

DAV PUBLIC SCHOOL SECL KORBA

Summer Vacation Homework, 2023-24

Class X

English

Summer vacation Home work

1. Pick out all literary devices from the poem The frog and Nightingale and write them down in the literature copy.
2. What is a fable ? Why is the Frog and the Nightingale called a fable? (To be done in literature copy)
3. Pick a fable(poem) and write it in your enrichment copy along with pictures. Also pick various figures of speech used in it.

ग्रीष्मकालीन गृह कार्य
विषय- हिंदी, कक्षा-दसवीं

1. सूर द्वारा रचित अपने 20-20 प्रिय पदों को सूर-लय में गाएं।
2. नेताजी सुभाष चन्द्र बोस के व्यक्तित्व और कृतित्व पर एक प्रोजेक्ट बनाइए।
3. अपने घर के आसपास देखिए और पता लगाइए कि नगर पालिका के क्या-क्या काम करवाए हैं? हमारी भूमिका उनमें क्या हो सकती है?
4. आपके विद्यालय में शारीरिक रूप से चुनौती पूर्ण विद्यार्थी हैं। उनके लिए विद्यालय परिसर और कक्षा-कक्ष में किस तरह के प्रावधान किए जाएं, प्रशासन को इस संदर्भ में पत्र द्वारा सुझाव दीजिए।

Sanskrit

'आज्ञा गुरुणां हि अविचारणीया' नामक पाठ से क्रियाविशेषण एवं सर्वनाम शब्द छाँटकर लिखिये एवम् अपने मन पसन्द चित्र बनाकर संस्कृत में दस वाक्य लिखें।

Mathematics

Summer Vacation Home Work Mathematics-X

Assertion and Reason Based Questions:

DIRECTION: In the following questions, a statement of assertion (A) is followed by a statement of Reason (R) . Mark the correct choice as:

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A)
- (b) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A)
- (c) Assertion(A) is true but reason(R) is false.
- (d) Assertion(A) is false but reason(R) is true.

1.Assertion: The HCF of two numbers is 18 and their product is 3072. Then their LCM is 169.

Reason: If a, b are two positive integers, then $HCF \times LCM = a \times b$.

2.Assertion: 12^n ends with the digit zero, where n is any natural number.

Reason: Any number ends with digit zero, if its prime factor is of the form $2^m \times 5^n$, where m and n are natural numbers.

3. Assertion: $x^2+7x+12$ has no real zeroes.

Reason: A quadratic polynomial can have at the most two zeroes.

4. Assertion: If the product of the zeroes of the quadratic polynomial $x^2+3x+5k$ is -10 then value of k is -2.

Reason: Sum of zeroes of a quadratic polynomial ax^2+bx+c is $-b/a$

5.Assertion: If the product of the zeroes of the quadratic polynomial $x^2+3x+5k$ is -10 then value of k is -2.

Reason: Sum of zeroes of a quadratic polynomial ax^2+bx+c is $-b/a$

6.Assertion: The value of k for which the system of linear equations $3x-4y=7$ and $6x-8y=k$ have infinite number of solution is 14.

Reason: The graph of linear equations $a_1x+b_1y+c_1=0$ and $a_2x+b_2y+c_2=0$ gives a pair of intersecting lines if $a_1/a_2 \neq b_1/b_2$

Multiple Choice Questions

- If two positive integers a and b are written as $a = x^3y^2$ and $b = xy^3$, where x, y are prime numbers, then $\text{HCF}(a, b)$ is
(a) xy
(b) xy^2
(c) x^3y^3
(d) x^2y^2
Also, find LCM of (a, b) .
- The ratio between the LCM and HCF of 5, 15, 20 is:
(a) 9 : 1 (b) 4 : 3
(c) 11 : 1 (d) 12 : 1
- If the zeroes of the quadratic polynomial $x^2 + (a + 1)x + b$ are 2 and -3 , then
(a) $a = -7, b = -1$ (b) $a = 5, b = -1$
(c) $a = 2, b = -6$ (d) $a = 0, b = -6$
- The pair of linear equations $2x + 3y = 5$ and $4x + 6y = 10$ is
(a) inconsistent
(b) consistent
(c) dependent consistent
(d) none of these
- The pair of equations $y = 0$ and $y = -7$ has
(a) one solution
(b) two solutions
(c) infinitely many solutions
(d) no solution

Subjective Questions

- Find HCF and LCM of 404 and 96 and verify that $\text{HCF} \times \text{LCM} = \text{Product of the two given numbers}$.
- Prove that $\frac{2+\sqrt{3}}{2-\sqrt{3}}$ is an irrational number.
- If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then find the value of k .
- Solve the following pair of linear equations by the substitution method.
(i) $x + y = 14$
 $x - y = 4$
- A fraction becomes $\frac{9}{11}$ if 2 is added to both the numerator and the denominator. If 3 is added to both the numerator and the denominator it becomes $\frac{5}{6}$. Find the fraction.
- Prove that $\sqrt{2}, \sqrt{5}, \sqrt{3}$ is an irrational number.
- Show that $7 + 5\sqrt{2}$ is an irrational number if $\sqrt{2}$ is an irrational number.
- The sum and the product of zeros of the polynomial $f(x) = 4x^2 - 27x + 3k^2$ are equal then find the value of k .
- Draw the graphs of the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the x -axis, and shade the triangular region.
- If 2 and 3 are zeros of the polynomial $3x^2 - 2kx + 2m$, then find the value of k and m .

