

DARSHAN ACADEMY
HOLIDAY HOMEWORK (2021-22)
CLASS: XI

SUBJECT: ENGLISH CORE

ADVANCED WRITING SKILLS

- 1) We are facing an unprecedented situation during the lockdown due to Corona Virus. Write your experience of what happened with you and around you during this time, What the government did, and what should have been done to contain the spread of Corona Virus. You are Avantika/ Aniket.
(You can also pretend to be a reporter and could shoot and submit a video report on the same topic instead.)
- 2) As the Head boy / Head girl of your school, you are organizing a Career Counseling Session for the students of XI and XII of your school. Write a notice giving details of it to be displayed on your school notice board.
(You can also make a poster for the same purpose.)
- 3) Your school is going to hold Annual Sports Day. You need volunteers from prefects and students to help the guests and maintain discipline during the event. Write a notice to be displayed on the notice board for this purpose.
- 4) As the Head boy/Head girl of your school you are organizing a Class excursion to Manali for the students of XI and XII of your school. Write a notice giving details of it to be displayed on your school notice board.
- 5) It is seen that few students work very hard and try to score 99-100% marks, but most are happy with scores below 60% and some don't work even if they pass on the margin or even failing. Write a speech on the topic 'How much Education we should really take` to be delivered in the morning assembly.

Or

You can prepare your audio or video record and submit the speech instead.

LITERATURE (HORNBILL & SNAPSHOTS)

THE PORTRAIT OF A LADY

- Q1) Describe the physical appearance of the grandmother from "The Portrait of a Lady".
- Q2) The grandmother herself was not formally educated but was serious about the author's moral and worldly education. How does the text support this?
- Q3) The lesson 'The Portrait of a Lady' suggests a growing distance between the younger and older generation. Comment on the basis of your reading of the text.

Q4) How did the birds behave after the death of the grandmother. Why did they behave so?

SUMMER OF THE BEAUTIFUL WHITE HORSE

Q1) What impression do you form of Mourad and Aram from the story?

Q2) Describe the character of Aram, the narrator in the story. How did he justify Mourad's act of stealing a horse? Why was he not ready to return the horse?

Q3) Why was uncle Khosrove considered a crazy streak of the family?

Q4) How do we come to know that Mourad stole the horse long time back?

THE ADDRESS

Q1) How did the narrator come to know about Mrs Dorling and the address where she lived?

Q2) What made Mrs. Dorling carry away the narrator's mother's belongings? Justify your answer with suitable reasons.

Q3) What family values prompted the narrator to visit 46, Marconi Street? What light does it reflect on her character and her relationship with her mother?

Q4) For how long and in what conditions the narrator remembered the address. Why does she decide to forget the address without fulfilling her wish?

A PHOTOGRAPH

Q1) What are the pasts of the mother and the daughter as told in the Photograph?

Q2) Explain: (i) 'terribly transient feet' (ii) 'both wry with the laboured ease of loss'

Q3) What does the author mean with 'silence silences'.

Q4) Identify the phrases where alliteration and imagery have been used in the poem.

GRAMMAR

Q1) Rearrange the following jumbled words to make meaningful sentences:

a) So/to/itchy/is/that/I/wait/my/off/uniform/can't/take/it

b) Is/good/both/for/and/early/rising/old/adults

c) The/weekend/I/can/love/down/be/I/myself/because/and/dress

d) Finish / work / early/ one / can / go / and / a / for walk / one's.

e) its / urbanization / in India / everywhere / has / tentacles /spread

f) Youngsters/ toys/ with/ are/ Chinese/a/the/hit

g) Many /the / come/ different / Delhi /parts/ to/ of /country/ students from

h) Computer / allowed/ pen drives/ this/ not/ are/ on

Q2) Fill in the blanks with determiners:

a) They were bored because there was _____ to do.

- b) We invited _____ friends over to our house for a barbecue.
- c) _____ of the cakes had been baked the day before.
- d) Sally didn't take _____ photos when she went on holiday.
- e) The teacher gave _____ of the students a piece of paper.
- f) Every one of _____ sent me a birthday card, but none of them bought me a present.
- g) Henry had _____ idea what the answer to the question was.
- h) I like many of her songs, but not _____ of them are good.

Q3) Complete the following paragraph by filling in the correct MODALS.

- a) I didn't feel very well yesterday. Ieat anything.
- b) I was using my pencil a minute ago. Itbe here somewhere!
- c) You reallybe late again.
- d) Phone her now. Shehome by now.
- e) Ibe able to help you, but I'm not sure yet.
- f) Already as a child Mozartplay the piano beautifully.
- g) I reallytry to get fit.
- h) I go to the bathroom, please?
- i) His excusebe true, but I don't believe.
- j) you open the window, please

Q5) The following passage has not been edited. Write the error and the correction in your answer sheets.

The process of borrowing a book from the school

library is very simple. Each student is issuing a

a. _____

library card. The library maintains the record of all

b. _____

books in catalogues. The student which wants to borrow
c. _____

a book have to fill up a requisition slip bearing
d. _____

the name of the book and it's author. If it is available
e. _____

it is at once issued for the student against his borrower's
f. _____

card. In case it has been issued to another card holder, the
g. _____

student is asking to contact on a particular date
h. _____

when the book is due.

Q6) In the unedited passage given below one word has been omitted in each line. Write the missing word along with the word that comes before and the word that comes after it in your answer sheet. Ensure that the word that forms your answer is underlined.

There nutrients in nearly any type	a.
of food- but nutrients need eaten	b.
in the right amount. Too much or doesn't	c.
help you stay healthy. To help	d.
guide everyone how much of each	e.
type of food a person eat scientists	f.
came up the idea of a food pyramid	g.
if you eat too much of the food groups	h.
the top and too little of the food groups at the bottom	i.
the pyramid collapse.	j.

SUBJECT: PHYSICS

(UNIT AND MEASUREMENT, KINEMATICS, LAWS OF MOTION)

LOTS

Q1 Prove that $A = i - 2j$ AND $B = 2i + j$ are mutually perpendicular to each other.

Q2 A swimmer can swim with velocity of 10 km/h with respect to the water flowing in a river with velocity of 5 km/h. In what direction should he swim to reach the point on the other bank just opposite to his starting point?

Q3. Earth moves in circular orbit around the sun once every year with an orbital radius of 1.5×10^{11} m. What is the acceleration of earth towards the centre of the sun?

Q4. Plot the position-time graph for an object (a) moving with positive velocity (b) moving with negative velocity, and (c) at rest.

Q5. A man goes 10m towards North, then 20m towards east then displacement is

Q6. A body moves over one fourth of a circular arc in a circle of radius r . The magnitude of distance travelled and displacement will be respectively.

Q7. Find a unit vector parallel to the vector.

Q8. Derive all three equations of motion by integral methods.

What is a projectile? Derive the equation of path of a projectile.

Q9. Explain why external forces are necessary to keep the bodies in motion?

Q10. State and derive the law of conservation of Momentum.

Q11. Under what conditions a particle is said to be in equilibrium. Explain

Q12. The resistance $R = V/I$ where $V = (100 \pm 5)V$ and $I = (10 \pm 0.2)A$. Find the percentage error in R .

Q13. Consider a simple pendulum, having a bob attached to a string, which oscillates under the action of the force of gravity. Suppose that the period of oscillation of the simple pendulum depends on its length (l), mass of the bob (m) and acceleration due to gravity (g). Derive the expression for its time period using the method of dimensions.

Q14. The relation describes the displacement of a particle in one direction where s is in metres and t in sec. The displacement, when velocity is zero, is

Q15. Plot the position-time graph of the following.

a. Two objects moving with equal velocities

b. Two objects with unequal velocities, showing the time of meeting.

c. Two objects with velocities in opposite directions, showing the time of meeting.

