

CLASS: X

SUBJECT: SOCIAL SCIENCE

### 1. Project Guidelines

\*Every student has to compulsorily undertake any one Project on the following topics:

**Consumer Rights OR,**

**Social Issues OR,**

**Sustainable Development**

**The project must include:** cover page, acknowledgement, certificate, index, bibliography, supporting images, graph, data etc should be included. (Note: Do it in preferably A4 Size paper.)

### 2. Map Work (Activity File)

Locate all major soil types (India) on the suitable map of India. **(Paste in HW notebook)**

1. Alluvial 2. Black 3. Red and Yellow 4. Laterite 5. Arid 6. Forest and Mountains

3. Study and **make notes + Solve exercise** of chapter "Resources and Development" (Geography).

### 4. Board Model Questions

**Write the answers of following questions in home work copy.**

- (I) What is power sharing? Why power sharing is essential for democracy?
- (II) Describe any three demands of the Sri Lankan Tamils. How did they struggle for their demands?
- (III) What are some of the basic elements of the Belgium model of power sharing?
- (IV) What are the Different forms of power sharing in modern democracies? Give an example of each of these.
- (V) Give an account of ethnic composition of Sri Lanka and Belgium.
- (VI) Differentiate horizontal and vertical power sharing in modern democracies.
- (VII) What is per capita income? Mention any two limitations of per capita income as an indicator of development.
- (VIII) Mention any four characteristics of Development.
- (IX) "Money cannot buy all the goods and services that one needs to live well" Do you agree with this statement? Justify your answer with any three suitable arguments.
- \* (X) What do you mean by public facilities? Why are they important?
- (XI) What are the main criteria used by the World Bank in classifying different countries? What are the limitations of this criteria, if any?
- (XII) Why the issue of sustainability is an important for development?

SUMMER VACATION HOME WORK

CLASS -X SUBJECT – SCIENCE

Q1. Write symbols of elements and their name in given your textbook (ch. 1 and learn them )

Q2. Write the name of compounds and their name in given your test book . (ch.1)

Q3. What is a balanced chemical equation? Why should chemical equations be balanced?

Q4. Write the balanced equation for the following chemical reactions.

(i) Hydrogen + Chlorine  $\rightarrow$  Hydrogen chloride

(ii) Barium chloride + Aluminium sulphate  $\rightarrow$  Barium sulphate + Aluminium chloride

(iii) Sodium + Water  $\rightarrow$  Sodium hydroxide + Hydrogen

Q5. Write a balanced chemical equation with state symbols for the following reactions.

(i) Solutions of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride. (ii) Sodium hydroxide solution (in water) reacts with hydrochloric acid solution (in water) to produce sodium chloride solution and water.

Q6. Why are decomposition reactions called the opposite of combination reactions? Write equations for these reactions.

Q7. What is the difference between displacement and double displacement reactions? Write equations for these reactions.

Q.8. Write the balanced chemical equations for the following reactions and identify the type of reaction in each case.

(a) Nitrogen gas is treated with hydrogen gas in the presence of a catalyst at 773K to form ammonia gas.

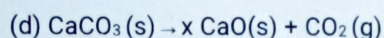
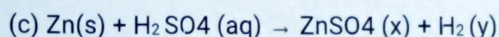
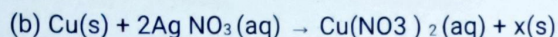
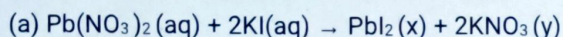
(b) Sodium hydroxide solution is treated with acetic acid to form sodium acetate and water.



(c) Ethanol is warmed with ethanoic acid to form ethyl acetate in the presence of concentrated  $\text{H}_2\text{SO}_4$ .

(d) Ethene is burnt in the presence of oxygen to form carbon dioxide, water and releases heat and light.

Q9. Complete the missing components/variables given as x and y in the following reactions



Q11. On heating blue coloured powder of copper (II) nitrate in a boiling tube, copper oxide (black), oxygen gas and a brown gas X is formed

(a) Write a balanced chemical equation of the reaction.

(b) Identify the brown gas X evolved.

(c) Identify the type of reaction.

(d) What could be the pH range of aqueous solution of the gas X? Q12.

Which among the following are physical or chemical changes? (a)

Evaporation of petrol

(b) Burning of Liquefied Petroleum Gas (LPG)

(c) Heating of an iron rod to red hot.

