SPRINGDALES PUBLIC SCHOOL, JAGADHRI
Session: 2023-24
Class-XII
(Holiday's Homework & Periodic Test-II Syllabus)

Subject	Holidays Home Work	Periodic Test- II Syllabus
English	• Complete Your Notebooks . • Revise Periodic Syllabus. • Attempt the following assignment in BBC and write in pencil only. **Module 1** a.) Classroom Assignment 1 (Pg-3) b.) Classroom Assignment 2 (Pg-6) c.) Classroom Assignment 6 (Pg-20) d.) Classroom Assignment 8 (Pg- 27) **Module 2-** a.) Classroom Assignment 9 (Pg-95) b.) Homework Assignment 9 (Pg- 99) c.) Classroom Assignment 11(Pg-119) d.) Practice Assignment 10(Pg- 121,122) **Module 3-** a.) Practice Assignment 12 (Pg - 141) b.) Practice Assignment 13 (Pg - 163) **Module 4** a.) Classroom Assignment 16(Pg - 177) b.) Homework Assignment 17(Pg - 207) **Module 5** • Attempt Extracts of the following chapters in BBC only. 1.) The Last Leasson 2.) Lost Spring 3.) Deep Water 4.) The Rattrap **Poetry:** 1.) My Mother at Sixty-Six 2.) Keeping Quiet 3.) A Thing of Beauty 4.) A Roadside Stand	Flamingo 1.) Ch - The Rattrap 2.) Poem - A Thing of Beauty Vistas 1.) Ch - The Tiger King Notice Writing

	Module 6 - • Attempt Extracts of the following chapters in BBC only. 1.) The Third Level 2.) The Tiger King **Subject Enrichment Activity-** You are Kamal/Karan, Cultural Head of your school. Your school is going to organise Academic Exhibition on 15th July,2023 in school auditorium. Draft an invitation on A4 Sheets to invite the dignitaries, staff and parents to witness the exhibition. Design its cover page also.	
Maths	Solve the NCERT Corner of Ch- 3, 4, 5 ,6 **Do the following activities in Maths Lab Manual :** 1. To demonstrate a function which is one-one but not onto. 2. To demonstrate a function which is onto but not one-one 3. To find the limit of the function analytically at x = C and also to check the continuity of function at that point. 4. To understand the concept of local Maxima and local Minima and point of inflection. 5. To understand the concept of increasing & decreasing function.	Ch-2 Inverse Trignometric Function (I.T.F.) Ch-6 Continuity & Differentiability Ch-7 Differentiation
Physics	**1. Make working model & project report as assigned.** **2. Complete your practical file with the given Practicals:** 1 .To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias 2. Determine the angle of deviation for a given prism and plot the graph. 3.To find resistance of a given wire / standard resistor using metre bridge. 4.To find the value of v for different values of u in case of a concave mirror and to find the focal length Activities 1. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items. 2. Use of multimeter to see the unidirectional flow of	Ch 3 Current electricity Ch 4 Moving charges and Magnetism

	current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order.	
Chemistry	**1. To make a working model** **2. Complete your practical file with given practicals.** 1. To prepare the colloidal solution of starch. 2. To prepare a colloidal solution of ferric hydroxide. 3. To study the effect of concentration on the rate of reaction between Sodium thiosulphate and hydrochloric acid 4. To study the effect of temperature on the rate of reaction between solution of sodium thiosulphate and hydrochloric acid 5. To separate the coloured pigments from extracts of leaves and flowers by paper chromatography and determination of RF value 6. To prepare the crystals of double salt of ferrous ammonium sulphate. 7. To prepare M/ 20 solution of Mohr's salt . With the help of this solution determine the molarity and strength of given solution of potassium permanganate. 8. Prepare M/20 Mohr salt solution and find out the percentage purity of given sample of impure KMnO4 , 2 gram of which has been dissolved per litre of the given solution. 9.Prepare a standard solution M/20 oxalic acid . Using this solution determine the molarity and strength of the given solution of $KMnO_4$. **4. To make a Project report on any one topic given below according to roll numbers:** 1. Study of common food adulterants in fat, oil ,sugar, turmeric powder, chilli powder and pepper (1,17,33,49,65) 2. To study the quantity of casein present in different samples of milk.(2,18,34,50,66) 3. Preparation of soyabean milk and its comparison with natural milk with respect to curd formation ,effect of temperature and taste.(3,19,35,51,67) 4. To study the presence of oxalate ions in guava fruit at different stages of ripening.(4,20,36,52,68) 5. Carbohydrates (5,21,37,53,69) 6.proteins(6,22,38,54,70) 7. Order and molecularity of a reaction (7,23,39,55) 8. Integrated rate equations and half life(8,24,40,56) 9. Corrosion (9,25,41,57) 10. Commercial cells (10,26,42,58)	**Periodic -II syllabus** Ch-3 Chemical Kinetics Ch-4 Co-ordination compounds