.For the velocity-time graph shown in figure below the distance covered by the body in last two seconds of its motion is what fraction of the total distance covered by it in all the seven seconds

Q 17The velocity time graph of a body moving in a straight line is shown in the figure. The displacement and distance travelled by the body in 6 sec are respectively

Q18. Rain is falling vertically with a speed of 35 ms^{-1} . Winds starts blowing after sometime with a speed of 12 m s^{-1} in east to west direction. In which direction should a boy waiting at a bus stop hold his umbrella?

Q19. . A train runs along an unbanked circular bend of radius 30m at a speed of 54km/hr. The mass of the train is 106kg. What provides the necessary centripetal force required for this purpose, the engine or the rails? What is the angle of banking required to prevent wearing out of the rail?

Q20. The motion of a particle of mass m is described by $y = ut + \frac{1}{2}gt^2$. Find the force acting on the particle.

Q21. Two identical billiard balls strike a rigid wall with the same speed but at different angles, and get reflected without any change in speed as shown in fig. What is (i). the direction of the force on the wall due to each ball? (ii). The ratio of the magnitudes of impulses imparted to the balls by the wall?

Q22. A mass of 6 kg is suspended by a rope of length 2m from the ceiling. A force of 50 N in the horizontal direction is applied at the mid-point P of the rope, as shown. What is the angle the rope makes with the vertical in equilibrium? (Take $g=10\text{ms}^{-2}$). Neglect the mass of the rope

SUBJECT: CHEMISTRY

Unit 1 Some basic Concepts of Chemistry

VERY SHORT QUESTIONS

Assertion and Reason Type Questions

In the following questions a statement of Assertion (A) followed by a statement of Reason (R) is given. Choose the correct option out of the choices given below each question.

1. Assertion (A): The empirical mass of ethene is half of its molecular mass. Reason (R): The empirical formula represents the simplest whole number ratio of various atoms present in a compound.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) A is true but R is false
- (c) A is false but R is true

(d) Both A and R are false.

Q2. Assertion (A): One atomic mass unit is defined as one-twelfth of the mass of one carbon-12 atom.

Reason (R): Carbon-12 isotope is the most abundant isotope of carbon and has been chosen as standard.

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

Q3. Assertion (A): Significant figures for 0.200 is 3 whereas for 200 it is 1.

Reason (R): Zero at the end or right of a number are significant provided they are not on the right side of the decimal point.

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

Q4. Assertion (A): Combustion of 16 g of methane gives 18 g of water.

Reason (R): In the combustion of methane, water is one of the product.

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

Q5. If the concentration of glucose ($C_6H_{12}O_6$) in blood is 0.9 g L^{-1} , what will be the molarity of glucose in blood?

- (i) 5 M
- (ii) 50 M
- (iii) 0.005 M
- (iv) 0.5 M

Q6. What will be the molality of the solution containing 18.25 g of HCl gas in 500 g of water?

- (i) 0.1 m
- (ii) 1 M
- (iii) 0.5 m
- (iv) 1 m

Q9. (i) Results of both the students are neither accurate nor precise.

(ii) Results of student A are both precise and accurate.

(iii) Results of student B are neither precise nor accurate.

(iv) Results of student B are both precise and accurate.

Q10. A measured temperature on Fahrenheit scale is 200 °F. What will this reading be on Celsius scale?

(i) 40 °C

(ii) 94 °C

(iii) 93.3 °C

(iv) 30 °C

Q11. What will be the molarity of a solution, which contains 5.85 g of NaCl(s) per 500 mL?

(i) 4 mol L⁻¹

(ii) 20 mol L⁻¹

(iii) 0.2 mol L⁻¹

(iv) 2 mol L⁻¹

Q12. If 500 mL of a 5M solution is diluted to 1500 mL, what will be the molarity of the solution obtained?

(i) 1.5 M

(ii) 1.66 M

(iii) 0.017 M

(iv) 1.59 M

Q13. The number of atoms present in one mole of an element is equal to Avogadro number. Which of the following element contains the greatest number of atoms?

(i) 4g He

(ii) 46g Na

(iii) 0.40g Ca

(iv) 12g He

Q14. If the concentration of glucose (C₆H₁₂O₆) in blood is 0.9 g L⁻¹, what will be the molarity of glucose in blood?

(i) 5 M

(ii) 50 M

(iii) 0.005 M

(iv) 0.5 M

Q15. What will be the molality of the solution containing 18.25 g of HCl gas in 500 g of water?

(i) 0.1 m

(ii) 1 M

(iii) 0.5 m

(iv) 1 m

Q16. One mole of any substance contains 6.022×10^{23} atoms/molecules. Number of molecules of H_2SO_4 present in 100 mL of 0.02M H_2SO_4 solution is _____

- (i) 12.044×10^{20} molecules
- (ii) 6.022×10^{23} molecules
- (iii) 1×10^{23} molecules
- (iv) 12.044×10^{20} molecules

Q17. What is the mass percent of carbon in carbon dioxide?

- (i) 0.034%
- (ii) 27.27%
- (iii) 3.4%
- (iv) 28.7%

Q18. The empirical formula and molecular mass of a compound are CH_2O and 180 g respectively. What will be the molecular formula of the compound?

- (i) $\text{C}_9\text{H}_{18}\text{O}_9$
- (ii) CH_2O
- (iii) $\text{C}_6\text{H}_{12}\text{O}_6$
- (iv) $\text{C}_2\text{H}_4\text{O}_2$

Q19. If the density of a solution is 3.12 g mL^{-1} , the mass of 1.5 ml solution in significant figures is ____.

- (i) 4.7g
- (ii) $4680 \times 10^{-3} \text{ g}$
- (iii) 4.680g
- (iv) 46.80g

Q20. Which of the following statements about a compound is incorrect?

- (i) A molecule of a compound has atoms of different elements.
- (ii) A compound cannot be separated into its constituent elements by physical methods of separation.
- (iii) A compound retains the physical properties of its constituent elements.
- (iv) The ratio of atoms of different elements in a compound is fixed.

LOTS

Q1. Differentiate between molarity and molality. What is the effect of temperature on molality and molarity?

Q2. Calculate the molecular mass of $\text{C}_{12}\text{H}_{22}\text{O}_{11}$

Q3. Calculate the no. of atoms present in 11.5 litres of H_2 at N.T.P.

Q4. Calculate the no. of moles of 5.68gm. of iron.

Q5. Explain with example limiting reagent.

Q6. Verify law of Reciprocal proportions or law of equivalent proportions with example.

Q7. Discuss Dalton's Atomic theory and its limitations? Why it is better than Dalton's Atomic theory?

Q8. What are empirical and molecular formulae? How are they relate To Each Other?

Q9. Differentiate between normality and molarity?

Q10. Why molality is preferred over molarity in expressing the concentration of a solution?

Q11. Explain with the help of an example law of conservation of mass and energy and also the law of constant proportions.

HOTS

Q1. An atom of an element is 10.1 times heavier than the mass of a carbon atom. What is its mass in a.m.u.?

Q2. A vessel contains 1.6 g of dioxygen at STP (273.15 K, 1 atm pressure). The gas is now transferred to another vessel at constant temperature, where pressure becomes half of the original pressure. Calculate

(i) volume of the new vessel.

(ii) number of molecules of dioxygen.

Q3. Calcium carbonate reacts with aqueous HCl to give CaCl₂ and CO₂ according to the reaction given below:



What mass of CaCl₂ will be formed when 250 mL of 0.76 M HCl reacts with 1000 g of CaCO₃? Name the limiting reagent. Calculate the number of moles of CaCl₂ formed in the reaction.

Q4. Discuss Avogadro's hypothesis. How Avogadro's hypothesis used to deduce atomicity of elementary gases?

Q5. Define the law of multiple proportions. Explain it with two examples. How does this law point to the existence of atoms?

Q6. A box contains some identical red coloured balls, labeled as A, each weighing 2 grams. Another box contains identical blue coloured balls, labeled as B, each weighing 5 grams. Consider the combinations AB, AB₂, A₂B and A₂B₃ and show that law of multiple proportions is applicable.

Q7. Why molality is preferred over molarity in expressing the concentration of a solution?

