



HERITAGE CHILDREN ACADEMY

(Senior Secondary School Affiliated to CBSE, New Delhi)
NH-24, JALIF NAGLA TEH. MILAK DISTT. RAMPUR (U.P)

HOLIDAY HOMEWORK

CLASS :- X

Let's Pen The Pandemic : Covid - 19

“Education is the passport to the future, for tomorrow belongs to those who prepare for it today.”

GENERAL INSTRUCTIONS TO BE FOLLOWED WHILE DOING

HOLIDAY HOMEWORK:

- It is compulsory to attempt each subject.
- Summer vacations are going to be started from June 10 to 25, 2020.
- Submit your assignments to Subject teachers as the school reopens.
- Holiday homework should be done as per the given instructions
- Label properly the name, class roll no and subject.
- The work will be assessed for the neat handwriting, presentation, creativity and submission of the work on time.

ENGLISH

Q 1- Collect 25 new words and 25 phrases to form a dictionary. Write their meanings and make 2 sentences of each word and phrase.

Examples:-

1. Beware

Meaning: Careful

Sentence 1: Beware of thieves as it is dark outside.

Sentence 2: Beware of falling rocks from the top of the mountains.

2. Dirt cheap

Meaning: low price

Sentence 1: They're always selling off stuff like that dirt cheap.

Sentence 2: The auctioneers let us have the stuff dirt cheap.

Q 2- You are Jenny/john head of ABC hospital, Naraina New Delhi. Suddenly the covid19 pandemic broke out in your city. You need some safety stuff to protect your staff from

this rapidly spreading disease. Place an order for safety equipment [PPE, respiratory, surgical masks, gowns, and gloves] that you wish to purchase for your hospital. Write a letter to the manager, M/S GTB Surgical & Co, Preet vihar to send items ASAP with a discount.

Q 3- Watch these Hollywood movies and try to write a short summary of these movies.

- 1- POLAR EXPRESS
- 2- HOME ALONE 1
- 3- HOTEL TRANSYLVANIA a

HINDI

ग्रीष्कालीन अवकाश कार्य

प्रधानमंत्री श्री नरेन्द्र मोदी द्वारा लॉकडाउन के दौरान दिए गए संदेशों की एक फाइल तैयार कीजिए। संदेशों का प्रारूप अपने पाठ्यक्रम के अनुसार लिखा जाए।

MATHEMATICS

Q.1 Prove that $\sqrt{2} + \sqrt{3}$ is irrational.

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

Q.3 Prove that one and only one out of n , $n+2$ and $n+4$ is divisible by 3, where n is any positive integer.

Q.4 If the remainders on division of $x^3 + 2x^2 + Kx + 3$ by $x-3$ is 21 find the quotient and the value of K . Hence find the zeroes of the cubic polynomial $x^3 + 2x^2 + Kx - 18$.

Q.5 Given that $\sqrt{2}$ is a zero of the polynomial $6x^3 + \sqrt{2}x^2 - 10x - 4\sqrt{2}$. Find its other two zeroes.

Q.6 For which values of p and q , will the following pair of linear equations have infinitely many solutions? $4x + 5y = 2$ and $(2p+7q)x + (p+8q)y = 2q - p + 1$.

Q.7 solve the pair of linear equations:-

$$21x + 47y = 110 \quad \text{and} \quad 47x + 21y = 162$$

Q.8 Draw the graphs of the pair of linear equations $x - y + 2 = 0$ and $4x - y - 4 = 0$. Calculate the area of the triangle formed by the lines so drawn and the x -axis.

Q.9 Find the values of x and y in the following rectangle



Q.10 If $x+1$ is a factor of $2x^3 + ax^2 + 2bx + 1$, then find the values of a and b given that $2a - 3b = 4$.

Q.11 The age of the father is twice the sum of the ages of his two children. After 20 years, his age will be equal to the sum of the ages of his children. Find the age of the father.

Q.12 Jamila sold a table and a chair for ₹ 1050, thereby making profit of 10% on the table and 25% on the chair. If she had taken a profit 25% on the table and 10% on the chair she would have got ₹ 1065. Find the cost price of each.