	11. Colligative properties (11,27,43,59) 12. Osmosis (12,28,44,60) 13. EMF and electrochemical cells (13,29,45,61) 14. Properties of aldehydes, ketones and carboxylic acids (14,30,46,62) 15. Foaming capacity of different soaps.(15,31,47,63) 16. Analysis of cold drinks.(16,32,48,64)	
Biology	**1. To make a working model** **2. Complete your practical file with the given practicals:** 1. Prepare a temporary mount to observe pollen germination. 2. Study the plant population density by quadrat method. 3. Study the plant population frequency by quadrat method. 4. Prepare a temporary mount of onion root tip to study mitosis. 5.Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc. **3. Make a Project report on the topic allotted.**	Chapter-2: Sexual Reproduction in Flowering Plants Chapter-3: Human Reproduction Chapter-4: Reproductive Health
Economics	❖ Revise NCERT questions of Ch-1to 10 of Macroeconomics. ❖ Make a Project Report on the topic : Group 1 : Money & Banking Group 2 : Government Budget Group 3: Foreign Exchange System & Balance of payment Group 4 : Aggregate Demand & Aggregate Supply Group 5 : Demonetization Group 6 : Problems in Development of Economy like Poverty , Unemployment , Environmental Degradation Group 7 : Rural Development	Ch-7 AD & AS Ch-8 Short Run Equilibrium Ch-9 Problem of Deficient Demand & Excess Demand Ch-10 Government Budget
Accountancy	❖ Revise NCERT questions of Ch-1,2,3. ❖ Make a Project Report on the topic : Group 1 : (Roll No 1-20) : Comprehensive project illustration 3 , Segment Analysis 1,6,14 Group 2 : (Roll No 21-40) : Comprehensive project illustration 3 , Segment Analysis 2,7,15 Group 3 : (Roll No 41- 58) : Comprehensive project illustration 3 , Segment Analysis 3, 5 , 16	Ch-2 Change in Profit Sharing Ratio , Ch-3 Admission of a Partner

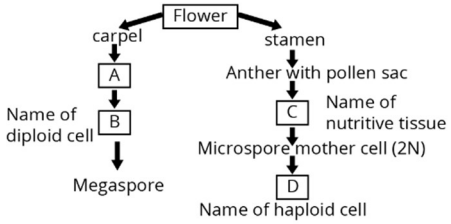
Business Studies	**Make a project report on following topics:** Group -1 Business environment (Roll no.1 to 15) Group -2 Principles of management (Roll no.16 to 30) Group-3 Marketing (Roll no.31 to 45) Group-4 Stock exchange (Roll no. 46 to 58)	Unit-4 and 5
Hindi	परियोजना कार्य आधुनिक मानवीय संवेदना से ओत-प्रोत साहित्यकार धर्मवीर भारती का जीवन परिचय, रचनाएं, साहित्यिक विशेषताएं व भाषा शैली लिखें।	गद्य भाग -पहलवान की ढोलक, शिरीष के फूल पद्य भाग- कैमरे में बंद अपाहिज ,उषा वितान -जूझ जनसंचार के माध्यम
Political Science	Project work (anyone topic) 1. European union and bricks 2.ASEAN & SAARC 3 Challenges of nation building 4. UN organisation	Contemporary South Asia UN organisation Security in the contemporary world
Sociology	Project work (anyone topic) Cultural change Industrialization Ruralization Globalisation	Ch - Social institution continuity and change. Ch- Pattern of social inequality and exclusion Ch- The challenges of cultural diversity
Physical Education	Complete your Practical file covering following topics: 1.Track 2.long jump 3.shot put 4.volley ball 5.Any five yoga asana	Ch1.Planning in sports Ch2.Children and women in sports Ch3.Yoga Ch4.Children with special needs Ch5 Sports and nutrition.
Music	(1) रागों के समय सिद्धांत के संदर्भ में विस्तार से चर्चा कीजिए। (2) तानपुरे को मिलाने की विधि लिखिए! (3) उस्ताद फैयाज खां, बड़े गुलाम अली खां तथा कृष्ण रावशंकर पंडित का जीवन परिचय देते हुए उनका संगीत में योगदान लिखिए। (4) प्रायोगिक कार्य (क) निम्न को परिभाषित कीजिए अलंकार, कण, मींड, ग्राम (ख) राग भैरव, राग मालकौंस, राग बागेश्री का परिचय, द्रुत ख्याल की स्वरलिपि आलाप एवं तान सहित लिखिए! (ग) रूपक ताल, झपताल एवं धमार ताल का परिचय दुगुन,	(1) उस्ताद फैयाज खां, बड़े गुलाम अली खान, पंडित कृष्ण राव शंकर पंडित का जीवन परिचय देते हुए उनका संगीत में योगदान लिखिए। (2) राग भैरव, राग मालकौंस, राग बागेश्री का परिचय एवं किसी एक ख्याल की स्वरलिपि अलाप एवं तान सहित लिखिए! (3) धमार ताल का परिचय दुगुन ,तिगुन ,चौगुन लयकारी सहित लिखिए!

