

Winter Holiday Homework Class- IX

English

Q.1. Diverse dance forms demonstrate the unity in diversity. Write a report in about 80-400 words on the 'Regional Dance Competition' you have witnessed.

Q.2. Write a bio-sketch about the following Authors/Poets along with the photograph.

- a) Emily Dickenson
- b) Percy Bysshe Shelley
- c) Robert Frost

Q.3. Make a collage on the topic 'Peace and Unity'.

Q.4. Complete the given worksheet.

Note:- H.Hw to be done in English Notebook only.

Hindi

प्र.1. वार्षिक परीक्षा हेतु अनुमानित प्रतिदर्श प्रश्न-पत्र – 1 (Page no- 428-432 Examnote)

प्र.2. प्रतिदर्श प्रश्न-पत्र – 2

क) दोनों प्रतिदर्श पत्र हिंदी रजिस्टर में हल करें।

ख) सुंदर, स्पष्ट, लेख व सही उत्तर लिखें तभी S.E.A. में अंक दिए जाएंगे।

Maths

Q.1. Solve worksheet of Ch-1 to Ch-5 from workbook.

Computer –

Q.1. Look at the word processor you use at your school and at home. Get a professional 'Visiting Card' from your father or any one known to you. Try to create similar card using your word processor.

Q.2. Make a PPT in impress of our school 'Sports Day'.

Note:- Submit colour printout of both visiting card and PPT.

Chemistry

Atoms and molecules Objective type questions

1. All matter is made up of very small indivisible particles called atoms. This statement is one of the assumptions of

a) Rutherford's theory b) Bohr's theory c) Dalton's atomic theory d) Kinetic theory of gases

2. Hydrogen was passed over heated 2g copper oxide till only copper was left. The mass of copper obtained was 1.6 g. The percentage of oxygen in copper oxide is

a) 80% b) 60% c) 40% d) 20%

3. Which of the following is the correct symbol for copper

a) Co b) Cu c) Cp d) Cr

4. Which of the following molecule has an atomicity of four

a) H₂O b) NH₃ c) CH₄ d) CO₂

5. Molecular mass of ozone is

a) 16u b) 32u c) 48u d) 64u

6. The correct formula of aluminium sulphate is

a) AlSO₄ b) Al₂SO₄ c) Al₃(SO₄)₂ d) Al₂(SO₄)₃

7. The atomicity of Ozone, Sulphur Phosphorus and Argon are respectively

a) 8,3,4,1 b) 1,3,4,8 c) 4,1,8,3 d) 3,8,4,1

8. Number of moles of water in 180g of water will be

a) 5 b) 10 c) 15 d) 18

9. Which of the following has the same molecular mass as its atomic mass

a) nitrogen b) neon c. oxygen d) chlorine

10. 1 Mole of atoms is

a) Gram atomic mass b)Both (a) and (b) c) None of these d) 6.022 X 10²³ atoms

Q1. Write down the chemical formulae for the following:

1)Hydrogen chloride

- 2) Aluminium hydroxide
- 3) Hydrogen sulphide
- 4) Ammonium sulphate
- 5) Calcium phosphate
- 6) Sodium carbonate
- 7) Copper (II) sulphate
- 8) Aluminium (III) chloride
- 9) Magnesium sulphate
- 10) Potassium nitrate

Q1 Define the following b) Atom b) Molecule c) Atomic mass d) Molecular mass

Q2 What do you understand by a polyatomic ion? Give two examples.

Q3 Write the formula of limestone, Name the elements present in it.

Q4 What is the contradiction against Dalton's atomic theory in the formula $C_{12}H_{22}O_{11}$.

Q5 An element M forms the oxide M_2O_3 . What will be the formula of its carbonate?

Q6 Give the names of any five elements whose names have been derived from Latin. Give their Latin names and symbols.

Q7 Define Atomic mass unit.

Q8 What is the difference between $2N$ and N_2

Q9 Define law of constant composition. Illustrate the law by taking an example of CO_2 .

Q10 State and explain the Law of conservation of mass. Give an activity to verify the law

Structure of Atom Assignment

- 1) Why is an atom neutral in spite of the charged particles present in it?
- 2) State the similarities and dissimilarities between a) an electron and a proton b) a proton and a neutron
- 3) Which experiment established the presence of atomic nucleus? What features of the nucleus were deduced from this experiment?
- 4) Write the electronic configuration of an element X with atomic number 15.