Q8. Two students performed the same experiment separately and each one of them recorded two readings of mass which are given below. Correct reading of mass is 3.0 g. On the basis of given data, mark the correct option out of the following statements.

Q9. Which of the following statements indicates that law of multiple proportion is being followed.

(i) Sample of carbon dioxide taken from any source will always have carbon and oxygen in the ratio 1:2.

(ii) Carbon forms two oxides namely CO₂ and CO, where masses of oxygen which combine with fixed mass of carbon are in the simple ratio 2:1.

(iii) When magnesium burns in oxygen, the amount of magnesium taken for the reaction is equal to the amount of magnesium in magnesium oxide formed.

(iv) At constant temperature and pressure 200 mL of hydrogen will combine with 100 mL oxygen to produce 200 mL of water vapour.

Q10 Which of the following statements is correct about the reaction given below:



(i) Total mass of iron and oxygen in reactants = total mass of iron and oxygen in product therefore it follows law of conservation of mass.

(ii) Total mass of reactants = total mass of product; therefore, law of multiple proportions is followed.

(iii) Amount of Fe_2O_3 can be increased by taking any one of the reactants (iron or oxygen) in excess.

(iv) Amount of Fe_2O_3 produced will decrease if the amount of any one of the reactants (iron or oxygen) is taken in excess.

Unit 2 Structure of Atom

LOTS

Q1. Write electronic configurations, of Cr, Cu, Zn?

Q2. Define Aufbau's Principle. Which of the following orbitals are possible. 1 s, 1 p, 2 s, 3 d, 3 f

Q3. Explain Hund's rule of maximum multiplicity by taking an example of phosphorous.

Q4. Why are Bohr's orbits called Stationary States?

Q5. What is the difference between atomic mass and mass number?

Q6. Explain why the uncertainty principle is significant only for the microscopic particles and not for the macroscopic particles?

Q7. Why half-filled and fully filled orbitals are extra stable?

Q8. Why config of 'Cr' is $3d^5 4s^1$ and not $3d^4 4s^2$ and 'Cu' is $3d^{10} 4s^1$ and not $3d^9 4s^2$?

Q9. Give differences between orbit and orbital.

Q10. What is photoelectric effect? What is the effect of frequency and intensity on photo electric effect?

Q11. Why large no. of lines appear in the spectrum of hydrogen although it contains only one electron?

Q12. Derive de Broglie relationship and give its significance.

Q13. Give important postulates of Bohr's model of an atom.

Q14. Discuss Planck's Quantum theory of Radiation.

Q15. Discuss blackbody radiation. Also explain its reason.

Q16. Discuss important facts about photo electric effect.

Q17. Discuss drawbacks of Rutherford's Model.

Q18. Explain Heisenberg's uncertainty Principle.

HOTS

Q19. What are emission and absorption spectra? Why dark lines appear in the absorption spectra?

Q20. What is the frequency and wave length of a photon emitted during a transition from $n=5$ state to $n=2$ state in the hydrogen atom.

Q21. What do you understand by an atomic orbital? Briefly describe the shapes of s, p & 'd' orbitals?

Q22. Using the s, p, d, f, notations describe the following quantum no.

(a) $n=1, l=0$ (c) $n=4; l=3$ (d) $n=4; l=2$

(b) $n=3, l=2$ (d) $n=5; l=4$ (e) $n=6; l=4$

Q23. State and explain Aufbau's principle, Pauli's exclusion principle.

Q24. Explain the properties of cathode rays.

Q25. How are anode rays produced?

VERY SHORT QUESTIONS

Q1. Which of the following orbitals are not possible? 1p, 2s, 2p, 3f, 3d, 4f, 4d

Q2. Which of the following conclusions could not be derived from Rutherford's α -particle scattering experiment?

(i) Most of the space in the atom is empty.

(ii) The radius of the atom is about 10^{-10} m while that of nucleus is 10^{-15} m.

(iii) Electrons move in a circular path of fixed energy called orbits.

(iv) Electrons and the nucleus are held together by electrostatic forces of attraction.

Q3. Which of the following options does not represent ground state electronic configuration of an atom?

(i) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 4s^2$

(ii) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^9 4s^2$

(iii) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^1$

(iv) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^1$

Q4. The probability density plots of 1s and 2s orbitals are given in Fig. 2.1:

Structure of Atom

Q5. The density of dots in a region represents the probability density of finding electrons in the region.

On the basis of above diagram which of the following statements is incorrect?

(i) 1s and 2s orbitals are spherical in shape.

(ii) The probability of finding the electron is maximum near the nucleus.

(iii) The probability of finding the electron at a given distance is equal in all directions.

(iv) The probability density of electrons for 2s orbital decreases uniformly as distance from the nucleus increases.

Q6. Which of the following statement is not correct about the characteristics of cathode rays?

(i) They start from the cathode and move towards the anode.

(ii) They travel in straight line in the absence of an external electrical or magnetic field.

(iii) Characteristics of cathode rays do not depend upon the material of electrodes in cathode ray tube.

(iv) Characteristics of cathode rays depend upon the nature of gas present in the cathode ray tube.

Q7. Which of the following statements about the electron is incorrect?

(i) It is a negatively charged particle.

(ii) The mass of electron is equal to the mass of neutron.

(iii) It is a basic constituent of all atoms.

(iv) It is a constituent of cathode rays.

Q8. Which of the following properties of atom could be explained correctly by Thomson Model of atom?

(i) Overall neutrality of atom.

(ii) Spectra of hydrogen atom.

(iii) Position of electrons, protons and neutrons in atom.

(iv) Stability of atom.

Q9. Two atoms are said to be isobars if.

(i) they have same atomic number but different mass number.

(ii) they have same number of electrons but different number of neutrons.

(iii) they have same number of neutrons but different number of electrons.

(iv) sum of the number of protons and neutrons is same but the number of protons is different.

Q10. The number of radial nodes for 3p orbital is _____.

(i) 3 (ii) 4 (iii) 2 (iv) 1

Q11. Number of angular nodes for 4d orbital is _____.

(i) 4 (ii) 3 (iii) 2 (iv) 1

Q12. Which of the following is responsible to rule out the existence of definite paths or trajectories of electrons?

(i) Pauli's exclusion principle.

(ii) Heisenberg's uncertainty principle.

(iii) Hund's rule of maximum multiplicity.

(iv) Aufbau principle.

Q13. Total number of orbitals associated with third shell will be _____.

(i) 2 (ii) 4 (iii) 9 (iv) 3

Q14. Orbital angular momentum depends on _____.

(i) l (ii) n and l (iii) n and m (iv) m and s

Q15. Chlorine exists in two isotopic forms, Cl-37 and Cl-35 but its atomic mass is 35.5. This indicates the ratio of Cl-37 and Cl-35 is approximately

(i) 1:2 (ii) 1:1 (iii) 1:3 (iv) 3:1

Q16. The pair of ions having same electronic configuration is _____.

(i) Cr^{3+} , Fe^{3+}

(ii) Fe^{3+} , Mn^{2+}

(iii) Fe^{3+} , Co^{3+}

(iv) Sc^{3+} , Cr^{3+}

Q17. For the electrons of oxygen atom, which of the following statements is correct?

- (i) Z_{eff} for an electron in a 2s orbital is the same as Z_{eff} for an electron in a 2p orbital.
- (ii) An electron in the 2s orbital has the same energy as an electron in the 2p orbital.
- (iii) Z_{eff} for an electron in 1s orbital is the same as Z_{eff} for an electron in a 2s orbital.
- (iv) The two electrons present in the 2s orbital have spin quantum numbers m_s but of opposite sign.

Q18. If travelling at same speeds, which of the following matter waves have the shortest wavelength?

- (i) Electron
- (ii) Alpha particle (He^{2+})
- (iii) Neutron
- (iv) Proton

Q19. In which of the following pairs, the ions are iso-electronic?