	तिगुन, चौगुन एवं विशेषताओं सहित लिखिए। (घ) तानपुरे को मिलाने की विधि लिखिए! (ड़) प्रत्येक विद्यार्थी संगीत से संबंधित एक चार्ट बनाएं।	

HOLIDAYS HOMEWORK ASSIGNMENT

CLASS XII **SUB : BIOLOGY**

1. What is apomixes and what is its importance?
2. Incompatibility is a natural barrier in te fusion of gametes? justify your statement?
3. (a) Explain the role of stigma in pollen-pistil interaction
    a. (b)Describe the post –pollination events leading to double fertilization in angiosperm ,started with two celled pollen grains?
4. (a) Draw a diagrammatic sectional view of a megasporangium ofan angiosperm andlabel funiculus,micropyle,embryo sac and nucellus ?
5. How does pollination takes place in salivia. List any four adaptations required for such type of pollination.
6. Differentiate between geitonogamy and xenogamy.
7. 7. Given below is an incomplete flow chart showing the formation of gamete in angiosperm plants. Observe the flow chart carefully and fill in the blank A, B, C, and D.



8. Continued self-pollination leads to inbreeding depression. List three devices, which flowering plants have developed to discourage self-pollination?
9. Trace the development of microsporocytes into mature pollen grains.
10. Explain the structure of maize grain with the help of a diagram.
11. Give two reasons why both the strands of DNA are not copied during transcription.
12. Three codons on mRNA are not recognized by tRNA. What are they? What is the general term used for them and what is their significance in protein synthesis?
13. Name the disorder with the following chromosome complement.

    a.22 pairs of autosomes + X X Y

    b.22 pairs of autosomes + 21st chromosome + XY

14 Give any two similarities between the behaviour of genes (Mendel's factor) during inheritance and chromosomes during cell division.

15. A woman with an O blood group marries a man with an AB blood group

    (i) Work out all the possible phenotypes and genotypes of the progeny.
    (ii) Discuss the kind of dominance in the parents and the progeny in this case.

16.In Antirrhinum majus a plant with red flowers was crossed with a plant with white flowers. Work out all the possible genotypes and phenotypes of F1 1 and F2 2 generations, comment on the pattern of inheritance in this case?

17.In dogs, barking trait is dominant over silent trait & erect ears are dominant over drooping ears. What is the expected phenotypic ratio of offspring when dogs heterozygous for both the traits are crossed?

18.Differentiate between dominance, codominance and incomplete dominance with one example each.

19 State the 4 criteria which a molecule must fulfill to act as genetic material.

20.Why is it that transcription & translation could be coupled in the prokaryotic cells but not in eukaryotic cells?

21.Illustrate schematically the process of initiation, elongation, and termination during transcription of a gene in a bacterium.

22.What is transformation? Describe Griffith's experiment to show transformation? What did he prove from his experiment?

23.Two claimant fathers filed a case against a lady claiming to be the father of her only daughter. How could this case be settled by identifying the real biological father?

24.What does the lac operon consist of? How is the operator switch turned on and off in the expression of genes in this operon? Explain.

Or

What is an operon? Describe the major steps involved in an operon?

25.Who performed the blender experiment? What does this experiment prove? Describe the steps followed in this experiment?

HOLIDAYS HOMEWORK ASSIGNMENT

CLASS XII **SUB : MATHEMATICS (Ch – Matrices)**

Q1(i) If a matrix has 12 elements, what are the possible orders it can have ? What if it has 7 elements?

(ii) If a matrix has 8 elements, what are the possible orders it can have? What if it has 5 elements?

Q2. Construct a 2x3 matrix whose elements in the e^{th} row and j^{th} column is given by :-

(i) $a_{ij} = \frac{i+3j}{2}$ (i) $a_{ij} = \frac{2i+3j}{2}$ (iii) $a_{ij} = \frac{3i+j}{2}$ (iv) $a_{ij} = \frac{3i-j}{2}$

Q3. Construct a 4x3 matrix whose elements are:-

(i) $a_{ej} = 2i + \frac{e'}{f}$ (ii) $a_{ej} = \frac{i-j}{j+j}$ (iii) $a_{ej} = i$

Q4. If

$$\begin{pmatrix} 2+3 & 2+4 & 2y-7 \\ 4x+6 & a-1 & 0 \\ b-3 & 3b & z=2c \end{pmatrix} = \begin{pmatrix} 0 & 6 & 3y-2 \\ 2x & -3 & 2c-2 \\ 2b+4 & -21 & 0 \end{pmatrix}$$

Obtain the values of a, b, c, x, y and z.

