



Summer Vacation Home Assignment 2023-24

Class – X

*Summer is messy
, Summer is fun,
Trips to the beach,
In the hot, hot Sun,
Let's give summer,
A big fat cheer!*

Summer is the best time of the year.

Dear Parent,

We wish you and your child a very happy summer holidays. It's time to enjoy and relate a bond with family, friends and relatives. To utilize this time in the most constructive way we have prepared Holiday Homework for the students on the principle of 'learning by doing' for his /her holistic development.

Note:

- 1. Kindly make sure Summer Vacation Homework is written in the respective subject copy.**
- 2. This Homework is a part of Periodic Assessment – I as Subject Enrichment 5 – Marks.**

Subject wise work to be completed

English:

Write the following answer in H/W notebook:

After having read the lesson 'Nelson Mandela: Long Walk to Freedom' on the oppression that communities faced in South Africa, you were deeply hurt. You could also relate to the struggles and hardships of millions of Indians who fought against the oppressive British rule. Write a diary entry expressing your feelings about oppression faced by people in their homeland.

Activity : To prepare a portfolio on: My favorite sports personality/ music maestro/ novelist

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Hindi : 1-औपचारिक और अनौपचारिक पत्र लिखें

2-किसी विषय पर कम से कम 200 का एक अनुच्छेद लिखें

3-किसी कवि या लेखक की जीवनी से संबंधित चित्र सहित चार्ट तैयार करें

Math: Write

A. Introduction to trigonometry (any 3 case study problems)

B. Polynomial (any 3 case study problems)

C. Quadratic equation (any 3 case study problem)

D. Do R.D. Sharma exercise of Trigonometry, Polynomial and Quadratic Equations and

E. Solve all the 4 worksheets given

Science:

A. Complete the provided worksheet

B. Write the experiments in practical note book as provided in the worksheet (use lab manual)

Social Science:

• Complete all the given notes in respective notebooks.

• On the political map of India locate all major dams (Multipurpose projects) built across important rivers of India.

• Make a file and attach

1. Maps on:

• Congress Sessions

• City of Jalianwalla Bagh incident

2. List of Important Indian Freedom Movements During Independence from 1857 to 1942. (<https://currentaffairs.adda247.com/important-indian-freedom-movements-during-independence-from-1857-to-1942/>)

3. Note on Swadeshi Movement.

(<https://mocomi.com/indian-independence-movement/>)

(<https://www.clearias.com/indias-struggle-for-independence/>)

(PDF provided on Indian Nationalism)

Computer: Do the attached worksheet as directed.

Art: Decorate a small pot (plastic or terracotta) with an indoor plant in it. Use only acrylic colours. (Below is the picture for your reference)



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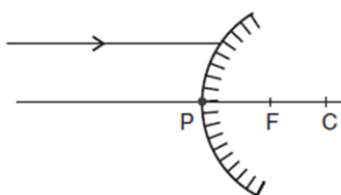
R K SARDA VIDYA ASHRAM
SUMMER VACATION WORKSHEET

Class : X Subject: Science

Roll No. _____ Name _____

PHYSICS

1. Write two point difference between real image and virtual image
2. What are the two factors on which the lateral displacement of an emergent ray from a glass slab depends ?
3. Why does the bottom of a tank or a pond containing water appear to be raised ?
4. A ray of light is incident on a convex mirror as shown. Redraw the diagram and complete the path of this ray after reflection from the mirror. Draw a Normal line at a point of incidence. Indicate angle of incidence and angle of reflection on it.



5. If the image formed by a lens for all positions of an object placed in front of it is always erect and diminished, what is the nature of this lens ? Draw a ray diagram to justify your answer. If the numerical value of the power of this lens is 10 D, what is its focal length in the Cartesian system ?
6. (a) Define focal length of a divergent lens.
(b) A divergent lens of focal length 30 cm forms the image of an object of size 6 cm on the same side as the object at a distance of 15 cm from its optical centre. Use lens formula to determine the distance of the object from the lens and the size of the image formed.
(c) Draw a ray diagram to show the formation of image in the above situation
7. (a) State the laws of refraction of light. Explain the term absolute refractive index of a medium and write an expression to relate it with the speed of light in vacuum.
(b) The absolute refractive indices of two media 'A' and 'B' are 2.0 and 1.5 respectively. If the speed of light in medium 'B' is 2×10^8 m/s, calculate the speed of light in :
(i) vacuum,
(ii) medium 'A'
8. What is meant by the power of a lens ? What is its S.I. unit ? Name the type of lens whose power is positive. The image of an object formed by a lens is real, inverted and of the same size as the object. If the image is at a distance of 40 cm from the lens, What is the nature and power of the lens ? Draw a ray diagram to justify your answer.
9. A student wants to project the image of a candle flame on the walls of school laboratory by using a lens :
(i) Which type of lens should he use and why ?
(ii) At what distance in terms of focal length 'F' of the lens should he place the candle flame so as to get (i) a magnified, and (ii) a diminished image respectively on the wall?
(iii) Draw a ray diagram to show the formation of the image in each case ?
10. List four factors: does the refractive index of medium depend ?