- (i) Na^+ , Mg^{2+}
- (ii) Al^{3+} , O^-
- (iii) Na^+ , O^{2-}
- (iv) N^{3-} , Cl^-

Q20. Which of the following statements concerning the quantum numbers are correct?

- (i) Angular quantum number determines the three dimensional shape of the orbital.
- (ii) The principal quantum number determines the orientation and energy of the orbital.
- (iii) Magnetic quantum number determines the size of the orbital.
- (iv) Spin quantum number of an electron determines the orientation of the spin of electron relative to the chosen axis.

Assertion and Reason Type Questions

In the following questions a statement of Assertion (A) followed by a statement of Reason (R) is given.

Choose the correct option out of the choices given below each question.

Q21. Assertion (A) : All isotopes of a given element show the same type of chemical behaviour.

Reason (R) : The chemical properties of an atom are controlled by the number of electrons in the atom.

- (i) Both A and R are true and R is the correct explanation of A.
- (ii) Both A and R are true but R is not the correct explanation of A.
- (iii) A is true but R is false.
- (iv) Both A and R are false.

Q22. Assertion (A) : Black body is an ideal body that emits and absorbs radiations of all frequencies.

Reason (R) : The frequency of radiation emitted by a body goes from a lower frequency to higher frequency with an increase in temperature.

- (i) Both A and R are true and R is the correct explanation of A.
- (ii) Both A and R are true but R is not the explanation of A.
- (iii) A is true and R is false.
- (iv) Both A and R are false.

Q23.Assertion (A) : It is impossible to determine the exact position and exact momentum of an electron simultaneously.

Reason (R) : The path of an electron in an atom is clearly defined.

- (i) Both A and R are true and R is the correct explanation of A.
- (ii) Both A and R are true and R is not the correct explanation of A.
- (iii) A is true and R is false.
- (iv) Both A and R are false.

Q24.What is photoelectric effect? State the result of photoelectric effect experiment that could not be explained on the basis of laws of classical physics. Explain this effect on the basis of quantum theory of electromagnetic radiations.

Q25.Threshold frequency, ν_0 is the minimum frequency which a photon must possess to eject an electron from a metal. It is different for different metals. When a photon of frequency $1.0 \times 10^{15} \text{s}^{-1}$ was allowed to hit a metal surface, an electron having $1.988 \times 10^{19} \text{ J}$ of kinetic energy was emitted. Calculate the threshold frequency of this metal. Show that an electron will not be emitted if a photon with a wavelength equal to 600 nm hits the metal surface.

SUBJECT: BIOLOGY

Chapter 1. The Living World

LOTS

- 1.....is the characteristic of living organism on the basis of sensations.
2. Which among the following is not a genus?
 - a. *Solanum*
 - b. *indica*
 - c. *felis*
 - d. *Homo*
- 3.4. How are specimens preserved and pasted on a herbarium sheet?
5. What are zoological parks? What is the scientific purpose of them?
- 6.Each category or unit of the classification, represent a rank, commonly called a

HOTS

- 6.Amoeba multiplies by mitotic cell division. Is this phenomenon growth or reproduction? Explain
7. Properties of cell organelles are not always found in the molecular constituents of cell organelles. Justify.

8. What does a couplet in a key represent?
9. Give the scientific name of mango, housefly, human beings, potato, wheat, tiger, brinjal, lion
10. A plant may have different names in different regions of the country or world.
How do botanists solve this problem?
11. Write examples of two species each belonging to same genera?

Chapter 2 -Biological Classification

LOTS-

1. What observable features in Trypanosoma would make you classify it under Protista?
2. Give the name of causative agent of red rot and early blight.
3. Give one reason to support the statement that deuteromycetes are considered as imperfect fungi.
4. What is the cell wall of Monerans made up of?
5. Give technical term for the following-
 - a. Elongated rod like unicellular cells
 - b. Comma like cells
 - c. One flagella at each of the two ends of a cell
6. Name the causative agent of the following-
 - a. Amoebic dysentery
 - b. Kala azar
 - c. Sleeping sickness
 - d. Malaria

HOTS

7. Why are viruses termed as nucleoproteins?
8. Neurospora an Ascomycetes fungus has been used as a biological tool to understand the mechanism of plant genetics. List the features that make it a genetic tool.

9. Name any three parasitic protozoans and mention the disease each of them causes in human beings.

10. Name the following:

- a. A moneran that lacks cell wall.
- b. The characteristics type of nutrition in animals.
- c. The chemical nature of fungal wall.

11. One basic difference between bacteria and archaebacteria has led the later to survive under extreme conditions. State the difference.

Chapter 3- Plant Kingdom

LOTS

1. Give one example of a marine angiosperm.
2. Phycoerythrin, chlorophyll a and chlorophyll d are characteristics of :
 - a. Chlorophyceae
 - b. Rhodophyceae
 - c. Phaeophyceae
 - d. Cyanophyceae
3. Name one gymnosperm with following characteristics-
 - a. Unbranched stem
 - b. Leaves are pinnately compound.
 - c. Tallest tree species
 - d. Megasporephylls are not organized into a female cone.
4. Name the first cell of sporophyte in the life cycle of liverwort.
5. Write the scientific name of Giant Redwood tree.
6. What is the reserve form of food in Phaeophyceae, Chlorophyceae, Rhodophyceae?

HOTS

7. What is heterospory? Briefly comment on its significance.
8. Vascular tissues are absent in bryophytes, then how does the conduction of water and food take place?
9. Write the difference between antheridia and archegonia.

Chapter 4- Animal Kingdom

LOTS

1. Which features makes mammals as most successful and dominant animals?
2. What is the fate of notochord in higher chordates?
- 3 Draw a well labeled diagram of TMV.
4. What are the reason that you can think for the arthropods to constitute the largest group of the animal kingdom?

5.Match the following: HOTS

- | | |
|---------------------|-------------------|
| a. Operculum | i.Ctenophora |
| b. Parapodia | ii.Mollusca |
| c.Scales | iii.Porifera |
| d.Comb Plates | iv.Cyclostoma |
| e.radula | v.Mammalia |
| f.Choanocytes | vi.annelida |
| g.Hairs | vii.Reptilia |
| h.Gill slits | viii.Osteichthyes |

6.How useful is the study of the nature of body cavity and coelom in classification of animals?

II Project work:

Prepare a project file on any topic related to the syllabus. The project should be based on any one of the following-

- Case Study
- Field Survey

SUBJECT: MATHEMATICS **SETS**

LOTS

Q1. For two sets A and B , prove that :

$$(1)(A-B) \cup B = A \cup B. \quad (2)(A-B) \cap B = \emptyset .$$

Q2. In a group of 50 persons, 14 drink fruit juice but not cold drink, 30 drink fruit juice and each person likes at least one of the two drinks. Find:

(1) how many drink/drinks both fruit juice and cold drink .

(2) how many drink/drinks cold drink but not fruit juice.

Which drink out of the two is healthier?

Q3 Let $S = \{x/x \text{ is a positive multiple of 3 less than } 100\}$ $P = \{\text{Prime number less than } 20\}$. Then write $n(S) + n(P)$.

Q4. In a group of 84 persons, each plays at least one game out of three viz. tennis ,badminton and cricket .28 of them play cricket ,40 play tennis and 48 play badminton .if 6 play both cricket and badminton and 4 play tennis and badminton and no one plays all the three games ,find the number of persons who play cricket but not tennis.

Q5. From 50 students taking examinations in mathematics ,physics and chemistry ,each of the student has passed in at least one of the subject ,37 passed mathematics ,24 physics and 43 chemistry .at most 19 passed mathematics and physics ,at most 29 mathematics and chemistry and at most 20 physics and chemistry . What is the largest possible number that could have passed 'all three examinations'?

HOTS

Q6 A survey shows that 63% of the people watch a News Channel whereas 76% watch another channel, then find value of x.

Q7. Two finite sets have m and n elements, the total number of subsets of first set is 112 more than the total number of subsets of second set. Find the value s of m and n.

Q8. For any two sets A and B, prove that $A \cap (A' \cup B') = A \cap B$.

