



NEW ERA PUBLIC SCHOOL, PATNA

(Affiliated to CBSE, Delhi, Upto 10+2 Level)

Summer Vacation Homework (2025-26)

CLASS - X

Subject	HOMEWORKS
English	<p>1. Project (First Flight) Write about the life of Robert Frost as well as summary of any one of his famous works in 300 words, including his pictures. (in A4 Size Sheet)</p> <p>2. Project (Footprint without Feet) Write about the life, career and journey of Ruskin Bond, in 200 words, including his pictures. (in A4 Size Sheet)</p>
Social Science	<p>History 1. Make note completely. 2. Write about following personalities ➤ Neapolian ➤ Otto Von Bismarck ➤ Giuseppe Mazzini</p> <p>Geography 1. Make note properly with map work and exercise work. 2. Explain all the classification of soils. 3. Define Resources? Explain all the classification of resources with examples.</p> <p>Pol. Science Answer the following questions. 1. Power Sharing is desirable. Give any three pro-arguments. 2. Some social values neglected by the Sri Lanka govt. lead to tension in the country which were these social values? 3. "Power sharing in the basic spirit of democracy." Justify. 4. Make note complete.</p> <p>Economics 1. Make note complete. 2. Keeping in Mind the HDR, prepare a data for your family members based on their educational level, health status, PCI, BMI.</p>
Hindi	<p>1. अपने स्वभाव को निर्मल रखने के लिए कबीर ने क्या उपाय सुझाया है ? 2. श्री कृष्ण का चित्र बनाकर उसके रूप सौंदर्य का वर्णन मीरा के शब्दों में करें । 3. 'बड़े भाई साहब' पाठ में प्रयुक्त मुहावरे का संकलन तैयार करें । 4. 'परीक्षा का महत्व' विषय पर अनुच्छेद लिखें । 5. समाज में रिश्तों की क्या अहमियत है? 'हरिहर काका' पाठ के आधार पर अपने विचार प्रकट करें । 6. पदबंध के विभिन्न प्रकारों को सोदाहरण लिखें । 7. अपने किसी एक यात्रा - वृत्तांत को लिखें ।</p>
Maths	Complete chapter 10 and 11 from R S Agarwal in fair copy.
A.I	➤ Complete the Work of Unit -2 & 3 (Part-B), in School Fair Copy.

Std-10

Physics

A. Very Short Answer Type Questions

- Q.1** A ray of light is incident on a plane mirror, i being the angle of incidence. What is the deviation suffered by the ray of light?
- Q.2** A plane mirror reflects a pencil of light to form a real image. What is the nature of the pencil of light incident on the mirror?
- Q.3** Define principal axis of a spherical mirror.
- Q.4** What is the focal length of a plane mirror?
- Q.5** Two perpendicular plane mirror forms number of images of a point source of light.
- Q.6** What is the magnification produced by a plane mirror?
- Q.7** Which mirror would you use for shaving?
- Q.8** Suppose x and y are distances of object and image respectively from a mirror. What shall be the shape of the graph between $\frac{1}{x}$ and $\frac{1}{y}$ for a concave mirror ?

B. Short Answer Type Questions

- Q.9** An object is placed between two plane parallel mirrors. Why do the distant images get fainter and fainter?
- Q.10** Why mirrors used in search light are parabolic and not concave spherical?
- Q.11** You read a newspaper because of the light that it reflects. Then why do you not see even a faint image of yourself in the newspaper?
- Q.12** If you were driving a car, what type of mirror would you prefer to use for observing traffic at your back and why?
- Q.13** We known that plane and convex mirrors produce virtual images of objects. Can they produce real images under some circumstances ? Explain
- Q.14** The wall of a room is covered with perfect plane mirror. Two movie films are made, one recording the movement of a man and the other of his mirror image. From viewing the films later, can an outsider tell which is which?
- Q.15** A concave mirror is held in water. What would be the change in the focal length of the mirror?
- Q.16** What is the difference between the virtual images produced by (i) plane mirror, (ii) concave mirror, (iii) convex mirror?

- Q.17** Show that if a ray of light is reflected successively from two mirrors inclined at an angle θ , the deviation of the ray does not depend upon the angle of incidence.
- Q.18** Use the mirror equation to deduce that an object placed between f and $2f$ of a concave mirror produces a real image beyond $2f$.
- Q.19** Show that a convex mirror always produces a virtual image independent of the location of the object.
- Q.20** Prove that the virtual image produced by a convex mirror is always diminished in size and is located between the focus and the pole.
- Q.21** Show analytically that an object placed between the pole and focus of a concave mirror produces a virtual and enlarged image.
- Q.22** We know that a virtual image cannot be obtained on a screen. But when we see a virtual image, we are obviously bringing it on the retina (may be regarded as a screen) of the eye. Point out the contradiction, if any.