Q5. Find matrices x and y i.e.

$$2x-y = \begin{pmatrix} 6 & -6 & 0 \\ -4 & 2 & 1 \end{pmatrix} \quad \text{and } x+2y = \begin{pmatrix} 3 & 2 & 5 \\ -2 & 1 & -7 \end{pmatrix}$$

Q6. Find the value of x such that :-

$$\begin{bmatrix} 1 & 1 & x \end{bmatrix} \begin{pmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 1 & 0 \end{pmatrix} \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix} = 0$$

Q7. If $A = \begin{pmatrix} 3 & -4, \\ 1 & -1 \end{pmatrix}$ prove that $A^n = \begin{pmatrix} 1+2n & -4n, \\ n & 1-2n \end{pmatrix}$ where n is any positive integer.

Q8. If $A = \begin{pmatrix} 1 & 2 & 0 \\ 3 & -4 & 5 \\ 0 & -1 & 3 \end{pmatrix}$, find $A^2 - 4A + 3I3$

Q9. Express the matrix $A = \begin{pmatrix} 4 & 2 & -1 \\ 3 & 5 & 7 \\ 1 & -2 & 1 \end{pmatrix}$ as the sum of a symmetric and a skew symmetric matrix

Q10. Express the following matrices as the sum of symmetric and skew-symmetric matrices:-

(i) $A = \begin{pmatrix} 6 & 1 \\ 3 & 4 \end{pmatrix}$ (ii) $A = \begin{pmatrix} 3 & 2 & 3 \\ 4 & 5 & 3 \\ 2 & 4 & 5 \end{pmatrix}$

(iii) $A = \begin{pmatrix} 2 & 3 & -1 \\ -1 & 4 & 2 \\ 6 & 0 & 8 \end{pmatrix}$ (iv) $\begin{pmatrix} 6 & 1 & -5 \\ -2 & -5 & 4 \\ -3 & 3 & -1 \end{pmatrix}$

Ch- (Continuity)

1. Examine the continuity of the function $f(x)=\begin{cases}1+x; x\le 2\\ 5-x; x>2\end{cases}$ at x=2.
2. Show that the function $f(x)=\{2x-|x|$ is continuous at x=0.
3. Discuss the continuity of the function: $f(x)=\begin{cases}\dfrac{e^x-1}{\log(1+2x)}, x\neq 0\\ 7, x=0\end{cases}$

   at the point x=0 .
4. Examine the continuity of the functions at x=0

   (i) $f(x)=\begin{cases}\dfrac{x}{\sin 3x}, x\neq 0\\ 3, x=0\end{cases}$ (ii) $f(x)=\begin{cases}\dfrac{\sin 2x}{\sin 3x}, x\neq 0\\ 2. x=0\end{cases}$
5. Determine the constants if the given functions are continuous at specified points

   (i) $f(x)=\begin{cases}ax+5; x\le 2\\ x-1, x>2\end{cases}$ at x=2 (ii) $f(x)=\begin{cases}\dfrac{x^2-3x+2}{x-1}, x\neq 1\\ k, x=1\end{cases}$ at x=1
6. Find the value of a,b and c for which the function is continuous at x=0.

$$f(x)=\begin{cases}\dfrac{\sin(a+1)x+\sin x}{x}, x<0\\ c, x=0\\ \dfrac{\left(x+bx^2\right)^{1/2}-x^{1/2}}{bx^{3/2}}, x>0\end{cases}$$

7. Find the derivative of the function with respect to x

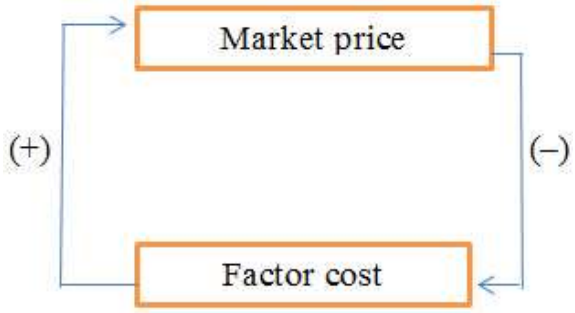
   (i) $e^{\tan^{-1}(\cos\sqrt{x})}$ (ii) $\log\left(\dfrac{x^2+x+1}{x^2-x+1}\right)+\dfrac{2}{\sqrt{3}}\tan^{-1}\dfrac{\sqrt{3}x}{1-x^2}$

8. If $y=x\log\left(\dfrac{x}{a+bx}\right)$, show that $x^3\dfrac{d^2y}{dx^2}=\left(x\dfrac{dy}{dx}-y\right)^3$
9. If $y=3\cos t-\cos 3t$, $x=3\sin t-\sin 3t$,find $\dfrac{d^2y}{dx^2}$ at $t=\dfrac{\pi}{3}$
10. If $ax^2+2hxy+by^2=1$, show that $\dfrac{d^2y}{dx^2}=\dfrac{h^2-ab}{(hx+by)^3}$