Q.13 A railway half ticket costs half the full fare, but the reservation charges are the same on a half ticket as on a full ticket. One reserved first class ticket from station A to B costs ₹ 2530. Also one reserved first class ticket and one reserved first class half ticket from A to B costs ₹ 3810. Find the full first class fare from station A to B and also the reservation charges for a ticket.

Q.14 Had Agita scored 10^{more} marks in her maths test out of 30 marks, 9 times these marks would have been the square of her actual marks. How many marks did she get in the test?

Q.15 A train travels at a certain average speed for a distance of 63 km and then travels a distance 72 km at an average speed of 6 km/h more than its original speed. If it takes 3 hours to complete the total journey, what is its original average speed?

Q.16 A train travelling at a uniform speed for 360 km, would have taken 48 minutes less to travel the same distance if its speed were 5 km/h more. Find the original speed of the train.

Q.17 The sum of the first three terms of an AP is 33. If the product of first and the third ~~th~~-term exceeds the second term by 29, find the AP.

Q.18 Find the sum:

(i) $\left(4 - \frac{1}{n}\right) + \left(4 - \frac{2}{n}\right) + \left(4 - \frac{3}{n}\right) + \dots$ upto n terms.

(ii) $\frac{a-b}{a+b} + \frac{3a-2b}{a+b} + \frac{5a-3b}{a+b} + \dots$ to 11 terms.

Q.19 If sum of first 6 terms of an AP is 36 and that of the first 16 terms is 256, find the sum of first 10 terms.

Q.20 solve the equation:

$$1 + 4 + 7 + 10 + \dots + x = 297$$

Q.21 The ratio of the 11th term to the 18th term of an AP is 2:3. Find the ratio of the 5th term to the 21th term and also the ratio of the ~~sum~~ sum of the first five terms to the sum of the first 21 terms.

Q.22 Show that the sum of an AP whose first term is a , the second term b and the last term c is equal to

$$\frac{(a+c)(b+c-2a)}{2(b-a)}$$

Q.23 If the midpoint of the line segment joining the points $A(3, 4)$ and $B(k, 6)$ is $P(x, y)$ and $x + y - 10 = 0$, find the value of k .

Q.24 Find the values of k , if the points $A(k+1, 2k)$, $B(3k, 2k+3)$ and $C(5k-1, 5k)$ are collinear.

Q.25 Find the ratio in which the line $2x + 3y - 5 = 0$ divides the line segment joining the points $(8, -9)$ and $(2, 1)$. Also find the coordinate of the point of division.

SOCIAL SCIENCE

HOLIDAY ASSIGNMENT SOCIAL SCIENCE CLASS 10 PROJECT

WORK This is the Board Exam Activity and you all have to do individually evaluation will be done on the basis of your performance and presentation. Dear class 10 Students As you know that in class IX you have already made one project in Social Science in the same way in this 10 class once again you have to develop a Project Report and you have to choose any one topic from the following giving here these all three topics are prescribed by the CBSE FOR SESSION :2020-2021 (1)CONSUMER AWARENESS (2) SOCIAL ISSUES (3)SUSTAINABLE DEVELOPMENT your project report will maximum of 10 pages we are sharing one video related to your project work for your assistance you can go through the Books ,Newspaper ,Magazine or other relevant sources to make your project more attractive and impressive.

Project on Sustainable Development

<https://youtu.be/YfPTl1rpva0>

PHYSICS

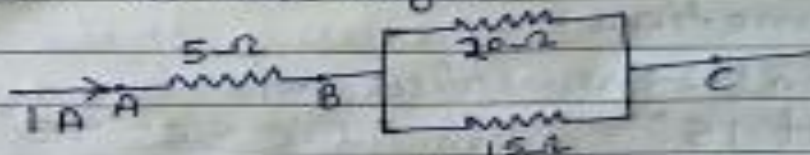
CLASS X (PHYSICS)

