ADARSH PUBLIC SCHOOL
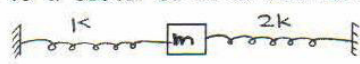## HOLIDAYS' ASSIGNMENT
CLASS - XI

ENGLISH

1. Water is precious and each one of us must stop its wastage to avoid its scarcity in the near future. Prepare a poster requesting people of your colony to adopt means to save water, prevent its wastage etc. You are Rama / Rohan of Ahimsa Vihar, Saket.

2. You read an article about the proposed garbage segregation programme in the neighbourhood, which is set to begin from next week. Draft a poster telling your neighbourhood about the programme and the value of garbage segregation. You are Veenayak / Revati from Green Public School, Dwarka.

3. One must have a clear cut and realistic goal in life. But simply having a goal is not enough. We must have fire in the belly to achieve it. Write an article in 150-200 words on the topic, (a) 'My Goal, My Plans'. (b) Importance of hardwork & punctuality in a student's life.

4. Write a debate in 150-200 words either for / against the motion, (a) 'Mobile Phones are proving to be a curse for students' (b) Capital Punishment should be abolished.

5. Draft suitable classified advertisements for the following.
   a) Sale of Car
   b) Matrimonial
   c) Sale of Flat
   d) Missing Person
   e) To Let

6. Attempt any 5 passages of Note Making and write a summary of each of them.

7. Write a letter to the Editor of a National Daily highlighting the following problems.
   a) Noise Pollution
   b) Road Rage
   c) Effects of Bullying
   d) Brain Drain
   e) Condition of Public Parks.

MATHS

Solve the following questions:-

1. If a, b, c are in G.P., x is the A.M. between a and b and y is the A.M. between b and c, then prove that (i) $\frac{a}{x} + \frac{c}{y} = 2$ (ii) $\frac{1}{x} + \frac{1}{y} = \frac{2}{b}$

2. A.M. between two distinct positive numbers is n times the G.M. between them. Show that the numbers are in the ratio $(n+\sqrt{n^2-1}) : (n-\sqrt{n^2-1})$.

3. Insert 4 geometric means between 3 and 96. Also show that their product is the 4th power of the G.M. between them.

4. Find the derivative of $\sqrt{\tan x}$ from first principle.

5. Differentiate $\frac{(x+2)(1-3x)}{2x+1}$, $x \neq -\frac{1}{2}$ w.r.t.x.

6. Differentiate $(1+2\tan x)(5+4\cos x)$ in two different ways and verify that the two results are same.

7. If $y = \sqrt{\frac{1-x}{1+x}}$, find the value of $(1-x^2)\frac{dy}{dx} + y$, $-1 \leq x < 1$.

8. Complete activities 8, 9 and 10 in the activity file.

9. Do all examples of Ch-16 Probability.

PHYSICS

1. The time period of a body executing SHM is 1sec. After how much time will its displacement be $\frac{1}{\sqrt{2}}$ of its amplitude?

2. Two springs of force constants K and 2K are connected to a block of m as shown in the figure. What is the frequency of oscillation of this block?

3. A wire stretched between two rigid supports vibrates in its fundamental mode with a frequency 45Hz. Length of wire between the supports is 1m and has mass of 50g. What is (a) the speed of transverse wave on the string and (b) the tension in the string. (c) the wavelength of third harmonic possible in the same string.

4. A train moves towards a stationary observer with speed 34m/s. The train sounds a whistle and its frequency registered by the observer is v_1. If the train's speed is reduced to 17m/s, the frequency registered is v_2. If the speed of sound is 340m/s, then find the ratio $\frac{v_1}{v_2}$.

5. Complete the NCERT Back Exercise of chapter Oscillations and Waves in the assignment register.

CHEMISTRY

1. Balance the following redox reactions by ION-ELECTION method:
   a) $NO_3^- + Bi(s) \longrightarrow Bi^{+3} + NO_2$ (acidic medium)
   b) $MnO_4^- + SO_3^{-2} \longrightarrow Mn^{+2} + Br_2$ (acidic medium)
   c) $P + OH^- \longrightarrow PH_3 + H_2PO_2^-$ (basic medium)
   d) $Zn + NO_3^- \longrightarrow Zn^{+2} + NH_4^+$ (basic medium)

2. Is it possible to store $CuSO_4$(aq.) in a
   a) Zinc vessel   b) Silver vessel   c) nickel vessel
   Given $E^o_{cu^{+2}/cu} = +0.34V$, $E^o_{zn^{+2}/zn} = -0.76V$, $E^o_{Ag^+/Ag} = +0.80V$, $E^o_{Ni^{+2}/Ni} = -0.13V$
   Justify your answer.

3. Write the mechanism of PEROXIDE EFFECT followed by HBr while its addition to an unsymmetrical alkene.

4. Write the mechanism of Friedel Craft alkylation and acylation reaction of benzene.

BIOLOGY

1. What are the major transport mechanisms for CO_2? Explain.
2. Distinguish between
   a) IRV and ERV
   b) Inspiratory Capacity and Expiratory Capacity.
   c) Vital capacity and Total lung capacity.
3. Sino-atrial node is called the pacemaker of our heart. Why?
4. Define a Cardiac cycle and the cardiac output.
5. Draw a standard ECG and explain the different segments in it.
6. Describe the process of digestion of protein in stomach.