- 5) Why are Bohr's orbits called stationary states?
- 6) Explain why ${}^{14}_6\text{C}$ and ${}^{14}_7\text{N}$ are not considered isotopes?
- 7) Why do elements have fractional atomic masses? Explain giving example?
- 8) The atomic number of two elements A and B are 18 and 16 respectively. Which of the two should be chemically more reactive and why?
- 9) What are the numbers of protons, neutrons and electrons present in ${}^{27}_{59}\text{Co}$ and ${}^{47}_{108}\text{Ag}$?
- 10) What is the relationship between valency and valence electrons in case of metals and non metals. Classify the following as metals or non metals on the basis of their valency. Hydrogen, Magnesium, Carbon, Chlorine and Oxygen?
- 11) The mass number and atomic number of an isotope of uranium are 235 and 92 respectively. Calculate the number of protons and neutrons in the nucleus of the atom?
- 12) Give any two applications of isotopes.
- 13) Naturally occurring copper consists of isotopes of ${}^{29}_{63}\text{Cu}$ and ${}^{29}_{65}\text{Cu}$ in the ratio of 8: 3. Calculate the average atomic weight of copper .
- 14) Given that percentage abundance of the isotope of ${}^{10}_{20}\text{Ne}$ is 90% and that of the isotope of ${}^{10}_{22}\text{Ne}$ is 10%, calculate the average atomic mass of neon.
- 15) What is the electronic configuration of Na^+ ? If atomic number of Na atom is 11 and mass number is 23, what is the atomic number and mass number of Na^+ ?

Biology

1. What do you mean by bio geo chemical cycles? Write its significance .
2. Explain nitrogen cycle in details.
3. what do you mean by carbon foot prints? How does carbon cycle help to balance O_2 - CO_2 in nature?
4. Define pollution. Describe three ill effects and their remedies.
5. Differentiate:
 - a. annelida/arthropoda
 - b. amphibia/reptilia
 - c. nematoda/platyhelminthes
6. Why do you think that mammals are superior animals? List five points.
7. Find out the cause(pathogens), symptoms and transmission of the following diseases:

Jaundice, typhoid, malaria, dengue, chikunguniya, filaria, dysentery, AIDS

8. Draw, label and compare: skeletal/ cardiac and smooth muscles, parenchyma/collenchyma/sclerenchyma tissues, gymnosperm/angiosperm, dicot/monocots

9. Draw a poster to prevent any type of pollution. Decorate it with colours.

10. Read newspaper daily and cut-paste five relevant news (related) with your biology/science syllabus.

Physics-

Chapter 11: Work, Energy and Power

1. Under what conditions work is said to be done?
2. Derive the formula for work done by a constant force.
3. Give few examples where energy is possessed by a body due to its change in shape.
4. State and prove the law of conservation of energy.
5. Is it possible that force is acting on a body but still work done is zero? Explain.
6. A rocket of mass 3×10^6 kg takes off from a launching pad and acquires a vertical velocity of 1 km/s at an altitude of 25 km. Calculate (a) the potential energy and (b) the kinetic energy. ($g = 9.8 \text{ m/s}^2$)
7. If a man lifts a load up with the help of a rope such that it raises the load of mass 50 kg to a height of 20 m in 100 sec. Find the power of man.
8. A ball is dropped from a height of 5 m. Find the velocity of the ball just before it reaches the ground. Do you require the value of mass to find the velocity?
9. Two persons A and B do same amount of work. The person A does that work in t_1 sec and the person B in t_2 sec. Find the ratio of power delivered by them.
10. Why do our hands become warm when rubbed against each other? Explain.
11. The kinetic energy of a body of mass 15 kg is 30 J. What is its momentum?
12. Give an example for each of the following energy conversion: (1) electrical energy to kinetic energy. (2) Chemical energy to electrical energy (3) sound energy to electrical energy.
13. Two bodies have same momentum. Which will have greater kinetic energy- heavier body or lighter body?
14. An electric bulb of 60 W is used for 6 h per day. Calculate the units of energy consumed in one day by the bulb.

15. A boy of mass 50kg runs up to a stair case of 45 steps in 9s. If the height of a step is 15cm, find his power. ($g = 10\text{m/s}^2$)
16. Two particles of masses 1g and 2g have equal momentum. Find the ratio between their kinetic energies?
17. What will be the work done by the string, when a stone is tied to a string and whirled in a circle?
18. A locomotive exerts a force of 7500N and pulls a train through 1.5 km. How much work is done by locomotive?
19. What work a boy of mass 50kg will do in order to increase running speed from 9km/h to 18km/h.
20. The speed of a moving body is halved. What is the change in its K.E.?
21. State the energy changes taking place in the following cases: (1) A car moves up a hilly road.
- (2) a stone projected vertically upward returns.
22. When we cut a log of wood with a saw it becomes warm, why?

Chapter 9: Force and Laws of motion

- 1 Why do passengers tend to fall sideways when the bus takes a sharp turn?
- 2 Why are road accidents at high speed very much worse than accidents at low speed?
- 3 Name the action and reaction forces acting during rocket propulsion?
- 4 Why do we have to run in the direction of the moving bus while getting down from the bus?
- 5 Why does an electric fan continue to rotate for sometime after the current is switched off?
- 6 A person hit harder when he falls on a concrete floor than when he falls on a heap of sand from the same height. Why?
- 7 Two identical bullets are fired one by a light rifle and another by a heavy vehicle with same force. Which rifle will hurt more and why?
- 8 Define impulse. Show that impulse of a force is equal to the change in momentum?
- 9 It is difficult to balance our body when we accidentally step on a peel of banana. Explain based on Newton's third law of motion?
- 10 A bullet fired against a glass window pane make a clear hole in it, but a stone smashes the glass pane. Why?
- 11 Define inertia. How does it depend on mass of the object? Explain
- (a) Dusting of a carpet by beating it with a stick.

