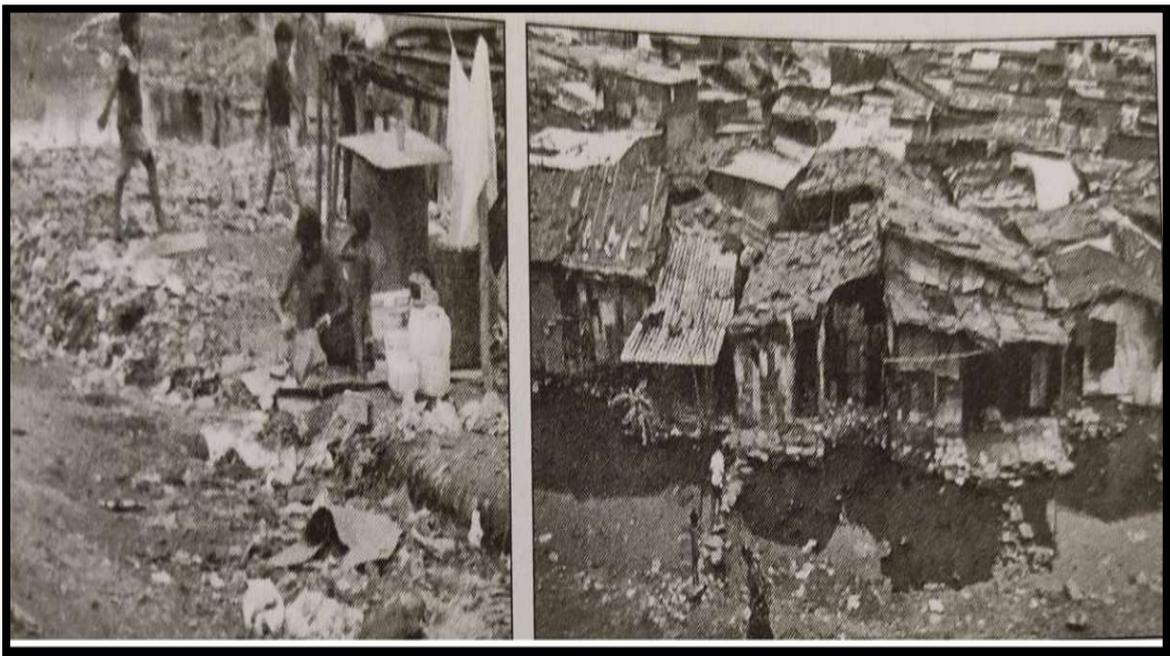


DARSHAN ACADEMY
HOLIDAY HOMEWORK (2021-2022)
CLASS: XII
SUBJECT: ENGLISH CORE

ADVANCED WRITING SKILLS (HOTS)

- (1) We are facing an unprecedented situation during the national lockdown due to Corona virus pandemic. Write your experience of what happened around you during this time, what measures were taken by the government and how the people of the country acted in the face of such a problem. You are Avantika/ Aniket.
(You can also pretend to be a TV reporter, and shoot and submit a video report for the same topic, instead.)
- (2) In India, the urban poor live in sub-human conditions in slums. Write an article on 'Possible Steps to Deal with Slums in India'. You are Kundan or Kashish, City Reporter of a newspaper. You can take help from the following visual. (Word limit: 120 – 150)
(You can also audio or video record and submit the speech on same topic.)



- (3) Write a letter to the Editor, "The Hindu", Chennai, about the rash, reckless and negligent driving by some of the people in your city, suggesting preventive measures. You are Prayag / Priya of 22, MG Road, Chennai.
- (4) Taking ideas from the visual below, together with your own ideas, write an article in about 120 – 150 words for your school magazine to raise awareness about the Government of India's initiative "Beti Bachao, Beti Padhao" (Save the girl child, Educate the girl Child).

In your article you should

- say how girls are disadvantaged in the society
- describe what 'BBBP' initiative is all about
- explain how it will ensure a dignified life for girls

Child sex ratio	No. of Girls/Boys
2001	918/1000
2011	927/1000

OBJECTIVES:

- Ensure safety of women and girls
- Prevent gender based sex selective elimination
- Ensure survival and protection of the Girl Child
- Ensure education of the Girl Child
- Improve the Nutrition Status of Girl Child
- Promote a protective environment for Girl Child

**BETI BACHAO
BETI PADHAO**

Date of Launch:
January 22, 2015 by the Honourable Prime Minister

(You can also audio or video record and submit the speech on same topic.)