Activity :

Join the correct ball to the correct bat so that the equations in the bat will be satisfied by the values in the balls.

X=2 Y=3	X=16 Y=6	X=1 Y=-1	X=35 Y=45	X=3 Y=2	Parallel lines
X=2 Y=-1	Only one solution	Infinite solutions	consistent	X=1/6 Y=1/4	X=1 Y=3/2

$(x+2)^{\circ}$ and $(3y+8)^{\circ}$ are opposite angles of Cyc Q	$4x - 2y = 6, 2x - y = 3$	$3(2x+y) = 7xy$ $3(x+3y) = 11xy$
$4x - \frac{6}{y} = 9, 6x + \frac{8}{y} = 22$	$\frac{1}{2x} - \frac{1}{y} = -1$ $\frac{1}{x} + \frac{1}{2y} = 8$	$\frac{x+y}{xy} = \frac{5}{6}, \frac{2x-y}{xy} = \frac{1}{6}$
$X+y=22, x-y=10$	Linear Equation In One Variable	$2x - 5y = 9$ $7x + 6y = 8$
$43x + 67y = -24$ $67x + 43y = 24$	$6x - 3y + 10 = 0$ $2x - y + 9 = 0$	$\frac{a1}{a2} \neq \frac{b1}{b2}$

CLASS-10 SUBJECT- PHYSICS

- I. Complete your notebook and learn the taught portion.
- II. Complete the assigned experiment in your lab manual copy.
- III. Solve the given questions in your notebook.

1. The focal length of a plane mirror is

- (a) 0 (b) infinite (c) 25 cm (d) -25 cm

2. An object is placed at a distance of 40cm in front of a concave mirror of a focal length of 20 cm. The image produced is:

- (a) virtual and inverted
 (b) real and erect
 (c) real, inverted and of size larger than that of the object
 (d) real, inverted and of the same size as that of the object

3. Image formed by a convex spherical mirror is:

- (a) virtual (b) real (c) enlarged (d) inverted

4. A concave mirror forms a 5mm long image of an object at a distance 30cm in front of the mirror. If the object is 10mm long, what is the focal length of the mirror?

- (a) -20cm (b) -30cm (c) -40 cm (d) -60 cm

5. Magnification produced by a rear view mirror is

- (a) Less than one (b) More than one (c) Equal to one (d) More than or equal to one

6. A concave mirror gives real, inverted and same size image if the object is placed

- (a) At F (b) At infinity (c) At C (d) Beyond C

7. Which of the following mirror is used by a dentist to examine a small cavity?

- (a) Convex mirror (b) Plane mirror (c) Concave mirror (d) Combination of convex and concave mirror

8. An object at a distance of 30 cm from a concave mirror gets its image at the same point. The focal length of the mirror is

- (a) - 30 cm (b) 30 cm (c) - 15 cm (d) +15 cm

9. A concave mirror of focal length 20 cm forms an image having twice the size of object. If the image formed is virtual, the position of object will be at

- (a) 25 cm (b) 40 cm (c) 10 cm (d) At infinity

10. If a man's face is 25 cm in front of concave shaving mirror producing erect image 1.5 times the size of face, focal length of the mirror would be

- (a) -75 cm (b) -25 cm (c) 15 cm (d) 60 cm

ASSERTION AND REASON QUESTIONS

- Assertion (A) :** A ray passing through the center of curvature of a concave mirror after reflection, is reflected back along the same path.
Reason (R) : The incident rays fall on the mirror along the normal to the reflecting surface.
- Assertion(A):** The mirrors used in search lights are concave spherical.
Reason (R) : In concave spherical mirror the image formed is always virtual.
- Assertion(A) :** For observing traffic at back, the driver mirror is convex mirror.
Reason (R) : A convex mirror has much larger field of view than a plane mirror.
- Assertion(A) :** Mirror formula can be applied to a plane mirror.
Reason (R) : A plane mirror is a spherical mirror of infinite focal length.
- Assertion(A) :** It is not possible to see a virtual image by eye.
Reason (R): The rays that seem to emanate from a virtual image do not in fact emanates from the image.
- Assertion(A) :** The height of an object is always considered positive.
Reason (R) : An object is always placed above the principal axis in this upward direction.
- Assertion(A) :** Concave mirrors are used as make-up mirrors.
Reason (R) : When the face is held within the focus of a concave mirror, then a diminished image of the face is seen in the concave mirror.
- Assertion(A) :** The formula connecting u , v and f for a spherical mirror is valid in all situations for all spherical mirrors for all positions of the object.
Reason (R) : Laws of reflection are strictly valid for plane surfaces.
- Assertion(A):** Virtual images are always erect.
Reason (R) : Virtual images are formed by diverging mirror only.
- Assertion(A) :** Concave mirrors are used in solar furnaces.
Reason (R) : Concave mirrors are converging mirrors.