(b) Removal of water from wet cloth?

12 A ball is suspended by a cord from the ceiling of a car. What will be the effect on the position of the ball if

(i) The car is moving with constant velocity?

(ii) The car is in accelerated motion?

(iii) The car is turning towards right?

13 Give reason and give the law related to these statements

(a) It is easier to push an empty box than a box full of books.

(b) It is difficult for a fireman to hold a hose which ejects large amount of water with high velocity.

14. State and prove the law of conservation of momentum?

15. In the diagram below, a 1 kg mass on a rough horizontal surface is joined to a 2 kg mass by a light, inextensible string running over a frictionless pulley. Will the 1 kg mass move at a lower, higher or zero acceleration?

Explain based on Newton's laws of motion and state the law.

16. A bullet leaves a rifle with a velocity of 100m/s and the rifle of mass 2.5 kg recoils with a velocity of 1m/s. Find the mass of the bullet?

17. A cricket ball of mass 0.15kg is moving with a velocity of 1.2m/s. Find the impulse on the ball and force applied by the player if he is able to stop the ball in 0.18s?

18. Two bodies of mass 1kg and 2kg moving in the direction opposite to each other collide with

a speed of 5m/s. Calculate the total momentum of the system before collision.

19. A speedboat has a mass of 500kg. It starts from rest and travels 200m in 12seconds. The boat undergoes constant acceleration during 12seconds. Find the magnitude of unbalanced force acting on the boat?

20. A motor car of mass 200kg is moving with a certain velocity. It is brought to rest by the application of brakes, within a distance of 20m when the average resistance being offered to it is 500N. What was the velocity of the motor car?

21. A man throws a ball weighing 500g vertically upwards with the speed of 10m/s, find

(a) Initial momentum.

(b) Its momentum at the highest point.

22. A cricket ball of mass 0.15 kg is moving with a velocity of 1.2m/s . Find the impulse on the ball and average force applied by the player if he is able to stop the ball in 0.18s?

23 . The velocity of a body of mass 10kg increases from 4m/s to 8m/s when a force acts on it for 5s. Find (a) the momentum before the action of force (b) the momentum after the action of force (c) the magnitude of force.

S.ST

Q1 What was the root of all ills in society, according to socialism? (1)

Q2 Folding and faulting are the result of which geographical actions? (1)

Q3 Write the cause of the Great Agrarian Depression of 1930. (1)

OR

Who was the first Inspector – General of forests in India? (1)

Q4 Name the strait separating Sri Lanka from India. (1)

Q5 Which wetland of India is very popular with flamingoes which are nesting? (1)

Q6 What is human capital? (1)

Q7 What are ‘Constituent Assembly Debates’ ? (1)

Q8 What do you understand by the different dimensions of food security? (3)

Q9 ‘Lok Sabha is more powerful than Rajya Sabha’. Analyse the statement. (3)

Q10 What problems do farm labourers face in terms of employment? (3)
Explain any three problems .

Q11 Explain the major reasons for the reduction in volume of water in most of the rivers. (3)

Q12 Explain the new education policy introduced by Hitler in Germany. (3)

Q13 Differentiate between the General Election & By-election. (3)

Q14 What was the great fear in French Revolution ? (3)

Q15 What are the different methods to estimate poverty? (3)

Q16 Why do western ghats receive more rainfall than the eastern ghats? (3)
Explain briefly.

Q17 What is the National Population Policy (NPP 2000)? Why was NPP 2000 Initiated by the govt? (3)

Q18 Explain the meaning of Representative democracy. How is it significant in the contemporary world? (3)

Q19 Where did the Great Famine of 1943 take place? How many people were killed in this famine? How are we prepared to handle such a situation if it occurs now? (5)

Q20 Why & how were the native Americans driven westwards? (5)

OR

How did the pastoralists cope with the serious shortage of pastures? Explain. (5)

OR

How did the British exploit the forests resource of India for their economic development ? (5)

Q21 Describe the various drainage patterns of rivers, giving some examples of Indian rivers. (5)

Q22 What is unemployment? Name two types of unemployment prevailing in India. What are the disadvantages of unemployment? (5)

Q23 Right to Constitutional Remedies is very special right. What is so special about this right? (5)

Q24 What were the main causes of the Civil War between Bolsheviks & the Russian army, the non-Bolsheviks socialists? (5)

Q25 “Formation of Indian Constitution was no less a struggle than that of South Africa”. Do you agree? Explain with five arguments. (5)

Q26 On the outline map of world political, locate & label the countries that were Axis Powers in Second World War. (2)

Q27 On the given outline map of India, label the following (1x3=3)

- (a) One National Park in the North-Eastern part of the country.
- (b) The river flowing to the North of the Tapi & having its estuary in Gulf of Khambat.
- (c) Deccan Plateau

Winter Holiday Homework Class- X

English

Q.1. Read the novel Anne Frank and write the character sketch of :-

- * Anne Frank
- * Otto Frank
- * Edith Frank
- * Margot Frank in 80 words

Q.2. Write three sentences giving the examples of the following literary device.