Q9. For any two sets A and B, prove that $A \cap (A \cup B)' = \emptyset$.

Q10. For any three sets A, B and C , Prove that :

$$(1) (A-B) \cup (A-C) = A - (B \cap C)$$

$$(2) (A-B) \cap (A-C) = A - (B \cup C).$$

RELATION AND FUNCTION

LOTS

Q1. Write total number of functions from set A to B ,where

$$A = \{1,2,3,4\}, B = \{a,b,c\}.$$

Q2. If $f(x) = x^3 - \frac{1}{x^3}$, then find the value of $f(x) + f\left(\frac{1}{x}\right)$.

Q3. Find the value of x for which the function $f(x) = 3x^2 - 1$ and $g(x) = 3 + x$ are equal .

Q4. Is $g = \{(1,1) (2,3) (3,5) (4,7)\}$ a function! Justify if this is described by the relation, $g(x) = \alpha x + \beta$, then what value should be assigned to α and β ?

Q5. If $f(x) = y = \frac{ax-b}{cx-a}$, then prove that $f(y) = x$.

Q6. Find the domain for which the function $f(x) = 2x^2 - 1$ and $g(x) = 1 - 3x$ are equal.

HOTS

Q7. Redefine the function which is give by

$$F(x) = |x-1| + |1+x|, -2 \leq x \leq 2.$$

Q8. Find the range of the following real function

$$(i). F(x) = \frac{x+1}{x-1} .$$

$$(ii). f(x) = \frac{1}{4-x^2} .$$

$$(iii). f(x) = \frac{|x-1|}{x-1}$$

Q9. Let f and g be two functions given by $f = \{(2,4), (5,6), (8,-1), (10,-3)\}$ and $g = \{(2,0), (7,1), (8,4), (10,3), (11,-5)\}$. find the domain of

Q.4 Write a short note on Khelo-India Program.

UNIT-2 OLYMPIC VALUE EDUCATION

Q.1 The ancient Olympic Games were celebrated and dedicated to the Greek God named.....

(a) Paul (b) Polo (c) Zeus (d) Thomas

Q.2 Write about the symbols of Modern Olympic Games?

Q.3 Explain briefly about Indian Olympic Association?

Q.4 Explain the various values developed by Paralympics.

Project Work: Project file on any one Games or Sports given below:-

(Athletics, Badminton, Judo, Gymnastic, Yoga, Chess etc.)

SUBJECT: PAINTING

Q1 write an essay on Indus valley civilization in about 200 words.

Q2. Describe the painting "Wizard's Dance"

Practical:

Draw & do pencil shading (use 2B,4B and 6B pencils only)

LANDSCAPE - 5

STILL LIFE - 5

SUBJECT: INFORMATICS PRACTICES

Cyber Safety

LOTS

1. What is cyber safety?
2. What should you do to protect your identity on internet?
3. Write the precautionary measures which should be followed to safely access websites.
4. Is it all right to give your name, address and birth date when registering to use a website online? If no, then why?

5. When you shop, you always check the security of the website before you enter personal and credit card information. Comment.

HOTS

6. Which of the following crimes is/are covered under cybercrime?

a) Stealing a brand new hard disk from a shop

b) Getting into an unknown person's social networking account and messaging on his behalf

c) Copying some important data from a computer without taking permission from the owner of the data.

7. Name any three social networking websites.

8. Write at least four tips of cyber safety.

9. Differentiate between http and https.

10. Define cookies.

MySQL

LOTS

1. What is a database?

2. What is the similarity and difference between primary and unique key?

3. What is a relation?

4. Naved wants to list the names of all the tables in his database namely status. What command(s) should he write at MySQL prompt to get this result?

5. If a database "Employee" exists, which MySql command helps you to start working in that database?

HOTS

6. Consider the table **BANK** given below. Write command in MySql for (i) to (iv) and output for (v)

Acc No	C Name	B Name	Amount	Date Of Open	Transactions
1	Karan	Bank Of Baroda	115000	2008-01-12	10
2	Puneet	State Bank	125000	2007-02-01	09
3	Anirban	Oriental Bank	117000	2009-07-15	05
4	Yatin	Standard Chartered	138000	2009-02-10	11
5	Sunny	State Bank	147000	2008-02-8	15
6	Jayant	UCO Bank	134000	2008-08-10	12

- i. Display data for all customers whose transaction is between 8 and 11.
 - ii. Display data of all customer sorted by their date of open.
 - iii. To show the details of customers with amount <13000
 - iv. To insert a new row in the table 7 , Nikhil, UCO Bank, 156000, 2009-01-02, 08
 - v. Select C Name, Amount from Bank where BNameIN('State Bank', 'UCO Bank');
7. Answer the question that follow:

Table : FACULTY

FNO	FNAME	AGE	DEPARTMENT	GRADE
111	Moksha	40	Biology	A
123	Malini	35	Maths	A
125	Akshit	43	English	B
130	Nishant	27	Maths	b

Identify the Primary key in the above table.

Which MySql command will be used to open an already existing database "CONTACTS".

SUBJECT : ECONOMICS

ASSIGNMENT-I:

TOPIC- Unit – I Introduction to Micro Economics

LOTS

1. Pick up the variable of Microeconomics.
 - a. Income of a family
 - b. Production of wheat by a farmer
 - c. General price level
 - d. Salary of a computer engineer

- 2 Pick up the variables of Microeconomics:
 - a. Total output in an economy
 - b. Inflation in the industrial sector
 - c. Salary of an engineer
 - d. Total investment

3. The economic problem is concern with
 - a. production
 - b. growth
 - c. scarcity
 - d. equity

4. 'Efficiency' arises when:
 - a. Wastage is the least
 - b. Resources have alternative uses
 - c. Reallocation of resources without wastage
 - d. Choosing production technique
5. The central problem of 'For whom to produce?' concerns with
 - a. Whether rich/poor will purchase the commodities
 - b. Equity and growth
 - c. The distribution of National Income
 - d. Who will purchase the commodities

6. Scarcity arises because:
 - a. Wants are unlimited
 - b. Resources are limited
 - c. Resources have alternative uses
 - d. All the above

7. The government has started promoting foreign capital, what will happen to the PPC?
 - a. Growth of resources
 - b. Underutilization of resources
 - c. Mismanagement of resources
 - d. Resources along the PPC

8. Why is PPC concave? Explain

HOTS

9. Complete the following table:

Possibilities	Machines in K	Wheat in M tons	MRT
A	0	75	
B	1		5:1
C	2		8:1
D	3	50	
E	4	30	
F	5		30:1

10. Due to the implementation of employment schemes, what will happen to the PPC?

- a. Under utilization of PPC
- b. Along the PPC
- c. Growth of PPC
- d. All the above

11. Explain any three characteristics of the PPC

12. The table below shows PPC Schedule. What is the pattern in the table that gives rise to the concave shape of the PPC?