(d) Curdling of milk

(e) Sublimation of solid ammonium chloride

Q13. Name the following (a) The process in plants that links light energy with chemical energy (b) Organisms that can prepare their own food (c) The cell organelle where photosynthesis occurs (d) Cells that surround a stomatal pore (e) Organisms that cannot prepare their own food (f) An enzyme secreted from gastric glands in stomach that acts on proteins.

Q14. How do the guard cells regulate opening and closing of stomatal pores? Q15.

Differentiate between an autotroph and a heterotroph.

Q16. How does aerobic respiration differ from anaerobic respiration?



Q17. Differentiate between an artery and a vein.

Q18. Why is the rate of breathing in aquatic organisms much faster than in terrestrial organisms?

Q19. Mention the major events during photosynthesis.

Q20. Draw labeled diagram of the following

- (a) Human digestive system
- (b) Human respiratory system
- (c) Stomatal pore – Open and closed
- (d) Double circulation in humans

**Q21. Make a working model for science exhibition.**

### Case study questions

*Q22. Read the following and answer any four questions from (i) to (v).*

Heterotrophic nutrition is a mode of nutrition in which organisms obtain readymade organic food from outside sources. The organisms that depend upon outside sources for obtaining organic nutrients are called heterotrophs. Heterotrophic nutrition is of three types: saprophytic, parasitic and holozoic nutrition.

**(i) In which of the following groups of organisms food material is broken outside the body and absorbed?**

- (a) Mushroom, green plants, Amoeba
- (b) Yeast, mushroom, bread mould
- (c) Paramecium, Amoeba, Cuscuta
- (d) Cuscuta, lice, tapeworm

**(ii) Which of the following is a parasite?**

- (a) Yeast
- (b) Taenia
- (c) Amoeba
- (d) Earthworm

**(iii) Which of the following is an example of saprotroph? (a) Grass**

- (b) Mushroom
- (c) Amoeba
- (d) Paramecium

**(iv) Heterotrophic nutrition involves**

- (a) production of simple sugar from inorganic compounds
- (b) utilisation of chemical energy to prepare food
- (c) utilisation of energy obtained by plants
- (d) all of these.

**(v) In Amoeba, food is digested in**

- (a) mouth
- (b) pseudopodia
- (c) cilia
- (d) food vacuole



Q23. Read the following and answer any four questions from (i) to (v). Rishaan experienced muscular cramps during the training session for his upcoming football match. Mr. Sen, his coach advised him on a schedule of some aerobic exercises to overcome his problem of muscular cramps. Rishaan followed his coach's advice and did not face the problem of muscular cramps again during his match



- (i) Which life process is depicted by the above passage?
  - (a) Respiration
  - (b) Digestion
  - (c) Nutrition
  - (d) Excretion
- (ii) Lack of oxygen in muscles often leads to cramps due to
  - (a) Conversion of pyruvate to ethanol
  - (b) Conversion of glucose to pyruvate
  - (c) Conversion of pyruvate to glucose
  - (d) Conversion of pyruvate to lactic acid
- (iii) Is lactic acid produced by anaerobic respiration in yeast?
  - (a) YES
  - (b) NO
- (iv) Why is there an increase in lactic acid concentration in the blood at the beginning of the exercise?
  - (a) Lack of oxygen
  - (b) Excess of oxygen
  - (c) Lack of carbon dioxide
  - (d) Excess of carbon dioxide
- (v) Is carbon dioxide produced by anaerobic respiration in yeast? (a) YES  
(b) NO

Q24. Read the following and answer any four questions from (i) to (v). A reaction in which two or more reactants combine to form a single product is called a combination reaction. For example, calcium oxide reacts vigorously with water to form calcium hydroxide. The reaction is highly exothermic in nature, as lots of heat is produced during the reaction.

$$\text{CaO(s)} + \text{H}_2\text{O(l)} \rightarrow \text{Ca(OH)}_2\text{(aq)} + \text{Heat}$$

Calcium oxide    Water    Calcium hydroxide

Solution of  $\text{Ca(OH)}_2$  is used for white wash the walls. Calcium hydroxide reacts slowly with carbon dioxide in air to form a thin layer of calcium carbonate on the wall which gives a shiny appearance to wall. Calcium carbonate will form after two or three days of white wash.

- (i) What is the chemical name of quick lime?