- a) Simile b) Metaphor c) Imagery
d) Irony e) Personification d) Hyperbole

Note- English H.Hw to be done in English Notebook only.

Hindi

प्र.1. **Sample Paper** प्रतिदर्श प्रश्न-पत्र – 7 (E.A.D)

प्र.2. प्रतिदर्श प्रश्न-पत्र – 8 (E.A.D)

क) दोनों प्रतिदर्श प्रश्न पत्र हिंदी रजिस्टर में हल करें।

Oswal

प्र.1. पेज नं –66 स्वतः मूल्यांकन प्रश्न- पत्र – 1

प्र.2. पेज नं – 71 स्वतः मूल्यांकन प्रश्न-पत्र – 2

क) सुंदर स्पष्ट व सही उत्तर लिखें- तभी S.E.A. में अंक दिए जाएँगे।

Maths

Q.1. Solve any three sample paper and paste them in notebook.

Chemistry

Q1. Explain Thermal Decomposition and Photolytic decomposition reactions with example. .

Q2. Balance the following equations :- 1) $Fe_2O_3 + Al \rightarrow Al_2O_3 + Fe$ 2) $FeSO_4 \rightarrow Fe_2O_3 + SO_2 + SO_3$

Q3. What happens i) when quicklime is added to water? ii) Zinc metal is dipped in copper sulphate solution .

Q4. Translate the following into balanced chemical equations :

1) Steam is passed over heated iron to form magnetic oxide of iron (Fe_3O_4) and hydrogen.

2) Carbon disulphide burns in air to give carbon dioxide and sulphurdioxide .

3) Magnesium burns in presence of Nitrogen to form Magnesium nitride.

Q5. What is an indicator? Name three common indicators and their effect on acids and bases.

Q6. Crystals of a substance changed their colour on heating in a closed vessel but regained it after some time when they were allowed to cool down .Name one such substance .

Q7. Identify the compound of calcium which is yellowish white powder and is used for disinfecting drinking water. How it is manufactured? Write chemical equations for the reactions involved. What happens when it is left exposed to air?

Q8. With the help of an activity show that hydrochloric acid solution conducts electric current.

Q9. Name the products obtained after the electrolysis of aqueous sodium chloride? (Give the reaction involved)

Q10. Give reasons;

a) Acid must be added to water and not vice versa during dilution.

b) Solution of sulphuric acid conducts electricity whereas alcohol does not.

c) Cake rises on adding baking powder.

d) Dry ammonia gas has no action on litmus paper, but a solution of ammonia in water turns red litmus blue.

e) Tartaric acid is an important ingredient of baking powder.

Q11. Identify the compound of calcium which is used for plastering of fractured bones. With the help of chemical equation show how it is prepared. What special precautions should be taken during the preparation of this compound?

Q12 Write balanced equations for the following reactions ;

1) Dilute sulphuric acid reacts with aluminium powder.

2) Dilute hydrochloric acid reacts with iron fillings.

3) Dilute sulphuric acid is added to solid sodium carbonate.

Q13. An element on burning in air forms an oxide XO_2 which when dissolved in water turns blue litmus red. Identify if 'x' is a metal or a non metal. Justify your answer.

Q14 Name the reducing agent in the reaction $3MnO_2 + 4Al \rightarrow 3Mn + 2Al_2O_3$ For the reduction of metal oxide to metal, suggest a reducing agent cheaper than aluminium

Q15. Give reason:

(i) Metals are regarded as electropositive metals.

(ii) Aluminium which is more reactive than iron does not corrode like iron.

(iii) When a piece of copper metal is added to a solution of zinc sulphate, no change takes place, but the blue colour of copper sulphate fades away when a piece of zinc is placed in its solution.

(iv) Aluminium cannot be extracted by using carbon as a reducing agent.

(v) Ionic compounds in solid state do not conduct electricity and they do so in molten state.

(vi) When calcium is added to water, the gas evolved does not catch fire but the same gas evolved on adding sodium metal to water catches fire.

Q 16. Name a metal which does not react with cold water as well as hot water but reacts with steam. Give the reaction involved.

Q17. Describe with the help of a labeled diagram the method of refining of copper by electrolytic method. How are the less reactive metals extracted? Explain with the help of an example.

Q18. An ore on heating in the absence of air gives carbon dioxide. Which method will you use to convert the ore into oxide form? Explain.

Q19. What are amphoteric oxides? Show by giving equations that Aluminium oxide is an amphoteric oxide.

Q 20. What are alloys? What properties of alloys make it useful over pure metals. Explain with examples. Q10. Show the formation of Na_2O by the transfer of electrons between the combining atoms.

Q21. What are periods and groups?

Q22. State modern periodic law.

Q23 Name the first and last member of the third period

Q24 . Name the following a. The sum of the number protons and neutrons in the atoms. b. Most electro negative element. c. Most electro positive element.

Q25 Given below is a list of elements that form the periodic table: S, Al, C, Ar, Mg, F, O and B Choose from the above list, 1)the most metallic element 2)the most electronegative element 3)elements of period 3 of the periodic table

Q26. Name of the element Two elements with symbol X (atomic no. 11) and Y (atomic no. 13) are placed in the III period of the modern periodic table –

(i) Which amongst the two has more metallic character?