CHEMISTRY

1. Account for the following :
 - (a) White silver chloride turns grey in sunlight.
 - (b) Brown coloured copper powder on heating in air turns into black coloured substance.
2. What do you mean by :
 - (a) Displacement reaction
 - (b) Reduction reaction(c) Combination reaction ? Write a balanced chemical equation.
3. (a) Explain the term ‘rancidity.’ Name the type of chemical reaction responsible for causing rancidity and define it.
 - (b) Write three methods for preventing rancidity of food.
4. (i) Define corrosion.
 - (ii) What is corrosion of iron called ?
 - (iii) Why is corrosion of iron a serious problem ?
 - (iv) How can we prevent corrosion of iron ?
5. (i) What happens chemically when quick lime is added to water ?
 - (ii) Balance the following chemical equation $\text{MnO}_2 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + \text{H}_2\text{O}$
 - (iii) What is the decomposition reaction ? Explain it with suitable examples.
6. $\text{ZnO} + \text{C} \rightarrow \text{Zn} + \text{CO}$
 - (i) Identify the substance getting oxidised and the one getting reduced.
 - (ii) State the reason for choosing the substances in (i).
 - (iii) Name the type of reaction and give another example of a similar type of reaction.
7. ‘Combination reaction is the reverse of decomposition reaction.’ Justify this statement with the help of appropriate chemical equations of each.
8. When is a chemical reaction considered a double displacement reaction ? Explain giving examples. State a difference between displacement and double displacement reaction.
9. A small amount of calcium oxide is taken in a beaker and water is added slowly to it.
 - (i) Will there be any change in temperature of the contents ? Explain.
 - (ii) Name and define the type of reaction taking place.
 - (iii) Write a chemical equation for the above reaction.
10. What is alkali ? Give an example.

BIOLOGY

1. Mention the site of complete digestion in our body. Name the end products formed on complete digestion of carbohydrates, proteins and fats.
2. What function is served by the following:
 - (i) Gastric Sphincter?
 - (ii) Anal Sphincter?
3. Write three events which occur during the process of photosynthesis.
4. Name the following :
 - (i) Where is food completely digested ?
 - (ii) Juice that contains trypsin enzymes.
 - (iii) Who secretes bile juice ?
 - (iv) That absorbs water from unabsorbed food.
 - (v) Two secretions released by gastric glands.

5. In the human alimentary canal, name the site of complete digestion of various components of food. Explain the process of digestion.
6. With the help of a schematic flowchart, show the breakdown of glucose in a cell to provide energy :
 - (i) in the presence of oxygen
 - (ii) in the absence of oxygen
 - (iii) when there is a lack of oxygen.
7. Draw a diagram of human respiratory system and label the following :
 - (i) part where air is filtered by fine hair and mucus.
 - (ii) part which terminates in balloon-like structures.
 - (iii) balloon-like structures where exchange of gases takes place.
 - (iv) part which separates chest cavity from abdominal cavity.
8. What are the differences between aerobic and anaerobic respiration ? Name some organisms that use the anaerobic mode of respiration ?
9. Stomata of desert plants remain closed during day time. How do they take up CO₂ and perform photosynthesis ?
10. Name the respiratory pigment in human beings. Where is this pigment found ?

