



MOHINDER SINGH MEMORIAL PUBLIC SCHOOL

SESSION : (2020-21)



Dear Parents,

The global pandemic corona virus or covid-19 has caused a road bump in children's educational journey. While students are thrilled at the extended summer vacation. During summer vacations, children usually divert their energy in outdoor activities and games. However, a mass lockdown in the country has forced everyone to stay at home. It is the only way to keep our kids' Safe 'but summer vacation do not just sit idle and watch television. So, let's your child's creativity flourish by indulging them in some simple and yet fun filled activities.

- Parents are advised to guide motivate and facilitate their children to complete their holidays homework.
- Working together will help your child build confidence ,learn to reason and develop skills for her /his education
- Encourage them to spend time with parents and grandparents
- Play indoor games with your child.

General instructions for homework

- ✓ Take a printout of the holidays homework and do the work as per teachers' instruction.
- ✓ Maintain a beautiful decorated folder for holidays homework with properly labeled students name, class, roll no and subject.
- ✓ Parents can be facilitator at home but the work should be done independently by the child in his/her own handwriting.
- ✓ Decorate the cover page beautifully
- ✓ Well organized and beautiful work will be the subject of appreciation.

WISH YOU A SAFE AND HAPPY HOLIDAYS

By Principal

ENGLISH

1. Read more about the following 'Great Personalities' and write their autobiography-

- Nelson Mandela
- 2. Anne Frank
- 3. Helen Keller.

2. Write all your 'First Flight' poems names with their writers, main characters names in a form of table.

3. Write a beautiful 'Letter to God' asking him to help you in an imaginary difficult situation. (word limit:180)

4. Make a beautiful and informative English Project-'TLM' on any grammar topic with using different materials.

5. Compose a poem beautifully on 'My Father' specially for your father on Fathers Day.

6. Write a story on the title 'Work Delayed is Work Undone'

BIO

1. Do NCERT questions of the chapter 1 and 2 in separate NB.

2. Prepare a project report on any one of the following topics—

- a) Hypertension – its causes and consequences.
- b) Heart Transplant Techniques-its story in India.
- c) Nephrons and their role in our body.

OR

3. Make a model of reflex arc discovering directions of flow of signal.

CHEMISTRY

1. Prepare a detailed report on types of chemical reaction(10 each).

2. Using a natural indicator(turmeric) categories the naturally occurring substances as acid, base and neutral compound:-

Water, milk, lemon juice , cold drink, mustard oil, curd.

3. Prepare a detailed report on natural and man made acids.

4. Prepare a report on 'The Medicine ' which is used in prevention of **Corona Virus**.

प्रदूषण पर निबंध - Pollution Essay in Hindi

Hindi writing Skills - Pollution Essay in Hindi
- प्रदूषण पर निबंध. इस लेख में हम प्रदूषण के प्रमुख
कारण, प्रभाव, रोकने के उपाय पर विस्तार पूर्वक चर्चा
करेंगे.

Essay on Discipline in Hindi - अनुशासन पर निबंध

Hindi writing Skills - Essay On Essay on Discipline in Hindi - अनुशासन पर निबंध. सभी को ज्ञात है कि अनुशासन ही सफलता की कुंजी है।

अपठित गद्यांश

अपठित का अर्थ होता है जो पढ़ा नहीं गया हो, अर्थात् जो पाठ्यक्रम की पुस्तक से नहीं लिया जाता है। पद्यांश व गद्यांश का विषय कुछ भी हो सकता है। इसमें सम्बंधित प्रश्न पूछे जाते हैं, इससे विद्यार्थियों का मानसिक व्यायाम होता है और उनके साहित्यिक ज्ञान-क्षेत्र का विस्तार भी होता है। साथ ही विद्यार्थियों की व्यक्तिगत योग्यता एवं अभिव्यक्ति क्षमता भी बढ़ती है।

विधि:-

अपठित गद्यांश व पद्यांश पर आधारित प्रश्न को हल करते समय निम्नलिखित बातों का ध्यान रखना चाहिए:-

- 1- दिए गए गद्यांश/पद्यांश को ध्यानपूर्वक पढ़ें।
- 2- पढ़ते समय मुख्य बातों को रेखांकित करें।
- 3- प्रश्नों के उत्तर देते समय भाषा सरल होनी चाहिए।
- 4- उत्तर सरल, संक्षिप्त व सहज होने चाहिए।
- 5- उत्तर में जितना अपेक्षित हो उतना ही लिखना चाहिए।
- 6- उत्तर सदैव पूर्ण वाक्य में दें।