(ii) Calculate the valency of each element.

(iii) Element ‘Y’ is smaller than ‘X’ in terms of atomic size. Is the statement true, justify?

Q.27 a) What happens to the size of the atom down the group. b) Classify the following elements as metal, non-metal and metalloid : (i) Calcium (ii) Sulphur c) Explain how the tendency to form electropositive ions change on moving down a group ?

Q28. An element has atomic no17. Predict its

a) Valency b) Group number c) Whether it is a metal or non-metal d) Nature of the oxide found

PHYSICS

1. a) Explain the following terms used in relation to defects in vision and correction provided by them:

(i) Myopia (ii) Bifocal lenses (iii) Far-sightedness.

b) Why is the normal eye unable to focus on an object placed within 10 cm from the eye?

2. The values of current I flowing in a given resistor for the corresponding values of potential difference V across the resistor are given below:

I(ampere)	0.5	1.0	2.0	3.0	4.0
V(volt)	1.6	3.4	6.7	10.2	13.2

Plot a graph between V and I and calculate the resistance of the resistor.

OR

In a given ammeter, a student sees that needle indicates 17 divisions in ammeter while performing an experiment to verify Ohm's law. If ammeter has 10 divisions between 0 and 0.5A,

then what is the value corresponding to 17 divisions?

3. Draw a path of light ray passing through a prism. Label angle of incidence and angle of deviation in the ray diagram.
4. Distinguish between a real and a virtual image of an object. What type of image is formed (i) by a plane mirror, (ii) on a cinema screen?
5. Describe how hydro-energy can be converted into electrical energy. Write any two limitations of hydro energy.
6. A student using a convex lens of focal length 20 cm, formed image of an object placed in front of the lens on one side a screen placed on the other side of the lens. He noted the following reading for object distance (u) and image distance (v) from lens.

S.No	1	2	3	4	5	6
u (cm)	60	45	40	32	35	15
v (cm)	30	36	45	53	25	10

Without using lens formula, comment, which of these observations are wrong. Justify your answer.

7. Study the circuit shown:

A current of 0.6 A is shown by ammeter in the circuit when the key K1 is closed. Find the

resistance of the lamp L. What change in current flowing through the $5\ \Omega$ resistor and potential

difference across the lamp will take place, if the key K2 is also closed. Give reason for your answer.

8. Explain the use of an electric fuse. What type of material is used for fuse wire and why?

OR

Explain the underlying principle and working of an electric generator by drawing a labelled diagram.

9. (a) Define dispersion of light. How is scattering of light different from dispersion ? Give one example of natural phenomenon based on each of these.

(b) A beam of light consisting of red, blue and yellow is incident on the prisms as shown below. Complete the diagram to show refracted and emergent ray

10. Aishwarya once visited her uncle's house. Somehow she came to know about her uncle's illness and also about the neglect of MRI (Magnetic resonance imaging) due to its high cost. She then not only collected money from some of her family friends but also convinced her uncle for the test. The reports came after the test helped the doctors to treat him well. After getting well, uncle arranged the money and returned to her saying thanks. Then her uncle did a brief research about the test and found that it was expensive because of its set-up, that needs a strong magnetic fields and pulses of radio wave energy.

(a) What were the values shown by Aishwarya and her uncle ? (b) How the magnetic field produced due to a circular coil depends on its radius? (c) State the characteristics of magnetic field lines produced by current carrying circular coil.

11. What are the factors on which the resistance of a conductor depends? OR While experimentally verifying Ohm's Law a student observed that the pointer of the voltmeter coincides with 15th division when the voltmeter has a least count of 0.05 V. Find the observed reading of voltmeter.

12. A student performed an experiment for the image formation by a convex lens at different positions of an object. If focal length of lens is 15 cm. Match the following :

Position of object

Position of the image

(a) At 15 cm from convex lens

(a) At 30 cm from convex lens

(b) At 30 cm from lens

(b) On the same side of an object

(c) Beyond 30 cm of lens

(c) At infinity

(d) At 10 cm from lens

(d) Between 15 cm and 30 cm of lens

13. Why is bio-gas considered an ideal domestic fuel?

14. What is the minimum number of rays required for locating the image formed by a concave mirror for an object? Draw a ray diagram to show the formation of a virtual image by a concave mirror.

15. Name the electric device that converts electrical energy into mechanical energy. Draw the labelled diagram and explain the principle involved in this device. OR (a) Distinguish between the terms “overloading and short circuiting” as used in domestic circuits. (b) Why are the coils of electric toasters made of an alloy rather than a pure metal?

16. Find out the reading of ammeter and voltmeter in the circuit given below :

17. (a) If the image formed by a mirror for all positions of the object placed in front of it is always diminished, erect and virtual, state the type of the mirror and also draw a ray diagram to justify your answer. (b) Define the radius of curvature of spherical mirrors. Find the nature and focal length of a spherical mirror whose radius of curvature is +24 cm.