Following experiments to be written in practical note book

1. A. Finding the pH of the following samples by using pH paper/universal indicator:
 - (i) Dilute Hydrochloric Acid
 - (ii) Dilute NaOH solution
 - (iii) Dilute Ethanoic Acid solution
 - (iv) Lemon juice
 - (v) Water
 - (vi) Dilute Hydrogen Carbonate solution
- B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with:
 - a) Litmus solution (Blue/Red)
 - b) Zinc metal
 - c) Solid sodium carbonate
2. Performing and observing the following reactions and classifying them into:
 - A. Combination reaction
 - B. Decomposition reaction
 - C. Displacement reaction
 - D. Double displacement reaction
 - (i) Action of water on quicklime
 - (ii) Action of heat on ferrous sulphate crystals
 - (iii) Iron nails kept in copper sulphate solution
 - (iv) Reaction between sodium sulphate and barium chloride solutions
3. Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions:
 - i) ZnSO₄(aq)
 - ii) FeSO₄(aq)

iii) $\text{CuSO}_4(\text{aq})$

iv) $\text{Al}_2(\text{SO}_4)_3(\text{aq})$

Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.

4. Experimentally show that carbon dioxide is given out during respiration.

5. Preparing a temporary mount of a leaf peel to show stomata.

6. Determination of the focal length of:

i) Concave mirror

ii) Convex lens

by obtaining the image of a distant object.

7. Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.



R K SARDA VIDYA ASHRAM
SUMMER VACATION WORKSHEET
Class : 10 Subject: Computer

Roll No. _____ Name _____

1. Explain the 7 C's of Effective Communication -

1)	
2)	
3)	
4)	
5)	
6)	
7)	

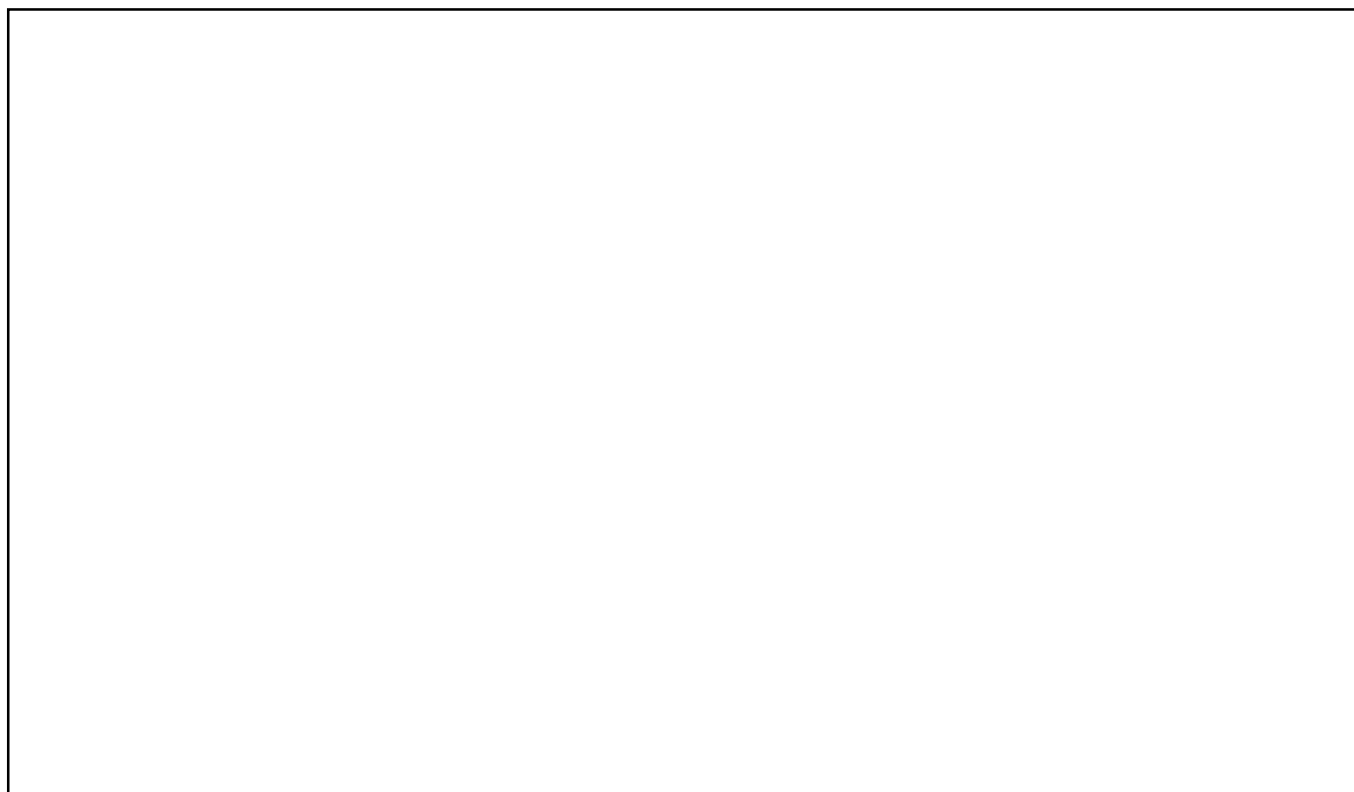
2. Write 2 advantages and 2 disadvantages of Visual Communication -