(1)

निम्नलिखित गद्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर दीजिये-

जब मनुष्य जंगली था, उसे नाखून की जरूरत थी। उसकी जीवन रक्षा के लिए नाखून बहुत जरूरी थे। असल में वही उसके अस्त्र थे। दाँत भी थे पर नाखून के बाद ही उनका स्थान था। उन दिनों उसे जूझना पड़ता था नाखून उसके लिए आवश्यक अंग था। फिर धीरे धीरे वह अपने अंग से बाहर की वस्तुओं का सहारा लेने लगा। पत्थर के ढेले और पेड़ की डालें काम में लाने लगा। मनुष्य और आगे बढ़ा। उसने धातु के हथियार बनाए। जिसके पास लोहे के अस्त्र और शस्त्र थे वो विजयी हुए। इतिहास आगे बढ़ा, नख धार मनुष्य अब एटम बम पर भरोसा करके आगे की ओर चल पड़ा। पर उसके नाखून अब भी बढ़ रहे हैं। अब भी प्रकृति मनुष्य को उसके भीतर वाले अस्त्र से वंचित नहीं कर रही है, अब भी वो याद दिला देती है की तुम्हारे नाखून को भुलाया नहीं जा सकता। तुम वही लाख वर्ष पहले वाले नखदन्तावलम्बी जीव हो - पशु के साथ एक ही सतह पर विचरने वाले और चरने वाले।

1. मनुष्य को नाखून जरूरी क्यों थे ?
क) शस्त्र बनाने के लिए
ख) उँगलियों को सुंदर बनाने के लिए
ग) अंगुलियों की सुरक्षा के लिए
घ) जीवन रक्षा के लिए
2. कुछ समय बाद मनुष्य किन चीजों का सहारा लेने लगा ?
क) पत्थर के ढेले और पेड़ की डालें
ख) पत्थर के बर्तन
ग) नाखून से बने हथियार
घ) जानवरों के दाँत
3. मनुष्य अब किस पर भरोसा कर के आगे की ओर चल पड़ा है ?
क) परम पिता परमेश्वर पर
ख) एटम बम
ग) वज्र
घ) नाखून
4. प्रकृति मनुष्य को कौन से अस्त्र से वंचित नहीं कर रही ?
क) वज्र
ख) तन
ग) हस्त
घ) नख
5. लेखक ने मनुष्य को कैसा जीव बताया है ?
क) संघर्ष करने वाला जीव
ख) युद्ध करने वाला जीव
ग) परजीवी जीव
घ) नखधारी जीव

उत्तर-

- 1- घ-जीवन रक्षा के लिए
- 2- क- पत्थर के ढेले और पेड़ की डालें
- 3- ख- एटम बम
- 4- घ- नख
- 5- घ- नखधारी जीव

'पत्र' का शाब्दिक अर्थ है, 'ऐसा कागज जिस पर कोई बात लिखी अथवा छपी हो'। पत्र के द्वारा व्यक्ति अपनी बातों को दूसरों तक लिखकर पहुँचाता है।

1. बस में छोटे सामान के बारे में परिवहन अधिकारी को सूचना पत्र।

2. दुर्घटनाग्रस्त होने पर अवकाश माँगते हुए प्रधानाचार्य जी को प्रार्थना पत्र लिखिए।

3. रक्तदान शिविर लगाने की अनुमति हेतु प्रार्थना पत्र।

4. डाकपाल को डाकिये कि शिकायत करते हुए पत्र।

Answer the questions

- (1) Using Euclid's Division Algorithm, find the HCF of 6496 and 376
- (2) In a school annual day function parade, a group of 1309 students need to march behind the band of 408 members. The two groups have to march in the same number of columns. What is the maximum number of columns in which they can march?
- (3) Show all the prime factors of 1778700;
- (4) Two tankers contain 1482 litres and 779 litres of petrol respectively. Find the maximum capacity of the container which can measure the petrol of either tanker in exact number of litres.
- (5) Find the largest positive integer that will divide 1638 and 1082 leaving remainders 26 and 16 respectively.
- (6) Prove that $n^2 - n$ is even for every positive integer n .
- (7) Using Euclid's Division Algorithm, find the HCF of 480 and 210
- (8) Two tankers contain 540 litres and 300 litres of petrol respectively. A container with maximum capacity is used which can measure the petrol of either tanker in exact number of litres. How many containers of petrol are there in the first tanker.
- (9) Three people go for a morning walk together. Their steps measure 70 cm, 84 cm and 105 cm respectively. What is the minimum distance traveled when their steps will exactly match after starting the walk assuming that their walking speed is same?
- (10) In a seminar, the number of participants in German, English and French are 207, 135 and 117 respectively. Find the numbers of rooms required to house them if in each room, the same number of participants are to be accommodated and all of them must belong to the same language.
- (11) Prove that $3 - 3\sqrt{7}$ is an irrational number.
- (12) Find the LCM of 1824 and 1080.
- (13) Prove that $\frac{1}{\sqrt{5}}$ is an irrational number.
- (14) Find the smallest number which when increased by 7 is exactly divisible by both 247 and 130.
- (15) Prove that $\sqrt{7}$ is an irrational number.