Possibilities	Green chilli	sugar
A	100	0
B	95	1
C	85	2
D	70	3
E	50	4
F	25	5

13. The technique of 'How to Produce', can

- a. Increase production
- b. Solve the problem of distribution
- c. Growth and equity
- d. Profits of the firm

14. The natural calamity in a country will place the PPC:

- a. Outside
- b. Inside
- c. on
- d. away

15. Opportunity Cost is defined as:

- a. Cost incurred
- b. Cost forgone
- c. Additional cost
- d. Negative cost

16. Draw PPC for the following schedule. Also, calculate the MOC for different combination:

Combination	Rice in '000tonnes	Maize '000tonnes	MOC
A	0		120
B	25		100
C	50		75
D	75		45
E	100		0

17. What are the three central problems of an economy? Why do they arise?

18. Explain the meaning of MRT with the help numericals examples.

19. Explain the meaning of "For whom to produce" central problems of an economy.

20. Which problem is related to the Unequal distribution of an Income in an economy?

UNIT – II Consumer's Equilibrium (LOTS)

1. When $MU_x > P_x$, how will a consumer react:

- a. Change his income
- b. Buy more of X
- c. Wait for the price to decrease
- d. Buy less of X

2. How many chocolates will you consume if these are free of cost to achieve equilibrium?

- a. MU is positive
- b. MU is negative
- c. MU is zero
- d. MU is equal to infinity

3. The equation for budget constraint is:

- a. $P_x \times Q_x + P_y \times Q_y = M$
- b. $P_x \times Q_x - P_y \times Q_y = M$

c. $P_x \times Q_x + P_y \times Q_y > M$ d. $P_x \times Q_x + P_y \times Q_y < M$

4. When $MRS > MRE = P_x/P_y$ then the consumer:

- a. Values X more than what market value
- b. Values Y more than what market value
- c. Values X less than what market value
- d. Values Y less than what market value

5. Explain the three properties of Indifference Curve?

6. With a hypothetical example explain the Consumer's Equilibrium in two commodity case?

HOTS

7. Which of the following statements is correct?

- a. BL is a downward sloping straight line
- b. Bundles which cost less than consumer's money income lies outside the BL
- c. If there is an increase in consumer's income and no change in prices of goods, then the BL will shift to the left.
- d. A decrease in the price of good measured along X-axis makes the BL steeper.

8 When $MU_x/P_x > MU_y/P_y$, as a result:

- a. Consumption of Y rises, & X falls
- b. Consumption of X rises, & Y falls
- c. Consumption of X & Y rises
- d. Consumption of X & Y falls

9. Starting from an initial situation of C's E, suppose the MU of money increases. How will it affect the QD of the product?

- a. It will increase
- b. It will decrease.
- c. It will remain unchanged
- d. It will fall to zero.

10. The slope of the Indifference curve is measured by:

- a. Marginal rate of transformation
- b. Marginal rate of substitution
- c. Marginal rate of utility
- d. Marginal rate of technical substitution

11. At the point of Equilibrium, IC must be convex to the origin. Why?
12. State the condition of consumer's equilibrium by Utility Analysis of double commodities?
13. State any one difference between Consumer's and Producers.
14. Explain the meaning of MRS with the help of numerical examples.
15. What do you mean by the Budget line?

Assignment 2: CH – 1 Introduction to Statistics and Collection of Data

LOTS

1. Would it be called Statistics if it is said that there are 2000 students in our school?
2. Mention the two sources of secondary data.
3. State the name of data which involves less time and expenses.
4. Write three sentences highlighting the importance of Statistics in Economic planning.
5. Out of primary and secondary data, which one is collected for a definite purpose.
6. Name an important government agency which collects, process and tabulate data at national level.
7. Statistics as a singular noun means:

a) Statistical data	b) Statistical methods
c) Inductive statistics	d) Descriptive statistics
8. Statistics is the science of analyzing:

a) Qualitative data	b) Quantitative data
c) Any kind of data	d) Both (a) and (b)

HOTS

9. Distrust of statistics is due to:

a) Misuse of statistics	b) Insufficient statistical methods
c) Scope of statistics is limited	d) Limitations of statistics

10. When Population under investigation is infinite, we should use:
- a) Sample method
 - b) Census method
 - c) Either census or sample method
 - d) Neither census nor sample method
11. After every ten years, information regarding population of India is collected through:
- a) Census
 - b) Sample
 - c) Both (a) and (b)
 - d) Neither of the above
12. What do you mean by enumerators?
13. Under what condition, deliberate sampling is considered ideal?
14. Discuss the precautions to be considered while making use of the secondary data.
15. Discuss the non-random methods of sampling.
16. State any one difference between primary data and secondary data.
17. News paper data is the example primary data or secondary data.
18. What do you mean by Questionnaire?
19. State any four main features of a good Questionnaire.
20. Explain the simple meaning of Investigation.

SUBJECT: BUSINESS STUDIES

HOTS

PROJECT WORK:

- a) Visit a Departmental store, observe the following and record them in a file:
 - i) Different departments and their layout.
 - ii) Nature of products offered for sale.

- iii) Display of fresh arrivals.
- iv) Promotional campaigns.
- v) Assistance by sales personnel.
- vi) Billing counter at store- cash, credit card/debit card, swipe facility. Added attractions and facilities at the counter.
- vii) Additional facilities offered to customers
- b) Take a product having seasonal growth and regular demand (e.g., Tea from Assam) and develop a case study on any of the following points:
 - i) Effect on prices in absence of effective transport system.
 - ii) Effect on prices in absence of suitable warehouse facilities.
 - iii) Demand and supply situation of the product during harvesting season, prices near the place of origin and away.

NATURE AND PURPOSE OF BUSINESS

1. Read both the statements carefully and choose the correct alternative from the following:

Assertion: Speculative risks involve both the possibility of gain, as well as, the possibility of loss.

Reason: Speculative risks arise due to changes in market conditions, including fluctuations in demand and supply.

- a) Both the Assertion and the Reason are correct
- b) Assertion is true but the Reason is false
- c) Assertion is false but the Reason s true
- d) Both the Assertion and the Reason are false.

2. The business risk which cannot be insured is.....

- a) Fire in a factory
- b) Foreign exchange fluctuations
- c) Accidental damage of assets
- d) Shipment of goods through sea

3. 'Strikes' come under which type of risk:

- a) Natural causes
- b) Human causes
- c) Economic causes
- d) None of these

4. It is possible to transfer the interest in case of employment. T/F

5. Machinery imported from China was further sold to Nepal.It is:

- a) Entrepot
- b) Import
- c) Export
- d) None of these

6. Supply of quality products at fair prices is an example of_____ objective.

7. Which of the following does not characterize business activity?

- (a) Productions of goods and services
- (b) Presence of risk
- (c) Sale or exchange of goods and services
- (d) Salary or wages

8. "An activity can be an economic activity in one situation and non-economic in another situation". Do you agree? Give one example to justify the given statement.

9. Mukul is a teacher in RD Public School. During the weekends, he teaches kids of slum area free of cost. He also opened a book shop in partnership with his neighbour Kapil. Identify the human activities done by Mukul.

10. "One man control is best in the world if that man is big enough to manage everything". Explain the statement.

11. 'A single transaction of sale does not constitute business.' Which characteristic of business is highlighted in this statement?

12. After completing the graduation, three close friends (Govind, Satish and Vinod) decided to start trading of goods and services.

a) Govind started purchasing mobile accessories from China to be sold in India.

b) Satish established his Tea business and started purchasing tea from Assam and selling it to America.

c) Vinod deals in purchase of Chocolates from Switzerland and sell them to Bangladesh and Nepal.

Identify the types of external trade highlighted in the given case.

13. The following cases highlight the various situations in which entrepreneurs suffered huge losses. Identify the cause of business risk indicated in the given case:

a) Alok's factory was completely destroyed due to floods.

b) Tarang was a leading manufacturer of basic keypad mobiles. However, demand for such mobiles drastically decreased after the origin of smart phones.

c) Craft Ltd. is known for its technically advanced gadgets. The company is planning to launch a latest model of speakers, which is not yet released in India. However, before the company could bring pout its model, the same type of speaker was launched by one of its competitor. On scrutiny, it was discovered that one of the employees shared the technical aspects of the speaker with the competitor.

14. Pramesh was a successful businessman and owned a departmental store. He was of the fact that profit is the reward of risk bearing. So, in order to earn more profits, he opened two more departmental stores and employed a team of young staff to look after the stores. Initially, the staff was very sincere and Pramesh earned huge profits from his 3 departmental stores. However, over the last two years, his business is running into losses. On close analysis, he found that his staff was not giving much attention to the customers. Moreover, there were many cases of embezzlement (misappropriation of funds) by the employees.

Identify and explain the main cause behind the losses in the Pramesh's business.

FORMS OF BUSINESS ORGANISATION

15. Life insurance of India is a.....

- a) Statutory corporations
- b) Departmental Undertakings
- c) Multi-National Corporations
- d) Government Company

16. Read both the statements carefully and choose the correct alternative from the following:

Assertion: A government company can be established by fulfilling the requirements of the Indian Companies Act.