18. (a) What is a magnetic field? How can the direction of magnetic field lines at a place be determined? (b) State the rule for the direction of the magnetic field produced around a current carrying conductor. Draw a sketch of the pattern of field lines due to a current carrying

conductor. Draw a sketch of the pattern of field lines due to a current flowing through a straight conductor.

19. The magnification of an image formed by a lens is -1 . If the distance between the object and its image is 60 cm, what is the distance of the object from the optical centre of the lens? Find the nature and focal length of the lens. If the object is displaced 20 cm towards the optical centre of the lens, where would the image be formed and what would be its nature? Draw a ray diagram to justify your answer.

20. Two lamps, one rated 60 W at 220 V and the other 40 W at 220 V, are connected in parallel to the electric supply at 220 V. Draw a circuit diagram to show the connections. Calculate the current drawn from the electric supply. OR Draw a schematic diagram of an electric circuit comprising of 3 cells and an electric bulb, ammeter, plug-key in the ON mode and another with same components but with two bulbs in parallel and a voltmeter across the combination.

21. Two resistors $3\ \Omega$ and unknown resistor are connected in a series across a 12 V battery. If the voltage drop across the unknown resistor is 6 V, find (a) potential across $3\ \Omega$ resistance (b) the current through unknown resistor 'R' (c) equivalent resistance of the circuit.

22. (a) Define the following terms in the context of spherical mirrors : (i) Pole (ii) Centre of curvature (iii) Radius of curvature (iv) Principal axis (b) Draw ray diagrams to show the principal focus of (i) a concave mirror, and (ii) a convex mirror.

23. (a) What is a solenoid? Draw a sketch of the pattern of field lines of the magnetic field through and around a current carrying solenoid. (b) Consider a circular loop of a wire lying in the plane of the table. Let the current pass through the loop clockwise. Apply the right hand rule to find out the direction of the magnetic field inside and outside the loop.

24. A student suffering from myopia is not able to see distinctly the objects placed beyond 5 m. List two possible reasons due to which this defect of vision may have arisen. (a) With the help of ray diagrams, explain (i) why the student is unable to see distinctly the objects placed beyond 5 m from his eyes. (ii) the type of the corrective lens used to restore proper vision and how this defect is corrected by the use of this lens. (b) If, in this case, the numerical value of the focal length of the corrective lens is 5 m, find the power of the lens as per the new Cartesian sign convention.

25. 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?

BIOLOGY

1. Definitions-

Pollination, fertilisation, contraception, biodiversity hot spots, life process, cellular respiration, phytohormones, biodegradable, sustainable development, growth inhibitors, synapse, motor end plate,,

Evolution, fossils, connecting link (Archaeopteryx). Genetic drift, reproductive isolation, khadins

2. Full forms-

AIDS, HIV, STDs, ADH, ACTH, TSH, GH, ABA, GAP

3. Short notes (3 marks)-

- | | |
|----------------------------------|---|
| a. Rain water harvesting | b. People's participation to conserve forests |
| c. Big dams | d. Stake holders of forest |
| e. fate of glucose in the body | f. breathing process |
| g. formation of urine | h. double fertilization in angiosperms |
| i. monohybrid and dihybrid cross | j. phototropism |
| k. geotropism l. hydrotropism | m. bio magnification |
| n. speciation | o. natural selection |

4. Differences-

Aerobic/anaerobic respiration asexual/sexual reproduction internal/external fertilization

Nastic/tropic movements pepsin/trypsin self/cross pollination

micro/macro evolution

TSH/Thyroxine anterior/posterior pituitary gland diabetes mellitus/insipidus

Insulin/glucagon acquired/inherited traits homologous/analogous organs testes/ovary

Unisexual/bisexual flowers excretion/egestion breathing/respiration
pollination/fertilisation

5. source , composition, functions of-

a. seminal fluid b. placenta c. saliva d. gastric juice e. bile

6. Practice the following terms 10 times each-

Saffranine, glycerine, sphygmomanometer, haemodialysis,

7. Practice the following important diagrams, label and write the function of each part-

a. Human alimentary system b. double circulation through human heart c. reflex action

d. neuron e. nephron f. urinary/excretory system g. 5 types of asexual reproduction

h. female reproductive system i. germination of a seed (all seed parts) j. a bisexual flower
k. stomata

8. Prepare a table of plant and animal hormones, their sources, target organs, role-normal and abnormal.

9. Mention their contributions-(1 mark)

Mendel Darwin Haeckel Amrita Devi Bishnoi

Mr. A K Banerjee Dr. William Harvey Carl Landsteiner

S.ST

General Instructions:

- (i) The question paper has 28 questions in all. All questions are compulsory.
- (ii) Marks are indicated against each question.
- (iii) Questions from serial number 1 to 7 are very short type questions. Each question carries one mark.
- (iv) Questions from serial number 8 to 18 are 3 marks questions. Answer of these questions should not exceed 80 words each.
- (v) Questions from serial number 19 to 25 are 5 marks questions. Answer of these questions should not exceed 100 words each.
- (vi) Question numbers 26 & 27 are map questions from History with 1 mark each.
- (vii) Question number 28 is map question of 3 marks from geography.
- (viii) Questions at serial Number -20, 22, 24 & 25 have Internal Choice. Attempt any one option out of the given in each of these questions.

