PRATAP
INTERNATIONAL SCHOOL
POCKET -2, SEC- 24, ROHINI, NEW DELHI

HOLIDAY HOMEWORK

CLASS - X (2019-20)

Life is all about climbing mountains and fording streams... Arouse in yourself the desire to reach the pinnacle of perfection. Make the most of yourself by fanning the tiny, inner sparks of possibilities into flames of opportunity. Act now, value every moment for your dreams can only become a reality when action is taken towards its achievement.

Note :- All work to be done in the respective fair notebooks/registers.

ENGLISH

TO DO:-

1. Read the novel –A train to Pakistan

By- Khushwant Singh

2. Study the Novel- A Tale of two cities

By- Shakespeare

3. Analyze the novel- Little Women

Or

Pride and Prejudice

4. Learn a poem – The Frog and the Nightingale

Or

The Melon City

By- Vikram Seth

A.Write the summary of the above 4 Literary Pieces in an interleaved notebook.

B.Paste pictures to support the document.

Please ensure that your work is up to the mark. Use only fevistick.

DON'T WORRY BE HAPPY

MATHEMATICS

1. Using Euclid's division algorithm find the largest number that divides 1251, 9377 and 15628 leaving remainders 1, 2 & 3 respectively.

2. In a seminar, the number of participants in Hindi, English and Mathematics are 60, 84 and 108 respectively. Find the minimum number of rooms required if in each room the same number of participants are to be seated and all of them being on the same subject.

3. Find the quadratic polynomial whose zeroes are $\frac{3-\sqrt{3}}{5}$ and $\frac{3+\sqrt{3}}{5}$.

4. If α and β are the zeroes of the quadratic polynomial $f(x)=x^2-3x-2$ then find a quadratic polynomial whose zeroes are $\frac{1}{2\alpha+\beta}$ and $\frac{1}{2\beta+\alpha}$.

5. Find all the zeroes of the polynomial $2x^4-9x^3+5x^2+3x-1$ if two of its zeroes are $2+\sqrt{3}$ and $2-\sqrt{3}$.

6. If the polynomial $6x^4+8x^3+17x^2+21x+7$ is divided by another polynomial $3x^2+4x+1$ the remainder comes out to be $ax+b$, find a and b.

7. What must be subtracted from $4x^4+2x^3-2x^2+x-1$ so that the resulting polynomial is exactly divisible by x^2+2x-3.

8. Aftab tells his daughter ,"seven years ago, I was seven times as old as you were then.Also, three years from now, I shall be three times as old as you will be."Represent this situation algebraically and graphically.

9. On selling a T.V. at 5% gain and a fridge at 10% gain shopkeeper gains Rs 2000. But if he sells the T.V. at 10% gain and the fridge at 5% loss, he gains Rs 1500 on the transaction . Find the actual price of TV and fridge.

10. A taken 3 hours more than B to walk a distance of 30 km. But if A doubles his speed, he is ahead of B by 1 and half hours. Find their original speed.

11. Solve the following pair of linear equations:

i) px+py= p-q

qx-py=p+q

ii) $\frac{x}{a}-\frac{y}{b}=0$

ax+by=a^2+b^2

iii)(a-b)x+(a+b)y=$a^2-2ab-b^2$

(a+b)(x+y)=a^2+b^2

iv) 152x-378y= -74

-378x+152y= -604

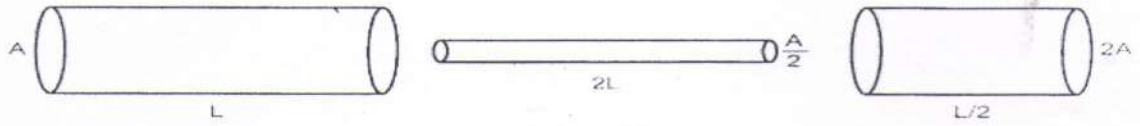
12. 2 women and 5 men can together finish an embroidery work in 4 days, while 3 women and 6 men can finish it in 3 days.Find the time taken by 1 woman alone to finish the work, and also that taken by 1 man alone.

13. Ritu can row downstream 20 km in 2 hours, and upstream 4 km in 2 hours. Find her speed of rowing in still water and the speed of the current.

SCIENCE

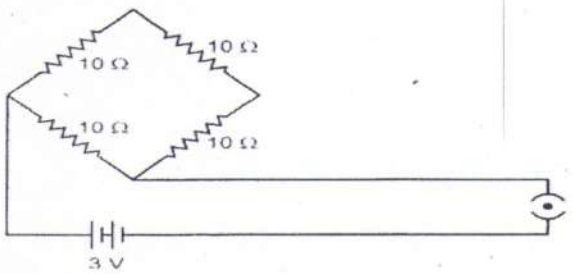
PHYSICS

1. Define Electric Power. Derive its expression. Write the relation between Power, Current, Potential Difference, and Resistance.
2. An electric bulb is connected to a 220 V generator. The current is 0.5 A. what is the power of the bulb?
3. How much energy is dissipated in 10 minutes when a current of 4 A is flowing through a potential drop of 60 V?
4. Which uses more energy, a 250 W television set in 1 hour or a 1200 W toaster in 10 minutes?
5. An electric refrigerator rated 400 W operates 8 hours per day. What is the cost of energy to operate it for month at Rs. 3 per kWh?
6. An electric heater of resistance 8 Ω draws 15 A from the service mains for 2 hours. Calculate the rate at which heat is developed in the heater.
7. The figure below shows three cylindrical copper conductors along with their face areas and lengths. Discuss in which geometrical shape the resistance will be highest.



