMATION
- Do the ***Final Project work*** on A4 assignment sheets.
- Do Map Work in your Fair Notebook.
- All the teacher notes must be written in a fair Notebook.

 # (Art Integrated Learning)
. **Music and Physical Expression in Devotional Practices:**
  - **Art Integration:** Compose and perform music inspired by Bhakti and Sufi poetry**.**
  - **Physical Education:** Engage in physical activities like yoga or meditation sessions with live devotional music.
  - **History:** Study the role of music in the spiritual practices of Bhakti and Sufi traditions and its impact on community bonding

 # ***Write **One Mark questions of all completed chapters of **History and Political Science**
 # ART INTEGRATED PROJECT (POL SCI & ECONOMICS)
*Investigate the role of government in the business sector.
*Explore how political decision and stability effects SMEs
* Discuss the influence of a political advocating and lobbying by Business groups in policy making