Q1 Name the author of the famous novel 'Anandamath'? (1)

Q2 Which two languages are generally spoken in Belgium? (1)

Q3 State the importance of Rio Convention. (1)

- Q4 What are the factors important for development other than income? (1)
- Q5 What do you mean by 'coming together federation'? (1)
- Q6 Write one main provision of NREGA. (1)
- Q7 Which material is found in Kundremukh mines? (1)
- Q8 What were the circumstances which led to Jallianwalla Bagh incident? Describe in brief the reaction of the people immediately after the incident. (3)
- Q9 State any three important features of 'Civil Rights Movement' of the USA during 1954 – 1968. (3)
- Q10 Explain any three reasons due to which large dams have come under great opposition in recent years. (3)
- Q11 "Workers are exploited in unorganized sector in India". Support the statement with suitable examples. (3)
- Q12 Who is the author of novel Titash Ekti Nadir Naam? Why is it considered a special novel. Explain any four reasons? (3)
- Q13 What is the difference between National & Regional Party? (3)
- Q14 What are Software Technology Parks? State any two points of significance of Information Technology (IT) Industry in India. (3)
- Q15 Describe any five characteristics of WTO. (3)
- Q16 Why is a democratic government considered better than dictatorship? Explain any three reasons. (3)
- Q17 What are the various courts set up under COPRA? (3)
- Q18 What does sustainability of development mean? How can sustainable development be achieved? (3)
- Q19 What changes did Napoleon introduce to make the administrative system more efficient in the territories ruled by him? (5)
- Q20 When was the 'Right to Information (RTI) Act, implemented? How does it act as the watchdog of democracy'? (5)

OR

Describe the main features of federalism.

Q21 Classify the roads according to their capacity & describe the role of each. (5)

Q22 Describe the problems faced by the Indian Cotton weavers in the 19 th century. (5)

OR

Why did the poor peasants join the Civil Disobedience Movement (1930 – 34)? Why could not the congress give full support to their demands?

Q23 What is meant by caste hierarchy? Explain the role of caste in Indian Politics. (5)

Q24 Discuss any five features of Indian Agriculture. (5)

OR

Define plantation agriculture .Explain any four characteristics of plantation agriculture.

Q25 Analyse the functions of Consumer Protection Council or Consumer Forum. (5)

OR

“Globalisation and greater competition among producers has been advantageous to consumers.” Support the statement with examples.

Q26 Locate & label the place in the given outline political map of India. (1)

(A) The place where Indian National Congress held its session in September 1920.

Q27 Locate & label the place in the given outline political map of India (1)

(B) The place where Cotton Mill Workers organized Satyagrah

Q28 Identify the following places & mark on the same given outline political map of India & write their names: (1x3=3)

(C) An International Airport

(D) A jute Producing State

Winter Holiday Homework

Class- XI (Science)

ENGLISH

Q.1. Design poster in your fair notebook on following topics :-

- a) Necessity of oral Poao Vaccine
- b) Instill Discipline in students.

Q.2. Revise the self-assessment exercises of following chapters from all in one:-

- a) Browning version
- b) Tale of Melon City
- c) Mother's Day
- d) The Birth

Q.3. Failure and success are part of life. Failures show our weaknesses and helpers to achieve success by conquering them. Write debate in favour of the motion 'Failur is a stepping stone to success' in your fair notebook.

MATHS

Q.1. Ch-15 – Ex.- 15.3 (Q-2, 4, 5), Ex.-15.2- Q-6 , 8, 10 , Ex-15.1- Q-7, 8, 9, 10

Q.2. Ch-13- Ex-13.2- Q-5, 6, 9, 11, Ex.-13.1- Q-7,9,12,15,17, 19,21, 23-32

Q.3. Ch-11- Ex- 11.1- Q-6,7,10,12,13 , Ex.-11.2- Q-6,8,9,11,12, Ex-11.3- Q-10, 12,19, 20

Q.4. Ch-10 Ex-10.1- Q-7,9,10,12,13, Ex-10.2-Q-4,6,7,10,12,14,15,19, Ex-10.3- Q-2,5,7,9,10, 13,17, 18

CHEMISTRY

1. Do the NCERT questions intext and outext of s block elements and redox reaction.
2. Do the given assignment of Organic Chemistry (Ch-12 Some Basic Concepts of Chemistry)

PHYSICS

Practice on following chapter

1. Gravitaion (Theory and 10 Numrical from SL Arora)
2. Mechanical properties of Fluid (Theory and 10 Numrical from SL Arora)
3. Thermodynamics (Theory and 10 Numrical from SL Arora)
4. K T G (Theory and 5 Numrical from SL Arora)
5. Work power and energy (Theory and 10 Numrical from SL Arora)

Biology

Do the given Assignment.