Chemistry

1. Write balanced chemical equations for the following chemical reactions.

- Aluminium + Bromine \rightarrow Aluminium bromide.
- Calcium carbonate \rightarrow Calcium oxide + Carbondioxide.
- Silver chloride \rightarrow Silver + Chlorine.
- Potassium bromide + Barium iodide \rightarrow Potassium iodide + Barium bromide.
- Hydrogen + Chlorine \rightarrow Hydrogen chloride.
- Copper + Silver nitrate \rightarrow Copper nitrate + Silver.
- Sodium hydroxide + Sulphuric acid \rightarrow Sodium sulphate + Water.
- Magnesium + Hydrochloric acid \rightarrow Magnesium chloride + Hydrogen.
- Zinc carbonate \rightarrow Zinc oxide + Carbondioxide.
- Magnesium + nitrogen \rightarrow Magnesium nitride.

2. Make a list of names of elements (any 20) and radicals (any 10) with their valencies in tabular form.(Refer to class IX)

3. Write formulae of the following compounds.

- Silver(I)bromide, ii) Aluminium oxide, iii) Calcium chloride, iv) Zinc sulphate, v) Aluminiumsulphate, vi) Iron(II)sulphate, vii) Sodium nitrite, viii) Copper(II)chloride,

ix) Aluminium nitride, x) Potassium nitrate, xi) Iron(II)sulphide, xii) Sodium sulphite, xiii) Calcium phosphate, xiv) Sodium acetate, xv) Magnesium carbonate.

4. Write an activity to describe each of the following

- i) Combination reaction.
- ii) Decomposition reaction.
- iii) Single displacement reaction.

5. Explain why respiration is an exothermic reaction.

6. What happens when

- i) Ferrous sulphate crystals are heated?
- ii) Electricity is passed through water?
- iii) Lead nitrate crystals are heated?
- iv) An iron nail is dipped in copper sulphate solution?

Biology

I. Prepare any one of the following projects.

- a. A model of human respiratory system
- b. A Portfolio on diseases of human digestive system under the following points :Disease its causes, symptoms ,prevention
- c. A portfolio on diseases of human respiratory system under the following points causes symptoms and prevention .
- d. A poster /collage on food of Chhattisgarh and nutrition

II. Answer the following questions

Q1. Differentiate between autotrophic and heterotrophic nutrition

Q2 list the events happening during the process of photosynthesis.

Q3. What are stomata? Write the functions of stomata. Draw a labelled diagram to show stomata.

Q4. Stomata of desert plants remains closed during the day .Explain how and when do they take up carbon dioxide to perform photosynthesis.

Q5 Draw a diagram depicting human alimentary canal and label the following

- i. part where digestion starts.
- ii. leaf like gland
- iii. part which stores bile juice
- iv largest gland

b. State the role of liver and pancreas.

Q6 what function is served by the following

- a. Gastric sphincter
- b. Anal sphincter

Q7 Describe the nutrition in amoeba. Illustrate it with diagram.

- Q8 Is there any difference in the way of intake of food in Amoeba and paramecium?
if yes Explain.
- Q9 Describe the process of digestion in human intestine.
- Q10. Define (a) Peristalsis (b) Emulsification (c) Saprophyte (d) Parasitic nutrition
Respiration.

Social Science

History:

Write answer in your notebook

- Q1 Highlight the role of Otto von Bismarck in making of Germany.
- Q2 Explain the role of Art , culture and language in shaping the ideas of nationalism among European people. (pg 13)
- Q3 What was Napoleon Code? Explain any five reforms introduced by Napoleon in the region under his control (pg 06)
- Q4 Can you explain the factors responsible for economic hardship faced by European people during 1830s? (pg 15)
- Q5 What condition of Balkan area led to World War I? (pg 26)
- Q6 How did Greek War of Independence mobilize nationalist feelings among the educated elite across Europe? Explain (pg 13)
- Q7 What is meant by the 1848 revolution of the liberals. What were political social and economic ideas supported by the liberals?

Geography

- Q1. Write any four characteristics of arid soil of India?
- Q2. What is soil erosion? What are the main causes of soil erosion?
- Q3. What are the causes of land degradation? What are the ways to solve this problem?
- Q4. Why is there a need for planning resources in India ?
- Q5. Describe any three main features of the black soil ?

Economics :

Project work (**Any one** from the following topics)

Consumer Awareness

OR

Social Issues

OR

Sustainable Development

Project work must be handwritten and in separate project file