(i) ***(ii)*** ***(iii)***

8. Two devices of rating 44 W, 220 V and 11 W, 220 V are connected in series. The combination is connected across a 440 V mains. The fuse of which of the two devices is likely to burn when the switch is ON? Justify your answer.
9. You have two electric lamps having rating 40 W; 220 V and 60 W; 220 V. Which of the two has a higher resistance? Give reason for your answer. If these two lamps are connected to a source of 220 V, which will glow brighter?
10. Find the current drawn from the battery by the network of four resistors Shown in the figure.



CHEMISTRY

Q1) Balance the following chemical equations:

a) $Al + HCl \rightarrow AlCl_3 + H_2$
b) $MnO_2 + Al \rightarrow Mn + Al_2O_3$
c) $H_2S + SO_2 \rightarrow S + H_2O$
d) $Cu + NH_3 \rightarrow Cu + N_2 + H_2O$.
Also identify the oxidising and reducing agents.

Q2) Give reasons for the following:
(a) Respiration considered an exothermic reaction.
(b) Copper vessel lose shine when exposed to air.
(c) Potato chips manufacturers fill the packet of chips with nitrogen gas.
(d) We store silver chloride in dark coloured bottles.

Q3) What types of reactions are represented by following :
(a) $2Ca + O_2 \rightarrow 2CaO$
(b) $Pb + CuCl_2 \rightarrow PbCl_2 + Cu$
(c) $2FeSO_4 \rightarrow Fe_2O_3 + SO_2 + SO_3$
(d) $Na_2SO_4 + BaCl_2 \rightarrow BaCl_2 + 2NaCl$

Q4) Write down the balanced chemical equation for the following :
(a) Silver chloride is decomposed in presence of sunlight to give silver and chlorine gas.
(b) Calcium oxide reacts with water to give lime water.
(c) Dilute hydrochloric acid is added to copper oxide to give green coloured copper chloride and water.
(d) Solution of barium chloride and sodium sulphate in water reacts to give insoluble barium sulphate and solution of sodium chloride.

Q5) When metal X form a water soluble salt XNO_3. When an aqueous solution of XNO_3 is added to common salt solution, then a white precipitate of compound Y is formed along with sodium nitrate solution. Metal X is said to be best conductor of electricity and it does not evolved hydrogen when put in dilute hydrochloric acid.

a) What is metal X?
b) What is salt XNO_3?
c) Name the compound Y.
d) Write chemical equation of the reaction which takes place on reacting XNO_3 solution and common salt solution.
e) What kind of chemical reaction illustrated by the above equation.

BIOLOGY

(i) (a) Nutrition is important for all living organisms. Justify giving <u>three</u> reasons.
(b) If the leaves of a herbaceous plant are removed, will the plant still do photosynthesis? Yes/No. Why?

(ii) (a) What do you understand by emulsification of fat?
(b) Diagrammatically explain nutrition in Amoeba.

(iii) In which part of the cell does glucose breakdown into pyruvate. Trace the breakdown of Pyruvate in lack of O_2. In which cell of human body does it take place? Name the energy currency of the cell.

(iv) Differentiate between:

(a) Aerobic and Anaerobic respiration.
(b) Terrestrial and Desert plants in terms of photosynthesis.

(v) (a) Draw the digestive system. Explain the roles of glands associated with it.
(b) Draw the respiratory system showing clearly the path of air from atmosphere to the lungs.

SOCIAL SCIENCE

ECONOMICS

(i) Based on the table given below, discuss:
(a) Is Maharashtra more developed than Kerala?
(b) Is Maharashtra more developed than Bihar?

STATE	Per Capita Income (in ₹)	Infant Mortality Rate (Per 1000)	Literacy Rate (%)	Net Attendance Ratio
Maharashtra	1,04,000	25	82	64
Kerala	88,500	12	94	78
Bihar	27,200	43	62	35

(ii) Assume that there are four families in a country. The average per capita income of these families is ₹10000. If the income of three families is ₹8000, ₹14000 and ₹6000 respectively, find out the income of the fourth family?
(iii) In Tamil Nadu, 75% of the people living in rural areas use a ration shop, whereas in Jharkhand only 8% of rural people do so. Where would people be better off and why?
(iv) Why do we use averages? Are there any limitations to their use? Illustrate with own examples related to development?

CIVICS

(i) Differentiate between federal and unitary form of government.
(ii) What are the two routes of forming a federation? Give examples.
(iii) Briefly describe how the constitution of India has provided a three-fold distribution of legislative power of the government.
(iv) What are the steps taken in 1992 for decentralization of power in India?
(v) Explain the composition of the local government at the rural and urban level of India.

GEOGRAPHY

(i) Classify resources on the basis of status of development and explain them with examples.
(ii) Define the types of fallow land.
(iii) Net Sown Area is over 80% in some states and less than 10% in some states. Name the states in both the category and give reasons for this variations.
(iv) The areas where water is available in sufficient quantity, they also suffer with the problems of water scarcity. What are the reasons for the same?
(v) Why do we need to conserve and manage our water resources?

हिन्दी

1. पढाए गए सभी पाठों का पनः अध्ययन करें।
2. विशेषण,क्रिया, क्रिया विशेषण के पद परिचय दो- दो उदाहरण सहित लिखिए
3. रस की परिभाषा ,उनके प्रकार व स्थायी भाव लिखिए
4. पत्र (औपचारिक) – विद्यालय परिसर में भाषण प्रतियोगिता का आयोजन कराने हेतु प्रधानाचार्या को पत्र लिखिए।
5. अनुच्छेद–लेखन – "बच्चों में बढ़ती धूम्रपान की समस्या"
नोट : समस्त कार्य व्याकरण कॉपी में करें।