Reason: A separate Act in the Parliament is not required for the formation of a government company.

- a) Both the Assertion and the Reason are correct
- b) Assertion is true but the Reason is false
- c) Assertion is false but the Reason s true
- d) Both the Assertion and the Reason are false.

17. Read both the statements carefully and choose the correct alternative from the following:

Assertion: Statutory corporations are public enterprises brought into existence by a special Act of Parliament

Reason: The government defines the powers and functions, rules and regulations governing the employees of statutory corporations.

- a) Both the Assertion and the Reason are correct
- b) Assertion is true but the Reason is false
- c) Assertion is false but the Reason s true
- d) Both the Assertion and the Reason are false.

18. Read both the statements carefully and choose the correct alternative from the following:

Assertion: The operations and activities of multinational corporations are restricted to physical boundaries of their own countries

Reason: Multinational corporations operate through a network of subsidiaries, branches and affiliates in host countries.

- a) Both the Assertion and the Reason are correct
- b) Assertion is true but the Reason is false
- c) Assertion is false but the Reason s true
- d) Both the Assertion and the Reason are false.

19.is formed by people who want to procure residential accommodation at lower costs.

20. The liability of a partnership firm is limited to the extent of his capital contribution. T/F

21. If a company is registered on the basis of fictitious names, its incorporation is invalid. T/F

22. Qualification shares are subscribed byof the company.

- a) Auditors
- b) Directors
- c) Bankers
- d) Employees

23. Match the statements given under A with the correct options given under B.

(A)	(B)
i) Cooperative Society	a. Association of persons formed for carrying out business activities and has a legal status independent of its members.
ii) Joint Stock Company	b. Voluntary association of persons , who join together with the motive of welfare of the members.

24. Promoter is not a trustee of the company, but he stands in a fiduciary relationship'.
Comment.

25. Trenz industry has raised its entire authorized capital of Rs 10 crores through issue of shares. It is in severe need of funds. Can it issue share capital to meet the shortage of funds?

26. Prabhat and Rishi are doing separate business of installing centralized Air conditioning units in Mumbai. They enter into a partnership contract to install Centralized AC unit in a hotel in Shirdi.

Identify the type of partnership being highlighted in the given case.

27. 'There is a greater risk of leakage of confidential information in case of Sole Proprietorship.' Defend or refute.

28. Anki ,Kishore and Shivam are partners in a partnership firm manufacturing Water coolers. Recently ,Shivam entered into a contract with Mayank for purchase of raw material worthRs 10,00,000 without the knowledge of Ankit and Kishore. Now, Mayank is asking for the payment and Ankit and Kishore are of the view that only Shivam is liable to make the payment and they cannot be held liable.

a) Are they correct refusing payment?

b) State the related feature of partnership form of business organization.

SUBJECT: ACCOUNTANCY

Chapter: ACCOUNTING EQUATION

LOTS

Q-1 PREPARATION OF ACCOUNTING EQUATION FROM INFORMATIONS OF COVID Ltd

1) Start business with Bank Balance Rs 10,00,000; Fixtures Rs 6,00,000; Motor Rs 1,40,000 & Stock Rs 5,00,000.

2) Sold $\frac{1}{4}$ of above goods at 40% above cost on Credit.

3) Purchase goods costing Rs 9,00,000, half of the money is paid by cash.

4) Paid Rent Rs 60,000.

5) Paid Salary Rs 50,000.

Q-2 Jass has a business with Capital Rs 7,00,000 & Outside Liability of Rs 1,00,000. Find out the value of Total Assets.

Q-3 Which of the following is Correct:

(a) Assets = Liability + Capital

(b) Assets = Capital

(c) Capital = Drawings

(d) Both b & c

Q-4 John has a Assets of Rs 3,00,000 & Capital Rs 1,90,000. Liability will be:

(a) Rs 1,10,000

(b) Rs1,00,000

(c) Rs 3,00,000

(d) Non-of-these

Q-5 Nanu purchased goods on credit for Rs 1,00,000. The effect of the transaction would be:

a) Increase in Assets, Increase in Liability

b) Increase in Assets, Decrease in Liability

c) Decrease in Assets, Increase in Liability

d) Decrease in Assets, Decrease in Liability

HOTS

Q-6 On which side of a T-Shape Account will you record the **Increase** in following items & also tell it's **nature**?

1. Legal Charges

11. Input GST paid

2. Advertisements

12 .Discounts allowed

3. Discount received

13. Repair

4. Brand Name

14. Carriage inward

5. Seller

15. Loss by fire

6. Patent

16. Prepaid rent

7. Loans

17. Outstanding salary

8. Investments	18 .Advance commission
9. Insurance paid	19 .Bills payable
10.Life insurance paid	20 .Earned rent

Q-7 Open T-shape Accounts of DEBTOR, CREDITOR, CASH, and CAPITAL & also write the following transactions on proper side:

- 1) Cash sales for Rs 10,000.
- 2) Sold goods costing Rs 10,000 for Rs 12,000 on credit.
- 3) Paid rent Rs 5,000.
- 4) Purchase goods on credit for Rs 15,000.
- 5) Paid to creditor Rs 2,000.
- 6) Additional Capital Introduced Rs 1,20,000.
- 7) Goods returned by debtor Rs 20,000
- 8) Cash received from debtor Rs 5,000.
- 9) Cash withdrawn for personal use Rs 20,000.
- 10) Purchase goods for cash Rs 10,000.

Q-8 Give One Examples of transaction which will:

- a) Increase in Assets, Increase in Liability
- b) Increase in Assets, Decrease in Liability
- c) Decrease in Assets, Increase in Liability
- d) Decrease in Assets, Decrease in Liability

Q-9 Classify the followings under **Personal, Real and Nominal Accounts**:

1. Land & Building
2. Debtor
3. Closing stock
4. Bad debts

5. Rent receive
6. Loss by fire
7. Freight
8. Bank
9. Commission receive
10. Creditor
11. Drawings
12. Cash
13. Loss by theft &
14. Depreciation.

Q-10 Prepare accounting equation in the books of M/S Aahana & Co. and also make balance sheet.

- 1) Aahana commenced business with cash Rs 2,00,000.
- 2) Outstanding rent Rs 2,000
- 3) Prepaid insurance Rs 5,000.
- 4) Commission received in advance Rs 10,000
- 5) Salary due but not received Rs 5,000.

Q-11 Hardik started his business, but he is confused about the rule “Assets=Liability+Capital”, help him understand this rule by preparing accounting equation and from the balances make Balance Sheet.

- 1) Hardik started business with cash Rs 1,20,000 and Stock Rs 45,000.
- 2) Sold 1 / 3 Of above goods at 10% loss
- 3) Additional capital introduced Rs 10,000.
- 4) Rent paid Rs 15,000 which including Rs 5,000 for prepaid rent.
- 5) Salary due but not paid Rs 5,000.
- 6) Withdrew cash Rs 2,000 and goods for Rs 1,000 for personal use.

7) Goods destroyed by fire for Rs 10,000.

Q-12 At what side of accounts will the following items be recorded?

- a) Expenses
- b) Income
- c) Capital
- d) Drawings
- e) Assets
- f) Liabilities

Chapter: BASIC ACCOUNTING TERMS

LOTS

Q-1 **Learn and write** following terms :

- Business Transaction
- Account
- Capital
- Drawings
- Liability and its types
- Assets and its types
- Expenditure and its 2 types

Q-2 **Learn and write** following terms :

- Deferred revenue expenditure
- Income
- Expenses
- Profits
- Inventory
- Debtors

- Creditors
- Bill receivables
- Bills payable&
- Discounts and its 2 types.