HOLIDAYS HOMEWORK ASSIGNMENT

CLASS XII **SUB : ECONOMICS**

1. Give the meaning of factor income?
2. Distinguish between factor income and transfer receipt?
3. Who are referred to as 'normal residents'? Who all are not included under the category of normal residents?
4. Define the following:
    a. Factor income
    b. Transfer income
    c. Domestic territory
    d. Gross investment
    e. Net investment
    f. Depreciation
    g. Net indirect tax
5. Distinguish between intermediate products and final products. Give examples.
6. Discuss the meaning of consumption goods and capital goods?
7. What are the reasons for depreciation of assets?
8. Write the difference between depreciation and capital loss?
9. Define indirect tax and subsidies?
10. What is NFIA? Write its significance and components?
11. Classify the following as final goods or intermediate goods.
    a. Machine purchased by a firm
    b. Car purchased by a household
    c. Sewing machine purchased by a housewife
    d. Electricity consumption in a business
    e. Seeds purchased for kitchen gardening
12. Identify the missing items in the following flowchart:-



    a. Depreciation
    b. Net Indirect Taxes
    c. Indirect Taxes
    d. Net Factor Income from Abroad

13. Find National Income from the following
    Autonomous Consumption = Rs. 100
    Marginal Propensity to Consume =0.60
    Investment = Rs. 200
14. Given that National Income is Rs. 80 crore and consumption expenditure is Rs. 64 crore, find out Average Propensity to Save. When income rises to Rs. 100 crore and consumption expenditure to Rs. 78 crore, what will be the Average Propensity to Consume and Marginal Propensity to Consume?
15. If National Income is Rs. 50 crore and saving is Rs. 5 crore, find out Average Propensity to Consume. When income rises to Rs. 60 crore and saving to Rs. 9 crore, what will be the Average Propensity to Consume and Marginal Propensity to Save?
16. In an economy, the Marginal Propensity to Consume is 0.75. Investment expenditure in the economy increases by Rs. 75 crore. Calculate the total increase in National Income.
17. Explain the relationship between Average Propensity to Consume and Average Propensity to Save. Which of these can have a negative value and when?
18. In an economy, the consumption expenditure is Rs. 8750 crore and the ratio of Average Propensity to Consume and Average Propensity to Save is 7 : 1. Calculate the level of income in the economy. (All India 2010)
19. Calculate investment expenditure from the following data about an economy which is in equilibrium
    National Income = Rs. 1000
    Marginal Propensity to Save = 0.20
    Autonomous Consumption Expenditure = Rs. 100
20. Calculate 'autonomous consumption expenditure' from the following data about an economy which is in equilibrium
    National Income = Rs. 900
    Marginal Propensity to Save = 0.10
    Investment Expenditure =Rs. 80

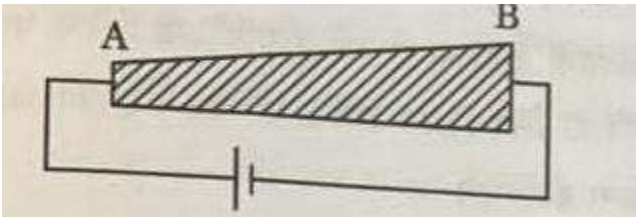
Accountancy

Make assignment of following additional questions
Ch-1 : Fundamentals of Partnership Firms – Q No. 78 , 84, 103 , 110, 112, 118
Ch-2 : Change in profit sharing ratio – Q No. 51 , 59 , 61, 62 , 63, 65
Ch-3 : Admission of a Partner – Q No 102, 110 , 115 , 119 , 122 , 125 , 138 , 142

Class XII **Physics Assignment**

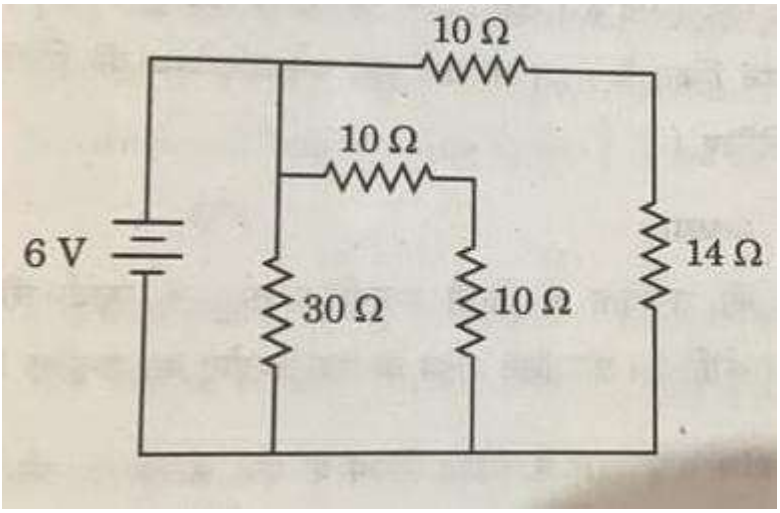
I) Answer the following questions .