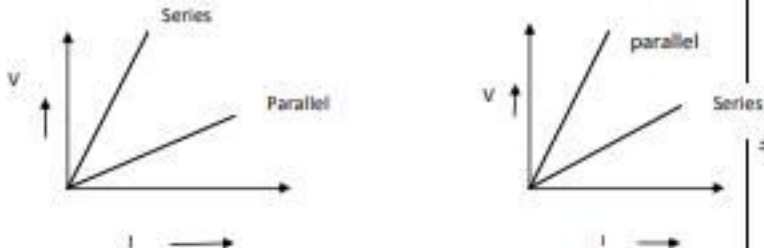
Answer the questions

- (1) If α and β are the zeros of quadratic polynomial $x^2 + px + 2q$, find the value of $\alpha^2 + \beta^2$.
- (2) If a and b are the zeros of quadratic polynomial $x^2 + 2px + q$, find the value of $\frac{1}{a} + \frac{1}{b}$.
- (3) If α and β are the zeros of quadratic polynomial $x^2 + 3x - 4$, find the value of $\alpha^3 + \beta^3$.
- (4) Find the zeros of the polynomial $f(x) = x^3 - 12x^2 + 47x - 60$, if it is given that sum of its two zeros is 9.
- (5) Find the quadratic polynomial such that sum of its zeros is 10 and difference between zeros is 8.
- (6) Find a quadratic polynomial whose zeros are reciprocals of the zeros of the polynomial $x^2 + 7x + 12$.
- (7) If two zeros of polynomial $x^3 + bx^2 + cx + d$ are $3+\sqrt{3}$ and $3-\sqrt{3}$, find its third zero.
- (8) If α and β are the zeros of polynomial $x^2 - 6x + k$, such that $\alpha^2 + \beta^2 = 20$. Find the value of k .
- (9) If α and β are the zeros of quadratic polynomial $x^2 - 4x - 5$, find the value of $1/\alpha^3 + 1/\beta^3$.
- (10) Find the zeros of the polynomial $f(x) = x^3 - 21x^2 + 143x - 315$, if it is given that the zeros are in arithmetic progression.
- (11) If α and β are the zeros of polynomial $x^2 - 7x + k$, such that $\alpha - \beta = 3$. Find the value of k .
- (12) If α and β are the zeros of polynomial $x^2 - x - 2$, find a polynomial whose zeros are α^2/β^2 and β^2/α^2 .
- (13) If α and β are the zeros of polynomial $x^2 + 3x - 4$, find a polynomial whose zeros are $3\alpha+1$ and $3\beta+1$.
- (14) Find the zeros of the polynomial $f(x) = x^3 - 2x^2 - 25x + 50$, if it is given that two of its zeros are equal in magnitude but opposite in sign.

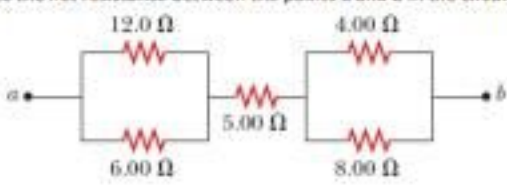
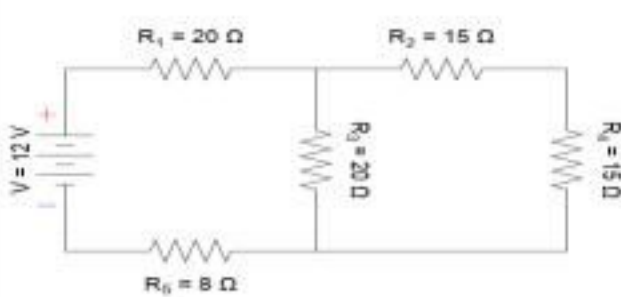
ELECTRICITY
WORKSHEET NO 1