Q-3 Explain GOODS related Accounts with Examples

1. Purchases
2. Sales
3. Purchase Return &
4. Sales Return

HOTS

Q-4 A person to whom money is owed by the business enterprises is called:

- a) Creditor
- b) Debtor
- c) Owner
- d) Non-of-these

Q-5 Bank-Overdraft Is:

- a) Short-term Liability
- b) Long-term Liability
- c) Very Long-term Liability
- d) Non-of-these

Q-6 Rent Received is termed as _____

Q-7 Distinguish between:

- a) Capital Expenditure and Revenue Expenditure
- b) Assets and Liabilities

Q-8 Debentures are _____ Liability.

Q-9 Goods used by the proprietor for personal use are called _____.

Q-10 **Distinguish between:**

- a) Current Assets and Non Current Assets
- b) Revenue and Income
- c) Current Liabilities and Non Current Liabilities

Q-11 What are Vouchers?

Q-12 What is Understand by:

- a) Gain
- b) Cost
- c) Loss
- d) Opening Stock.

SUBJECT: HISTORY

LOTS

1. **Discuss** some facts regarding farming and pastoralism.
2. **“There** was never shortage of food even the times of drought in HADZA” Give reasons.
3. Mention any two special features of the palace of King Zimrilim at Mari.
4. **Why has** the early temple been much like a house?
5. **What** do ancient stories tell us about the civilisation of Mesopotamia?
6. **What was a city** in the Roman sense? Also tell some characteristics of the urban life.
7. Show sites from where the earliest fossils of homo erectus have been found.
8. On the outline map of Asia locate rivers the Tigris and The Euphrates and the cities of Mari, Babylon, Uruk and Ur.

HOTS

- 1) What can we learn about the change in our lives today by studying the causes of the change in the life of early man?
- 2) Describe some facts regarding the ways of obtaining food during early historic period.
- 3) Division of labour is one of the important features of urban life. Explain it with examples.
- 4) Mention any two special features of the palace of King Zimrilimat Mari.
- 5) Estimate the achievement of Mesopotamian King Assurbanipal.
- 6) Show sites from where the earliest fossils of homo erectus have been found.
- 7) On the outline map of Asia, locate rivers the Tigris and The Euphrates and the cities of Mari, Babylon, Uruk and Ur.

8. Individual Project

Collect pictures of some hunters and Gatherers like the Hadza. Compare their life with the lifestyle of the modern world and discuss which life is better and healthy? Support your answers with examples.

SUBJECT: POLITICAL SCIENCE

LOTS

Chapters- 1 to 5, Book 1 (Indian Constitution of Work)

- 1) Explain the term Fraternity.
- 2) What is meant by the term constitution?
- 3) What are the main features of constitution?
- 4) How do you think that India is a Socialist State? Give reasons.
- 5) Is India a Republic? Give Reasons.
- 6) What are the needs of Constitution for democratic country?
- 7) What do you mean by Right to Social Security?
- 8) Define Rights.
- 9) What do you mean by Right to Education?

- 10) Why should we perform duties?
- 11) What does the Right to Equality mean? Is it the most important right for our Society?
- 12) What do you understand by "protective discrimination"?
- 13) Mention the main points of the Article 21 of Indian Constitution.
- 14) Mention two main discriminations against women in our society.
- 15) Mention two distinctions between a Citizen and an Alien.
- 16) List down fundamental rights in our Indian constitution?
- 17) What is direct democracy?
- 18) Which system of election is adopted in India?
- 19) What is plurality system?
- 20) How FPTP is different from PR system?
- 21) What is an election commission?
- 22) What are the functions of election commission?
- 23) What are the discretionary powers of president?
- 24) What are the different types of executive?
- 25) What are the three organs of government?
- 26) Explain the classification of bureaucracy.
- 27) What is pocket veto?
- 28) Write a note on "National Human Right's Commission".
- 29) Explain the Right to Freedom. What restrictions have been imposed with this right?
- 30) What is the difference between ordinary rights and fundamental rights?
- 31) What is the role of committees?
- 32) What is a joint session?
- 33) How are state legislative assemblies formed?
- 34) What is 52nd amendment?
- 35) Why do we need two Houses of Parliament?
- 36) How does parliament make laws?
- 37) Difference between powers of Lok Sabha and Rajya Sabha.
- 38) What are the functions of Parliament?
- 39) How many states in India have bicameral legislature? Name them?

HOTS

Chapters- 1 to 5, Book 1 (Indian Constitution of Work)

- 1) How does deliberation and discussion keep a control on executive?
- 2) How is the parliament able to exercise control by controlling the purse strings of executive?
- 3) Why does Rajya Sabha follow asymmetrical representation?
- 4) What are the instruments of control of parliament over executive?
- 5) What are the powers of Rajya Sabha regarding money bill?
- 6) The Right to Freedom is actually a cluster of several rights." Explain.
- 7) How Rights and Duties are closely related to each other?
- 8) Why India did not adopt presidential system of executive?
- 9) Why does the bill require the assent of the president?
- 10) What changes have come in the office of PM with coming of coalition politics?
- 11) Describe the three steps that have been taken by the government in the implementation of Directive Principles of economic sphere.
- 12) Suggest some electoral reforms to make our election system perfect?
- 13) What remarkable work has been done by Election Commission?
- 14) How does the constitution limit the powers of government?
- 15) Why were directive principles made non-justiciable?
- 16) Why only Supreme Court has expanded Right to Life? Why not High Court or any Lower Court?
- 17) Give two reasons for existing economic inequality in India.
- 18) What is the utility of the term Fundamental Duties being of the Indian Constitution?
- 19) Identify any two sources of the Indian Constitution. Describe in brief the provisions which have been taken from these sources.
- 20) Why were reservations introduced?

SUBJECT - HINDUSTANI MUSIC VOCAL (034)

LOTS

1. ताल किसे कहतेहैं?
2. लय किसे कहतेहैं? लय कितने प्रकार की होती है?
3. किनबद्ध गान किसे कहतेहैं?
4. अकिनबद्ध गान किसे कहतेहैं?
5. "तराना भी आधुनिक गायन शैली का एक प्रकार है।" इस पंक्ति का वर्णन करें।

6. स्वरमालिका क्या होती है? अपने शब्दों में लिखिए।
7. राग के नियम बताएं और इसकी परीभाषा लिखिए।
8. जाति क्या होती है?
9. राग के राजा रूपी स्वर को क्या कहते हैं?
10. सप्तक के कितने प्रकार होते हैं?
11. विवादी स्वर किसे कहते हैं?
12. आश्रय राग किसे कहते हैं?

HOTS

1. घराना किसे कहते हैं? संगीत जगत में कितने घराने हैं?
2. ध्रुपद किसे कहते हैं। संक्षेप में लिखिए।
3. खयाल का क्या अर्थ है? खयाल कितने प्रकार के होते हैं?
4. ताल कहरवा का परिचय देते हुए एकगुन और दुगुन में लिखिए।
5. तीन ताल का परिचय देते हुए एकगुन और दुगुन में लिखिए।
6. प्रश्न:-ताल दादरा को ठाह और दुगुन सहित लिखिए।
7. नाद किसे कहते हैं? इनके प्रकारों का वर्णन करें।
8. सप्तक किसे कहते हैं? यह कितने प्रकार के होते हैं?
9. तानपुरे की कितनी तारें होती हैं? इसको मिलाने की विधि बताएं।
10. राग भैरवी का परिचय देते हुए इसकी स्वरलिपि लिखो।

SUBJECT: RETAIL

Assignment based on chapter - 1 and 2

Q1. List some essential requirements of retailers.

Q2. Write suggestions for better service by the retailer and/or improvement of the product.

a) Suggestions for better service by the retailer:

b) Suggestions for product improvement:

Q3. Explain the strategies followed by the retailer.

Q4. Handling problems is an important duty of a sales associate. Why?

Q5. What are the special activities undertaken by sales associates in a retail organization?

Q6. Explain the features of credit sales.

Q7. What conditions are used for sale of goods on credit?

Q8. Write the differences between condition and warranty.

Q9. Mention a situation where clear communication skill was needed on the part of the shopkeeper.

Q10. What qualities do you think a customer service associate should possess?