1.An electrostatic field line is a continuous curve that is field line cannot have sudden breaks why?
2.Careful measurement of the electric field at the surface of a black box indicates that the net outward plugs through the surface of the box is 8×10^3 Nm^2/C
A)what is the net charge inside boxd?
B)If the net outward flux through the surface of the box were zero could you conclude that there were no charges inside the box why or why not?
3. An electric dipole of dipole moment of 6 x 10-7 C-m is kept in a uniform electric field of 10^4 N/C such that the dipole moment and the electric field are parallel. Calculate the potential energy of the dipole.
4.High current is to be drawn safely from (1) a low-voltage battery, and (2) a high-voltage battery. What can you say about the internal resistance of the two batteries?
5. Define mobility of electrons. Give its SI units.
6.A steady current flows through a wire AB, as shown in the figure. What happens to the electric field and



the drift velocity along the wire? Justify your answer.(fig 1)

7.Consider the circuit shown in the figure. Find the effective resistance of the circuit and the current drawn from the battery. (Fig 2)



8.A resistor of 30 ohm and a capacitor of 250/π microF are connected in series to a 200 V, 50 Hz ac source. Calculate (D) the current in the circuit, and (ii) voltage drops across the resistor and the capacitor. (iii) Is the algebraic sum of these voltages more than the source voltage ? If yes, solve the paradox.

9.What is a physical significance of electric field?

10. **Currents of the order of 0.1A through human body are fatal what causes death: heating due to current or something else?**

11 There is an impression among people that person touching a high power line gets stuck with it. Is that true? Explain.

12.A large number of free electrons are present in metals, why there is no current in absence of potential difference?

13 Can potential difference of a cell be greater than its emf?

14. Are Kirchoff's law applicable to both a.c. and d.c? How?

15.A positive charge +Q is located at a point. What is the work done,if a unit positive test charge is carried once around this charge along a circle of radius r about this point?

16.A charge conductor 'A' is placed on an insulating stand. An uncharged conductor B is brought close to A, as shown in the following figure. How will the charge and potential of conductor A will change?

17.How much work is done in moving a 500 μC charge between two points on an equipotential surface?

18.Draw an equipotential surface for a system, consisting of two charges Q and -Q separated by a distance r, in air.

19.What meaning would you give to the capacitance of a single conductor?

20.How can you protect a sensitive instrument from outside electrical influence?

Class XII **Chemistry Assignment**

1.State Kohlrausch's law of independent migration of ions. Write its one application.

2. (a) Express the relation between conductivity and molar conductivity of a solution held in a cell?

(b) Define the term degree of dissociation. Write an expression that relates the molar conductivity of a weak electrolyte to its degree of dissociation.

3. E°cell for the given redox reaction is 2.71 V.

$Mg(s) + Cu^{2+}$ (0.01 M) → Mg^{2+} (0.001 M) + Cu(s)

Calculate Ecell for the reaction. Write the direction of flow of current when an external opposite potential applied is (i) Less than 2.71 V and (ii) greater than 2.71 V

4. What type of battery is Lead storage battery ? Write the anodE and cathode reaction and the overall cell reaction occurring in the operation of a lead storage battery.

5. Solutions of two electrolytes 'A' and 'B' are diluted. The ^m of 'B' increases 1.5 times while that of 'A' increases 25 times. Which of the two is strong electrolyte? Justify your answer. Graphically show the behaviour of 'A' and 'B'.

6. state Raoult's law for a solution containing volatile components. What is the similarity between Raoult's law and Henry's law.

7. Define the following terms: molarity, molal elevation constant, mole fraction, colligative properties

8. Solution containing 50 g urea (molar mass 60 gram per mole)per litre of solution in water has the same osmotic pressure as a solution of glucose(molar mass 180 gram / mole) in water. Calculate the mass of glucose present in 1 litre of its solution.

9. Why does sprinkling of salt help in clearing snow covered roads in hilly areas? explain the phenomena involved in the process.

10. (a) .On mixing liquid X and Y, volume of the resulting solution decreases. What type of deviation from Raoult's law is shown by the resulting solution? What change is temperature would you observe after mixing liquids X and Y. (b) What happens when we place the blood cells in water? Give reason.

11. (a) What is meant by rate of reaction? Differentiate between average rate and instantaneous rate of reaction.

(b) For a reaction A + B ----→P, the rate is given by Rate = $k[A][B]^2$

(i) How is the rate of reaction affected if the concentration of B is doubled?

(ii) What is the overall order of reaction if A is present in large excess?

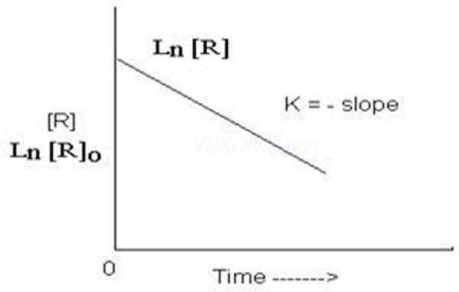
12. (a) What do you understand by the 'order of a reaction'? Identify the reaction order from each of the following units of reaction rate constant :

(i) L^{-1} mol s^{-1} (ii) L mol^{-1} s^{-1}

13.From the graph below

i) Identify the order of reaction.

ii) What will be the unit of rate constant?