Section A

CONCEPTUAL QUESTIONS

| S.No | QUESTIONS | MARKS |
|------|---|-------------|
| 1 | Calculate the number of electrons constituting one Coulomb of charge | 2 |
| 2 | How do we connect voltmeter and ammeter in an electric circuit? What is likely to happen if the positions of these instruments are interchanged? | (2015 SA1)2 |
| 3 | A bulb cannot be used in place of a resistor to verify Ohm's law. Justify this statement with reason. | 2 |
| 4 | State the type of combination used for connecting different electric appliances in domestic circuit. Give reasons | 3 |
| 5 |  <p>Two students perform the experiments on series and parallel combination of two given resistors R_1 and R_2 and plot the following V-I graphs. Which of the two diagrams correctly represents the labels 'series and parallel' on the plotted curves? Justify your answer.</p> | 3 |
| 6 | <p>Explain the following:</p> <ul style="list-style-type: none"> (i) Copper and Aluminum wires are employed for electricity transmission. (ii) Heating devices are made of an alloy rather than a pure metal. (iii) Tungsten is used for filament of electric lamp. | 3 |
| 7 | Two metallic wires of the same material are connected in parallel. Wire A has length l and radius r , wire B has a length $2l$ and radius $2r$. Calculate the ratio of their equivalent resistance in parallel combination and the resistance of wire A. | 3 |

| | | |
|---|---|----------------------|
| 8 | Why are electric bulbs filled with chemically inactive nitrogen or argon? | 1 |
| 9 | Derive an expression for the equivalent resistance of three resistors R_1 , R_2 and R_3 connected in series. | 3 |
| 10 | Match the correct range of resistivity with the materials given: a) Conductor ----- i) $10^{-6} \Omega m$ b) Alloys ----- ii) 10^{12} to $10^{17} \Omega m$ c) Insulators ----- iii) 10^{-4} to $10^{-8} \Omega m$ | 2012 SA1 3 |
| 11 | Derive an expression for Joule's law of heating. Give two examples for applications of heating effect of electric current. | 3 |
| 12 | A wire of resistivity ρ is stretched to double of its length. Find its new resistance and resistivity. | 3 |
| Section B NUMERICAL PROBLEMS | | |
| 13 | 100J of work is done in transferring 20C of charge between two points in a conductor. Find the resistance offered by the conductor, if a current of 2A flows through it. | 2 |
| 14 | Calculate the resistance of a metal wire of length 2m and area of cross section $1.55 \times 10^{-6} m^2$, if the resistivity of the metal be $2.8 \times 10^{-8} \Omega m$? (1) | 2 |
| 15 | A battery of 12V is connected to a series combination of resistors 3 Ω , 4 Ω , 5 Ω and 12 Ω . How much current would flow through the 12 Ω resistor? | 3 |
| 16 | Nichrome wire of length l and radius ' r ' has resistance of 10 Ω . How would the resistance of the wire change when (i) only the diameter is doubled? (ii) only length of the wire is doubled? | (2012 SA1) 3 |
| 17 | Two devices of rating 44W, 220V and 11W, 220V are connected in series. The combination is connected across a 440V main. The fuse of which of the two devices is likely to burn when the switch is ON? Justify your answer. | 3 |
| 19 | A wire of resistance 10 Ω is bent in the form of a closed circle. What is the effective resistance between the two points at the ends of any diameter of the circle? | 2 |
| 20 | Two resistors with resistances 5 Ω and 10 Ω are to be connected to a battery of 6V so as to obtain: (i) Minimum current (ii) Maximum current. How will you connect the resistances in each case? | 3 |

| | | |
|----|---|------------|
| 21 | Two identical resistors are first connected in series and then in parallel to a source of supply. Find the ratio of heat produced in two cases. | 3 |
| 22 | A torch bulb is rated 5V and 500mA. Calculate its (i) power, (ii) resistance, (iii) energy consumed when it is lighted for 4 hours. { | (2013SA1)3 |
| 23 | An electric heater rated 880W operates 6h/day. Find the cost of energy to operate it for 30 days at Rs 3.00 per unit. | |
| 24 | Calculate the net resistance between the points a and b in the circuit diagram shown.  | 3 |
| 25 |  <p>From the above diagram, determine</p> <ol style="list-style-type: none"> The equivalent resistance of the entire circuit The current through each resistor The total current from the power supply The voltage drop across each resistor | 5 |

CLASS - 10th
SUBJECT - SOCIAL SCIENCE

Learning work

1. **Learn chapter 1st and 2nd from civics...**
2. **Prepare a report on Jallianwala Bagh Massacre..**
3. **Prepare a file on disaster management**
4. **write about any 2 disaster.**