# ग्रीष्मकालीन अवधार गृहकार्य

कक्षा - 10

\* विज्ञापन लेखन -

1) योग परिचय नोट ।

2) पर्यावरण के प्रति जागरूकता ।

3) मतदान अधिकार के प्रति जागरूकता ।

4) मिठाई की दुकान के प्रचार के लिए ।

5) कोपी बनाने वाली कम्पनी के लिए ।

\* उ औपचारिक और उ अनौपचारिक पत्र लिखें ।

\* अध्यापक के पद के लिए एक स्वतंत्र बनाओ ।

\* पढ़ाये गये पाठों का सारांश लिखें ।

\* अनुच्छेद लेखन

\* सोशल साइट और विद्यार्थी

\* अंगरेजी में भारत के बहुत कदम

\* युद्ध वरदान या अभिशप



# PM SHRI KENDRIYA VIDYALAYA LOKRA

## artificial intelligence

### HOLIDAY HOMEWORK CLASS 9

**Activity 1:** Write a letter/ an email to future self in the word file and save it as pdf.

1. Imagine your future in the next 10 years (related to AI).
2. Type a letter or an email to your future self about what you want to see in the future or what you want to remind to your future.
3. The following points can be included in letter/email:
  - a. Start with your interests, hobbies, and skills.
  - b. Relate how AI can help you
  - c. Write about your career you want to pursue and how AI will make an impact on that.
4. Save the letter/ email in PDF format.

**Activity 2:** Share a minimum of five ideas about Smart Home and write them on the sheet as shown in the attached image (refer the attached form) and upload your pdf/image on the mentioned form.

**Activity 3:** How do you think Artificial Intelligence can help you as you go about your daily life? Write them on the sheet as shown in the attached image (refer the attached form) and upload your pdf / image on the mentioned form.

## HOLIDAY HOMEWORK FOR CLASS X MATHEMATICS

1. Complete your classwork and practical notebook till 8 May 2025.
2. Solve at least **15 extra questions from each chapter** (Classwork Notebook) that we have completed in class. Ensure that there should be 5 MCQs, 5 Assertion reasoning-based questions and 5 Previous year asked questions. You can take references from NCERT Exemplar, RD Sharma, Question bank, cbse website etc.
3. **ART INTEGRATED PROJECT** (Individual work)

Watch any 1 episode of the Eklavya 3030 series and prepare a project. Each episode discusses multiple topics and you can choose any single topic/activity for your project (File and Model/exhibit).

Marks will be deducted for copying your friend's work.

Come Fall in love with Math	<a href="https://www.youtube.com/watch?v=CHyRGInJcO0&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz">https://www.youtube.com/watch?v=CHyRGInJcO0&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz</a>
The adventures of A4 Sheet	<a href="https://www.youtube.com/watch?v=41sdyOCxivs&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=2">https://www.youtube.com/watch?v=41sdyOCxivs&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=2</a>
The wonder of calendar	<a href="https://www.youtube.com/watch?v=ItxF3cpdwaU&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=4">https://www.youtube.com/watch?v=ItxF3cpdwaU&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=4</a>
Math in vegetables	<a href="https://www.youtube.com/watch?v=2aEGg5TMdHs&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=8">https://www.youtube.com/watch?v=2aEGg5TMdHs&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=8</a>
Card Magic	<a href="https://www.youtube.com/watch?v=kVVzY9ffOjk&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=12">https://www.youtube.com/watch?v=kVVzY9ffOjk&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=12</a>
Life of PI	<a href="https://www.youtube.com/watch?v=xAi1tFWAWjE&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=16">https://www.youtube.com/watch?v=xAi1tFWAWjE&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=16</a>
Miracles of Paper	<a href="https://www.youtube.com/watch?v=qWr6Ek59JE&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=22">https://www.youtube.com/watch?v=qWr6Ek59JE&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=22</a>
MENSURATION -I	<a href="https://www.youtube.com/watch?v=QEktlX9dXeg&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=31">https://www.youtube.com/watch?v=QEktlX9dXeg&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=31</a>
MENSURATION- II	<a href="https://www.youtube.com/watch?v=y0V0YZBDAMA&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=32">https://www.youtube.com/watch?v=y0V0YZBDAMA&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=32</a>
3 TO INFINITY -I	<a href="https://www.youtube.com/watch?v=sH3N9o0Prdw&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=33">https://www.youtube.com/watch?v=sH3N9o0Prdw&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=33</a>
3 TO INFINITY -II	<a href="https://www.youtube.com/watch?v=nQt8tr9LABw&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=34">https://www.youtube.com/watch?v=nQt8tr9LABw&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=34</a>
COOL & CONFUSING CLOCKS	<a href="https://www.youtube.com/watch?v=S6RR7sYtLzE&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=43">https://www.youtube.com/watch?v=S6RR7sYtLzE&amp;list=PLmjuVk9xK8LraYfCi9G-675V81ECptFyz&amp;index=43</a>