HINDI

1. निम्नलिखित साहित्यकारों का साहित्यिक परिचय दीजिए:

   क) धूमिल   ख) श्रीकांत वर्मा   ग) नागार्जुन   घ) नरेंद्र शर्मा   ड) महादेवी वर्मा

2. पत्र लेखन

   क) किसी दैनिक समाचार -पत्र के संपादक को पत्र लिखकर अपने शहर की बसों की बिगड़ती हालत और कुव्यवस्था पर पत्र लिखिए ।

   ख) दूरदर्शन पर प्रसारित होने वाले किसी कार्यक्रम की समीक्षा करते हुए दूरदर्शन निर्देशक को पत्र लिखिए ।

3. निम्नलिखित पर अपने विचार अनुच्छेद के रूप में लिखिए ।

   क) वाह! क्या मेला था ।   ख) दिल्ली की बदलती तस्वीर   ग) शीत ऋतु में पर्वतीय सौंदर्य

   घ) विविधता में एकता: भारत की विशेषता

4. प्रदत्त परियोजना कार्य पूर्ण कीजिए ।

HISTORY

1. Collect any 5 most important historical changes that took place in year 2019.

2. Complete the given project.

3. Do the following assignment in the register:-

   a) Define the term native and settler

   b) What do you know about Wampum belts.

   c) Which names were given by Europeans to the countries of the New World?

   d) Where did John Cabot reach?

   e) Who made the historic declaration regarding slavery?

   f) Discuss two reasons to show that Gold rush proved to be blessing for the U.S.A.

   g) How did the native people lose their land?

   h) When was America discovered?

   i) What do you know about Red Indians?

   j) Define the concept of 'Aborigines'.

ACCOUNTANCY

1. Complete the given Comprehensive Problem by Journalising the transactions in Journal Book, posting them into Ledger Accounts, drawing a Trial Balance and preparing Trading Account, Profit & Loss Account and Balance Sheet.

2. Do Q.13, 14, 18, 23 and 25 from Short Answer Type Questions in the Chapter – Preparation of Financial Statements with adjustments.

3. Attempt the 'Viva Questions' given in assignment.

4. Revise the topics covered till date.

5. Practice Adjustments in Preparation of Financial Statements. Do Question No. 2, 5, 8 and 10 from Chapter-19.

BUSINESS STUDIES

1. Complete Business Studies project files.

2. Attempt back Q/Ans. from text book of Chapter-10 i.e. Internal Trade.

3. Make a list of 5 companies engaged in International Business and highlight their modes of entry into International Business along with their success stories.

ECONOMICS

1. Do 5 Questions each of the topics given below in all three series i.e. (Individual, discrete & continuous)

   - Karl Pearson correlation
   - Rank correlation
   - Standard deviation

2. Revise UNIT-3 Producer's behaviour and supply and prepare for the test to be held on 17.01.20.

3. Bring Project files for review.

4. Prepare a list of formulas (all statistics chapters) on an A-4 sheet as a revision tool and submit on 17th January 2020.

PSYCHOLOGY

1. Write an introduction to psychological testing in practical file.

2. Complete Psychology project files.

3. Revise the topics covered till date.

4. Revise chapter-4 Human development and prepare for the test to be held on 16.1.20

POLITICAL SCIENCE

1. Write about the Ayodhya incident and the final Ayodhya Verdict of the Supreme Court.

2. Article 370 has transformed the position of Jammu and Kashmir. Justify.

3. What is CAB and CAA?

4. Write about the recent election of Legislative assembly in Jharkhand.

5. Explain about the different Contemporary challenges of the world.

6. Critically justify the cartoon given in Page No. 131 of Political theory with reference to the meaning of Peace.

INFORMATICS PRACTICES & COMPUTER SCIENCE

1. Revise the chapters – Text Manipulation, Lists & Dictionaries.

2. Do the following Programs in Practical file.

   a) Write Python Script to do the following on a list of numbers.

      - Display the alternate values
      - Display maximum & minimum values

- Sort the list in descending order.
- Find an element's position in list.

b) Write menu driven program using Dictionary with Emplno. & Salary as key : value pair to do the following-

- Search for an Employee no and display salary
- Display the list of Employee Numbers.
- Update the salary of a given Employee no.
- Display all key : value pairs.

c) Write menu driven Program to perform following on strings-

- Display the string in Reverse
- Perform Palindrome checle
- Count occourances of letter 'a' in the string
- Count no. of words in string.

d) Write menu driven Program to do following on a number:

- Find sum of digits
- Perform Palindrome check
- Find Even / Odd
- Replicate the no. for 5 times.

WISHING YOU A VERY HAPPY & PROSPEROUS NEW YEAR !