Winter Holiday Homework Class- XI (Commerce)

ENGLISH

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MATHS

Q.1. Ch-15 – Ex.- 15.3 (Q-2, 4, 5), Ex.-15.2- Q-6 , 8, 10 , Ex-15.1- Q-7, 8, 9, 10

Q.2. Ch-13- Ex-13.2- Q-5, 6, 9, 11, Ex.-13.1- Q-7,9,12,15,17, 19,21, 23-32

Q.3. Ch-11- Ex- 11.1- Q-6,7,10,12,13 , Ex.-11.2- Q-6,8,9,11,12, Ex-11.3- Q-10, 12,19, 20

Q.4. Ch-10 Ex-10.1- Q-7,9,10,12,13, Ex-10.2-Q-4,6,7,10,12,14,15,19, Ex-10.3- Q-2,5,7,9,10,
13,17, 18

ECONOMICS

Prepare a project on any micro economics topic (as discussed in class).

Project Guidelines include:

1. The project should contain a cover page, acknowledgment, index, bibliography.
2. The project should have at-least 15 sheets relevant to the topic of your interest.
3. The project is to be submitted on the first day after reopening of school (January 8, 2019).
4. The project carries a weightage of 20 marks.

Winter Holiday Homework

Class- XI (Humanities)

ENGLISH

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Q.1. Ch-15 – Ex.- 15.3 (Q-2, 4, 5), Ex.-15.2- Q-6 , 8, 10 , Ex-15.1- Q-7, 8, 9, 10

Q.2. Ch-13- Ex-13.2- Q-5, 6, 9, 11, Ex.-13.1- Q-7,9,12,15,17, 19,21, 23-32

Q.3. Ch-11- Ex- 11.1- Q-6,7,10,12,13 , Ex.-11.2- Q-6,8,9,11,12, Ex-11.3- Q-10, 12,19, 20

Q.4. Ch-10 Ex-10.1- Q-7,9,10,12,13, Ex-10.2-Q-4,6,7,10,12,14,15,19, Ex-10.3- Q-2,5,7,9,10,
13,17, 18

ECONOMICS

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POLITICAL SCIENCE

Instructions:-

Make a file and record your answers in a Research and Development Format.

Q1. Make a survey report of your village do Research and Analysis on the several kinds of Unequal treatment among all the sections of the society. And also mention remedies to curb this ever increasing Inequality.

Q2. What do you understand by the word freedom and make a report on these points:-

1. Does Freedom equally exist in the society for every class ? explain why do you think so.
2. Does freedom means permission to violate the rules? Explain in the context of our country.

Q3. Explain John Rawl's theory of justice. And also share Do you agree with his point of view. Elucidate.

Class- XII**English**

Q.1. Read all the chapters of the prescribed novel, "The Invisible Man". Attempt following character sketches in your Fair Notebook.

- | | | |
|----------------|--------------|------------------|
| a) Mr. Marvel | b) Griffin | c) Dr. Kemp |
| d) Dr. Cuss | e) Mrs. Hall | f) Teddy Henfrey |
| g) Mr. Bunting | h) Mr. Hall | |

Q.2. Prepare a speech on themes and write in fair notebook. Science without Humanity is Catastrophic.'

Q.3. Revise self-assessment exercises of following chapters from All-in –one for bit:-

- a) Evan tries an O'level
- b) Onemories of childhood
- c) Aunt Jennifer's Tigers
- d) Going Places

Maths

Q.1. Solve all previous papers from 2010-2018 (All India CBSE)

Chemistry

1. Revise all the name reaction of Organic Chemistry
2. Revise all the given assignment
3. Do Correction work for the first confidence exam in assignment copy.

Physics

1. Practice on solved question paper from 2010 to 2018 Delhi Branch.
2. Write important formula and derivation from each chapter.

Biology

Q.1. Solve all previous papers from 2010-2018 (All India CBSE)

Economics

1. Explain the concept of producer equilibrium using MC-MR approach.
2. Explain the relationship between each of the following (with the help of a diagram):
(a) MC and AC (b) MR and AR (c) MP and AP
3. Explain the 3 stages of the law of variable proportions.
4. Explain the conditions of consumer equilibrium using ordinal approach.
5. Explain the various types of budget deficit and their implications.
6. Explain the concept of excess demand and inflationary gap.
7. Explain the investment multiplier process (with the help of a diagram and suitable example).
8. Explain equilibrium in the economy using AD-AS approach.
9. Derive the consumption function from the given savings function: $S = -40 + .20Y$
10. Explain the meaning and components of money supply.

Accountancy-

Do Questions from sample papers

From D.K. Goel :-

Practice paper 4- Q. No- 7-15 , 22 and 23

Practice Paper 5 – Q. No 7 -15, 22 and 23

Practice Paper 6 – Q. No 7 -15, 22 and 23

From EAD :-

Sample papers 15 – Q.No 7-15 , 22 and 23

Sample papers 8 – Q.No 7-15 , 22 and 23

Sample papers 7 – Q.No 7-15 , 22 and 23

Business Studies-

From EAD –

Sample Paper 15- Q no. 2, 3,5, 6,7 ,10,11,14, 17,21 and 24

Sample Paper 14- Q.no 1, 8, 9, 10, 13, 14, 17, 20, 21, 23 and 24