14. The activation energy of a reaction is 75.24 kJ/mol in the absence of a catalyst and 50.14 kg / mole with a catalyst. How many times will the rate of reaction grow in the presence of the catalyst if reaction proceeds at 25^0 C? (R = 8.314 $JK^{-1}mol^{-1}$. (Antilog 4.40= 2.512×10^4).

15. A first order reaction is 50% complete in 25 minutes. Calculate the time of 80% completion of the reaction.(log5 = 0.6990)

16. Explain the following term giving a suitable example : Ambidentate ligand , d-d transition

17. (a) What is meant by crystal field splitting energy? On the basis of crystal field theory, write the electronic configuration of d4 in terms of t2g and eg in an octahedral field when (i) $\Delta o > P$ (ii) $\Delta o < P$

(b) Write two limitations of crystal field theory.

18. Using crystal field theory, draw energy level diagram, write electronic configuration of the central metal atom/ion and determine the magnetic moment value in the following :

(a) $[CoF_6]^{3-}$, (b) $[FeF_6]^{3-}$, (c) $[Fe(CN)_6]^{4-}$

19. (i) Give the oxidation state, d-orbital configuration and coordination number of the central metal ion in the following complexes :

(i) $K_3[Co(C_2O_4)_3]$ (ii) $[Cr(en)_2Cl_2$

20. (a) Explain hybridisation in the complex which contains hexacyanoferrate (III) ion.

(b) Based on the valence bond theory describe the formation and nature of hexaaminecobalt (III) chloride.

(c)How will you show that hexafluorocobaltate (III) ion is paramagnetic in nature?

ग्रीष्मावकाश कार्य **कक्षा बारहवीं**

***दिए गए प्रश्नों को हिंदी अभ्यास -पुस्तिका में लिखें।**

पद्य भाग

प्रश्न 1-शीतल पानी में आग के होने का क्या अभिप्राय है ?
प्रश्न 2-दिन जल्दी -जल्दी ढलता है की आवृत्ति से कविता की किस विशेषता का पता चलता है?
प्रश्न3- आत्म -परिचय कविता में परस्पर विपरीत कथनों से कवि क्या कहना चाहता है ?
प्रश्न 4-आशय स्पष्ट कीजिए -मैं और ,और जग और, कहां का नाता ।
प्रश्न 5-कविता के अनुसार बच्चों में साहस और निडरता कब उत्पन्न होती है ?
प्रश्न 6-पतंग किसकी कविता है तथा इस कविता में कवि ने क्या कहा है?
प्रश्न 7- पतंग कविता का मूल भाव स्पष्ट कीजिए।
प्रश्न 8- बच्चों को कपास की तरह कोमल और उनके पैरों को बेचैन क्यों कहा गया है?
प्रश्न 9- कविता के बहाने में सब एक घर कर देने के मायने क्या है ?
प्रश्न 10-कविता के बहाने कविता का केंद्रीय भाव स्पष्ट करें।
गद्य भाग
प्रश्न 11-भक्तिनके जीवन में आई समस्याओं का चित्रण कीजिए ।
प्रश्न 12-भक्तिन ने लेखिका को कौन -सा सारगर्भित लेक्चर दिया ?
प्रश्न 13-भक्तिन लाट -साहब तक लड़ने को तत्पर क्यों थी ?इससे उसके स्वभाव की कौन सी विशेषता उजागर होती है ?
प्रश्न 14-बाजारुपन से क्या तात्पर्य है? किस प्रकार के व्यक्ति बाजार को सार्थकता प्रदान करते हैं अथवा बाजार की सार्थकता किसमें है ?
प्रश्न15- बाजार दर्शन के आधार पर बाजार का जादू चढ़ने और उतरने का आशय स्पष्ट कीजिए।
प्रश्न 16- बाजार के बाजारुपन में पर्चेजिंग पावर की भूमिका को स्पष्ट कीजिए?
प्रश्न 17- जीजी ने इंद्रसेना पर पानी फेंके जाने को किस तरह सही ठहराया ?
प्रश्न 18-काले मेघा पानी दे संस्मरण का मूल भाव स्पष्ट कीजिए।
प्रश्न 19- पहलवान की ढोलक कहानी के आधार पर ग्रामीणों की गरीबी और सहायता पर टिप्पणी कीजिए।
प्रश्न 20- पहलवान की ढोलक पाठ का एक संदेश यह भी है कि लोक कलाओं को संरक्षण दिया जाना चाहिए अपने विचार में लिखिए।

HOLIDAYS HOMEWORK ASSIGNMENT

CLASS XII **SUB : BUSINESS STUDIES**

1. Give two designations of first line managers.

2. Differentiate between specific & general forces.

3. In an organisation, managers need to reconcile differences in approach, timing, effort or interest. At the same time, there is a need to harmonies individual goals and organisational goals.Identify & explain the concept of management highlighted in the above para.