	Advantage
a)	
b)	
	Disadvantage
a)	
b)	

3. Match the following -

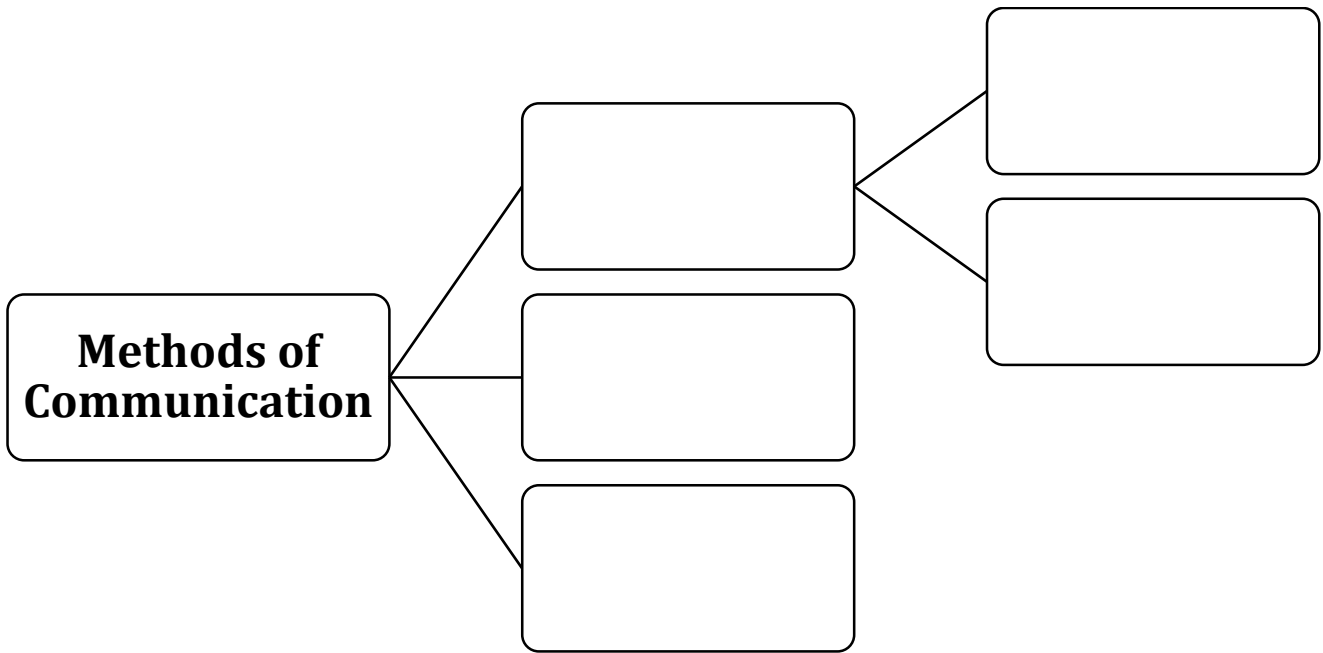
Column A		Column B		Ans
1)	Compound Sentence	a)	Put off the light.	
2)	Declarative Sentence	b)	How are you?	
3)	Interrogative Sentence	c)	Hurrah! We won the race.	
4)	Imperative Sentence	d)	They are playing cricket.	
5)	Exclamatory Sentence	e)	He started in time, but missed the bus.	

4. Draw the Communication Cycle with all its elements -



Elements of Communication Cycle are -

5. Complete the classification of Methods of Communication -



6. Write any four Stress Management techniques -

a)	
b)	
c)	
d)	

7. Explain any 4 skills required for Independent Working -

a)	
b)	
c)	
d)	