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Holiday Homework

Chemical Reactions & Equations

A. Very Short Answer Type Questions

Q.1 Why is that when a metal reacts with a non-metal, the reaction is always a redox reaction ?

Q.2 What are the two methods which can prevent the rancidity fatty foods ?

Q.3 Find the oxidising and reducing agent in the following reaction :
 $\text{PbS(s)} + 4\text{H}_2\text{O}_2\text{(aq)} \longrightarrow \text{PbSO}_4\text{(s)} + 4\text{H}_2\text{O(l)}$

Q.4 It is said that "decomposition of calcium carbonate to calcium oxide and carbon dioxide on heating is an important decomposition reaction used in various industries". Explain how ?

Q.5 What happen when green coloured crystals of ferrous sulphate are heated ? Which term is used to represent such type of reaction ?

Q.6 Write a balanced chemical equation for the following reactions ? Use symbols to make equations more informative.

- Barium chloride reacts with zinc sulphate forming zinc chloride and precipitates of barium sulphate.
- Aluminium metal displaces manganese in liquid form when heated with manganese dioxide.

Q.7 Consider the following reaction :
 $\text{SO}_2\text{(g)} + 2\text{H}_2\text{S(g)} \longrightarrow 3\text{S(s)} + 2\text{H}_2\text{O(l)}$

- Name the substance oxidized
- Name the oxidising agent.
- Name the substance reduced.
- Name the reducing agent.

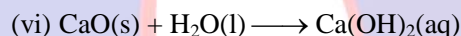
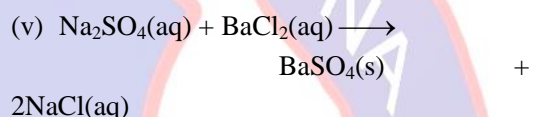
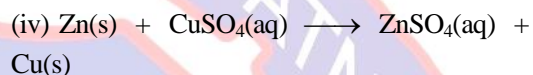
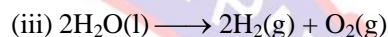
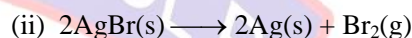
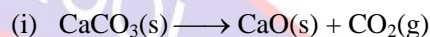
Q.8 Gives suitable reason for the following -

- Can a displacement reaction be a redox reaction ?

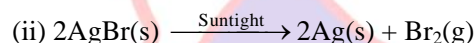
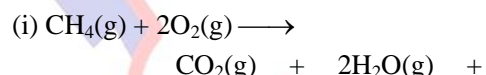
(ii) Gold and platinum do not get affected even if there is presence of moist air or acidic gases. Why

(iii) Corrosion of aluminium is considered to be advantageous ?

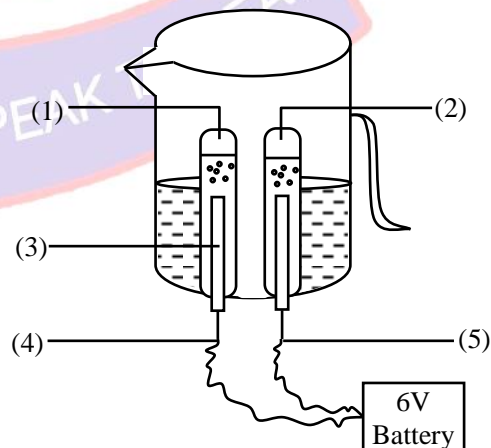
Q.9 Classify each of the following reaction as : thermal decomposition, displacement, double displacement, electrical decomposition, combination or photo decomposition reaction.



Q.10 [A] What interpretations can be made from the following reaction :



[B] Observe the figure carefully and answer the following question :





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Holiday Homework

- (i) Label the parts 1 to 5
- (ii) Why is the amount of gas collected in one of the test-tube is double of the amount collected in the other ?
- (iii) How you will test the presence of gases in both the test tubes ?

Q.11 What is a chemical equation ?

Q.12 What is a skeletal equation ?

Q.13 Name the term used for the solution of a substance in water

Q.14 In electrolysis of water. Why is the volume of gas collected over one electrode double that of gas collected over the other electrode

Q.15 Give reason for keeping hydrogen peroxide in coloured bottles ?

Q.16 Balance the following chemical equation :
 $\text{NaOH} + \text{H}_2\text{SO}_4 \longrightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$

Q.17 On the basis of the following reactions, indicate which is most reactive and which is least reactive metal out of zinc, copper and iron.



Q.18 In a chemical equation, what do the notations (s), (l) and (g) stand for ?

Q.19 Balance the following chemical equation :
 $\text{FeCl}_2 + \text{H}_2\text{S} \longrightarrow \text{HCl} + \text{FeS}$

Q.20 Write two conditions for rusting of an iron article.