Holiday Assignment

DATE: _____

PAGE: _____

- ① Three resistors are connected as shown in the figure

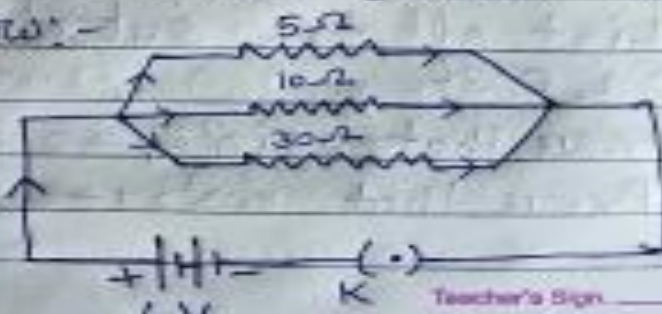


Through the resistor $5\ \Omega$, a current of 1 A is flowing.

- What is the current through the other two resistors?
 - What is the p.d. across AB and AC.
 - What is the total resistance?
- ② Two resistors, with resistances $5\ \Omega$ and $10\ \Omega$ respectively are to be connected to a battery of 6 V . Find
- minimum current flowing
 - maximum current flowing
 - How will you connect the resistance in case (i) and (ii)?

- ③ (a) With the help of a diagram, derive the formula for the resultant resistance of three resistors connected in series.

- (b) For the circuit shown in the diagram below:-



Teacher's Sign _____

Calculate:

- (i) the value of current through each resistor.
- (ii) the total current in the circuit.
- (iii) the total effective resistance of the circuit.

④ A 2 kW heater, a 200 W TV and three 100 W lamp are all switched on from 6 p.m. to 10 p.m. What is total cost at ₹ 5.50 per kWh?

⑤ (a) State and explain Joule's law of heating.

(b) A resistance of $40\ \Omega$ and one of $60\ \Omega$ are arranged in series across 220 V supply. Find the heat produced by this combination of resistances in half a minute.

⑥ What is a solenoid? Draw a sketch to show the magnetic field pattern produced by a current-carrying solenoid.

⑦ (i) State and explain Maxwell's right-hand thumb rule.

(ii) State Fleming's left-hand rule.

⑧ What is an electric motor? With the help of a labelled diagram, describe the working of a simple electric motor.

9) (a) What is a fuel? Give 5 examples of fuels.

(b) What are the characteristics of an ideal fuel?

10) (a) What is biogas? Name the major component of biogas.

(b) What are the raw material used for making biogas?

(c) Describe the construction and working of a biogas plant with the help of a diagram.

(d) Write any two uses of biogas.

(e) Write any two advantages of using biogas.

CHEMISTRY

Answer the following questions:-

Q1. Give two characteristics of the chemical reaction which occur on adding potassium iodide solution to the lead nitrate solution.

Q2. Give one example each of a chemical reaction characterised by-

1. Evolution of gas
2. Formation of a precipitate
3. Change in temperature

Q3. When a green iron salt is heated strongly its colour finally changes to brown and odour of burning sulphur is given out

(a) Name the iron salt

(b) Name the type of reaction that takes place during the heating of iron salt.

Q4. What happens when an acid reacts with a metal hydrogen carbonate? Write equation of the reaction inv. involved.

Q5(a) Why do acids not show acidic behaviour in the absence of water?

(b) Why does an aqueous solution of an acid conduct electricity?

Q6. What happens when Zinc granules are heated with sodium hydroxide solution? Write equation to the reaction which take place.

Q7. Describe how washing soda is produced starting from sodium chloride? Write equations of all the reactions involved.

Q8. What is meant by saying that the metals are malleable and ductile? Explain with examples.

Q9. Explain Calcination and roasting by giving one example.

Q10(a) Name two metals which are found in nature mainly in the free state.

(b) Define the term (i) Mineral (ii) ore (iii) Gangue

(c) Write reactivity series.

BIOLOGY

1- To make a working project related to covid 19 by using waste material.

2 - Write at least 10 question answer from ch 1 that is Life processes.

Ch 2) That is control and co-ordination.

Ch3) That is how do organism reproduce.

Work out

Students will take two bowls and hang them in the balcony of their house. Everyday.

They need to fill them with grains and water respectively to feed the birds.

Note : This activity will help the students to connect to the nature and they will develop a sense of compassion. Visual and Performing Arts



DP