- (5) CPR Senior Secondary School, Meerut is looking for a Receptionist, a PGT English and a Dance teacher for its school. Draft an advertisement in not more than 50 words to be published in classified columns of 'Hindustan Times'. You are RomolaVij, Principal of the school.
- (6) You are very much interested in Humanities subjects. Unfortunately, these have been dropped from your school as no one was opting for it. After having a conversation with some of your friends, you decide to highlight this matter. Write a letter in 120-150 words to the principal of your school requesting him to re-introduce the Humanities stream at the Senior Secondary level.
- (7) Recently your school's Basketball team participated in a national level tournament. Your team was ill-treated and had their worst experience ever. Write a letter to the authority concerned in about 120-150 words about the issues suggesting ways to improve it. You can use the following clues. **Clues:** Roughed up by other teams.....No scheduling of matches.....Locker rooms and changing rooms in pathetic condition.....Proper management of events... No Cordial staff
- (8) Plastic, with its exclusive qualities of being light yet strong and economical, has invaded every aspect of our day-to-day life. It has many advantages: it is durable, light, easy to mould, and can be adapted to different user requirements. Once hailed as a 'wonder material', plastic now is a serious worldwide environmental and health concern due to its non- biodegradable nature. Write an article about the growing plastic menace giving suggestions about dealing with plastic waste in not more than 150 words. You are Naren/ Nitisha.
- (9) A series of recent news about marriage preparations on a lavish scale have left you disturbed and you wish to give your views on it. Write an article on the

recent trend of making marriages a boastful affair so much so that it is turning into an upcoming industry. You are Isha/ Ishan. (150-200 words)

(You can make posters or ppts instead on the same topic.)

- (10) You are going to participate in Inter – School Debate. The topic is “Is women empowerment actually taking place?”. Write your speech in favour/ against the motion. You are Natasha Kulkarni of Raman House.

FLAMINGO (Poems & Prose texts)

1. MY MOTHER AT SIXTY SIX - *Kamala Das*

- 1) What different images does the poet use to convey the idea of her mother's old age?
- 2) What is the poet's familiar ache and why does it return?
- 3) Why does the poet smile and what does she say while bidding goodbye to her mother?

2. AN ELEMENTARY SCHOOL CLASSROOM IN A SLUM- *Stephen Spender*

- 1) What is expected of the governor, inspector and visitor and why?
- 2) What is the social issue that the poet raises in the poem?
- 3) Which world do the slum children belong to? Which world is inaccessible to them?

3. KEEPING QUIET- *Pablo Neruda*

- 1) Does the poet suggest total inactivity or death or something else? Give reasons.
- 2) How do few moments of introspection affect our lives?
- 3) What is the 'exotic moment'? Why?

4. THE LAST LESSON - *Alphonse Daudet*

- 1) How was the order from Berlin going to make a difference to the lives of the students?
- 2) Whom does the teacher blame for ignoring the learning at school and why?
- 3) In the story M. Hamel emerges not only as a dedicated teacher but also as a sensitive and understanding human being. Elaborate the character of M. Hamel in light of the above statement.

5. THE LOST SPRING: STORIES OF STOLEN CHILDHOOD - *By Anees Jung*

- 1) How did Saheb get tennis shoes? Why does he explain the author how he had got them?
- 2) 'Survival in Seemapuri means rag picking'. Give a detailed account of the life and activities of the refugees from Bangladesh settled in Seemapuri.
- 3) The life of bangle makers of Firozabad was full of obstacles, which forced them to lead a life of poverty and deprivation. Elaborate.

6. DEEP WATER – *By William Douglas*

- 1) Why couldn't Douglas implement his strategy of escaping drowning?
- 2) What are the quality traits of the swimming instructor who helped Douglas overcome his fear of water?
- 3) Mention any two long term consequences of the drowning incident on Douglas.

- 4) What is the series of fear and emotions Douglas experienced while he was drowning in the YMCA pool? How did he face the near-death experience?