B. Short Answer Type Questions

Q.21 How do we come to know that a chemical reaction has taken place ?

Q.22 What is an oxidation reaction ? Identify in the following reaction :

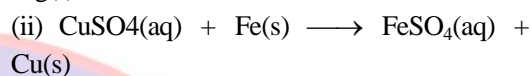
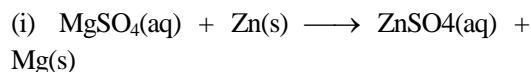
(i) The substance oxidised,

(ii) The substance reduced :



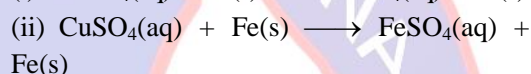
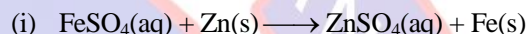
Q.23 Why cannot we stir silver nitrate solution with copper spoon ?

Q.24 Among the following displacement reactions which one will take place and which one will not occur and why ?



Q.25 What is an oxidation reaction ? Give an example of oxidation reaction. Is oxidation an exothermic or an endothermic reaction.

Q.26 On the basis of the following chemical equations, find out which is the least reactive metal amongst iron, copper and zinc ?

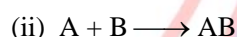
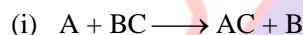


Q.27 What happens when iron nails are put in copper sulphate solution ?

(i) Write the equation for the reaction that takes place

(ii) Name the type of reaction involved

Q.28 What type of chemical equation are the following equations :



Q.29 Why does stale food give a bad taste and bad smell ?

Q.30 Why do silver, gold and platinum not corrode in moist air ?

Std--10
BIOLOGY

LIFE PROCESSES

1. How is small intestine designed to absorb digested food ?
2. What are stomata ? Draw a labeled diagram of stomata.
3. Write the equation for the process of breakdown of glucose in a cell :
i) in the presence of oxygen. ii) in the absence of oxygen.
4. Write the differences between inhalation and exhalation.
5. List the three events which occur during photosynthesis.
6. How does transpiration help in upward transport of substances.
7. Write the functions of the components of blood.
8. Why is small intestine longer in herbivores than in carnivores ?
9. Explain the cause of cramps after excessive physical exercise.
10. Why is the rate of breathing in aquatic organisms much faster than that seen in terrestrial organisms.

LIFE PROCESSES Long answer type questions

1. i) Explain how does the exchange of gases occur in plants across the surface of stems, roots and leaves.
ii) How are water and minerals transported in plants ?
2. (a) Draw a diagram to show open stomatal pore and label on it:
i) guard cells b. chloroplast
ii) State two functions of stomata.
iii) How do guard cells regulate the opening and closing of stomatal pore?
3. i) Draw a schematic representation of transport and exchange of oxygen and carbon dioxide during transportation of blood in human beings and label on it: Lung capillaries, Pulmonary artery to lungs, Aorta to body, Pulmonary veins from lungs.
ii) What is the advantage of separate channels in mammals and birds for oxygenated and deoxygenated blood?
4. Draw a sectional view of the human heart and label on it – Aorta, Right ventricle and Pulmonary veins.
5. State the functions of the following components of transport system:
i) Blood ii) Lymph
6. i) List the three events that occur during the process of photosynthesis. Explain the role of stomata in this process.
ii) Describe an experiment to show that “sunlight is essential for photosynthesis.”
7. State the role of the following in human digestive system:
i) Digestive enzymes ii) Hydrochloric acid iii) Villi
8. Draw the diagram of alimentary canal of man and label the following parts. Mouth, Oesophagus, Stomach, Intestine
9. How do carbohydrates, proteins and fats get digested in human beings?
10. Explain the three pathways of breakdown of glucose in living organisms.

∴ Prepare a art integrated project/Chart/Model on any one topic :

1. Human Digestive System
2. Human Respiratory System
3. Human Circulatory System
4. Human Excretory System
5. Stomata and Events of photosynthesis.



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HOLIDAY HOME-WORK NOTICE **SESSION - (2025-26)**

- 1) Do all the homework in Homework copy.
- 2) Write in cursive handwriting only.
- 3) Holiday Homework contains 5 Marks for each subject.
- 4) Virtual Summer Camp between 27.05.2025(Tuesday) to 31.05.2025 (Saturday).
- 5) Summer Vacation will be between 24/05/2025 (Saturday) to 21/06/2025(Saturday). School will re-open on 23/06/2025(Monday).
- 6) Completed homework copies need to be submitted on June 17-18, as teachers will be available to check them. Copies won't be evaluated if not submitted.
- 7) You can also get HOLIDAY HOMEWORKS from school website: - www.newerapublicschoolpatna.org