4. Gopal, a manager of A Ltd. believes that the degree of concentration of authority or its dispersal will depend upon the situations and circumstances of each enterprise.

(a) Which characteristic of nature of principles of management is highlighted in the above case?

(b) Which principle of management is highlighted here? .

5. Meena is working as 'Operational Manager' in Tifco Ltd.Name the managerial level at which she is working. Also state two functions is performing.

6. Which technique of Taylor is the strongest motivator technique? Explain.

7. Indian Railways has launched a new broad gauge solar power train which is going to be a path breaking leap towards making trains greener and more environment friendly. The solar power DEMU (Diesel Electric Multiple Unit) has 6 trailer coaches and is expected to save about 21,000 liters of diesel and ensure a cost saving of ₹12,00,000 per year. Identify by quoting the lines from above and explain the objectives of management achieved by Indian Railways in the above case**.**

8. Vivan runs a business consultancy firm in Delhi. His team of management consultants provide specialised services keeping in view the clients' most critical issues and help them to maintain a competitive edge. Vivan recently visited one of his clients, Mr. Ranveer Prakash who is running a garment manufacturing unit and is making losses. On, introspection of the working model of his unit Vivan realised that a lot of wastages is associated with a trial-and-error approach followed by his employees. Therefore, he advised him to replace traditional methods through work study with scientific methods as it would result in saving of human energy as well as wastage of time and materials. But, Vivan really appreciated Mr. Ranveer Prakash for providing good working conditions to his employees and using solar energy in his factory.

Identify & explain the principle of scientific management being referred to in the above paragraph.

9. Distinguish between formal and informal organisation on the basis of authority,flowof communication and origin.

OR

"Successful organizations do not achieve their goals by chance but by following a deliberate process**."** Identify the process highlighted here.Explain four importance of it.

10. Seema is one of the most successful managers of her company, 'Ziva Ltd.' She uses her creativity and initiative in handling challenging situations at work. The knowledge gained by her during her student days at a renowned management institute as well as through her

observation and experience over the years is applied by Hema in a skillful manner in the context of the realities of a given situation. She often reads books and other literature in various fields of management to keep her knowledge updated.

(i) An aspect of the nature of management is being highlighted in the above description. Identify the aspect.

(ii) Explain any three features of the aspect identified in part (i).

11. Explain the significance of principles of management.

OR

Explain the process of Planning.

12. Naman and Govind after finishing their graduation under vocational stream decided to start their own travel agency which will book Rail Tickets and Air Tickets on commission basis. They also thought of providing tickets within ten minutes through the use of internet. They discussed the idea with their Professor Mr. Mehta who liked the idea and suggested them to first analyse the business environment which consists of investors, competitors and other forces like social, political etc. that may affect their business directly or indirectly. He further told them about the technological improvements and shifts in consumer preferences that were taking place and hence they should be aware of the environmental trends and changes which may hinder their business performance. He emphasised on making plans keeping in mind the threat posed by the competitors, so that they can deal with the situation effectively. This alignment of business operations with the business environment will result in better performance.

(i) Identify and state the component of business environment highlighted in the above Para.

(ii) State any two features of business environment as discussed by Professor Mehta with Naman and Govind.

(iii) Also state two points of importance of business environment as stated by Professor Mehta in the above.

ASSIGNMENT ON POLITICAL SCIENCE CLASS XII

1. List three challenges to democracy in Nepal.
2. What was the economic condition of the Soviet union after the second world war?
3. Explain the meaning of the term glassnost.
4. What do you understand by Marshall plan?
5. Explain
1) BRICS
2)SAARC
3)ASEAN
4)E.U
6. How are the external powers influencing bilateral relation in south Asia? Take any one example to illustrate your points.
7. What is veto power? Which member nation of the UN Security council enjoy the special power and why?
8. India has spotted the restructuring of the UN on several grounds justify the statement with three suitable argument.
9. Describe the three new criteria that have been proposed for new permanent members of the UN Security council.
10. What do you mean by South Asia?
11. Explain any two reasons for the popular struggle in East Pakistan (now Bangladesh) against West Pakistan during 1971
12. What are the main functions of UNESCO and UNICEF?
13. Assess any six consequences of the partition of British India in 1947.
14. What was the task of the state reorganisation commission? What was its most salient recommendation?
15. Explain the role played by sardar Patel in the unification of princely states in India.
16. Write an essay on Pakistan and democracy.
17. What was the short therapy ?was this the best way to make a transition from communism to capitalism?
18. Give any four arguments to prove that the Soviet union had become stagnant in an administrative and political sense.
19. Analyse India's changing relationship with post communist Russia.
20. Write any four reasons for ethnic conflict in Sri Lanka.