7. THE RATTRAP – By Selma Lagerlof

- 1) How was the iron master's reaction to the peddler different from that of the blacksmith?
- 2) Why did Edla insist on entertaining the peddler even after he was exposed?
- 3) What did the gift of the rat trap signify? Why was Edla happy to see the gift left by the peddler?
- 4) 'A simple act of mercy and kindness can bring about a change of heart.' Discuss the significance of love and kindness with reference to the story 'The Rattrap'.

VISTAS (SUPPLEMENTARY READER)

1. THE THIRD LEVEL–Jack Finney

- 1) What does the third level refer to?
- 2) What was Charley's strange experience at the Grand Central Station?
- 3) How did The World help Charley to confirm his doubts regarding the existence of a third level?
- 4) Do you think that the third level was a medium of escape for Charley? Why?
- 5) What do you infer from Sam's letter to Charley?
- 6) Do you think Charley was really a worried man as his psychiatrist friend and the other friends believed?

2. THE TIGER KING - Kalki

- 1) What was the miracle that occurred soon after the birth of the Maharaja?
- 2) What did the astrologer have to say when the Maharaja killed the first tiger?
- 3) How did the Duraisani behave on receiving the gifts? What idea do you form about her?
- 4) How did the Maharaja celebrate his victory over the killing of the hundredth tiger?
- 5) Who actually killed the hundredth tiger and why?
- 6) "The Tiger King", is a satire on the conceit of those in power." Do you agree with the statement? Elucidate.

SUBJECT : PHYSICS

(ELECTROSTATICS, CURRENT ELECTRICITY, MAGNETIC EFFECT OF ELECTRIC CURRENT)

LOTS

- Q1. What is the charge acquired by a body when 1 million electrons are transferred to it?
- Q2. An electric dipole consists of a positive and a negative charge of $4\mu\text{C}$ each placed at a distance of 5mm. Calculate dipole moment.
- Q3. Show that the work done in an electric field is independent of path.
- Q4. What are dielectrics? Distinguish polar and non-polar dielectrics.

- Q5. An electric dipole with dipole moment $4 \times 10^{-9} \text{C}\cdot\text{m}$ is aligned at 30° with direction of electric field of magnitude $5 \times 10^4 \text{N/C}$. Calculate the magnitude of the torque acting on the dipole.
- Q6. What is the work done in moving a charge of $100 \mu\text{C}$ through a distance of 1cm along the equatorial line of dipole?
- Q7. Describe the motion of a charged particle in a magnetic field when it enters the field (a) perpendicular to the field lines (b) obliquely making an angle θ with the field lines.
- Q8. Why should electrostatic field be zero inside a conductor?
- Q9. A thin straight infinitely long conducting wire having charge density λ is enclosed by a cylindrical surface of radius r and length l , its axis coinciding with the length of the wire. Find the expression for the electric flux through the surface of the cylinder.
- Q10. State Gauss theorem and apply it to find the electric field at a point due to (a) a line of charge (b) A plane sheet of charge (c) A Charged spherical conducting shell
- Q11. State and explain the principle of Wheat Stone's principle. Deduce it using Kirchhoff's laws.
- Q12. Two wires of equal length, one of copper and the other of mangan in have the same resistance. Which wire is thicker?
- Q13. A wire of 15 ohm resistances is gradually stretched to double its original length. It is then cut into two equal parts. These parts are then connected in parallel across a 3.0 volt battery. Find the current down from the battery.
- Q14. Explain the color coding of carbon resistors.
- Q15. Derive the expression $I = nAev_d$
- Q16. Derive an expression for the current in a circuit with external resistance R when
 (a) 'n' identical cells of emf E and internal resistance r are connected in series
 (b) 'm' identical cells are connected in parallel
- Q17. State Biot- Savart law and apply it to find the magnetic field due to a circular loop carrying current at a point (a) at its Centre (b) on the axis
- Q18. State Ampere's circuital law and apply it to find the magnetic field (a) inside a current carrying solenoid (b) inside a current carrying toroid
- Q19. Apply Ampere's circuital law to determine the magnetic field at a point due to a long straight current carrying conductor.

HOTS

- Q20. V-1 Graph for parallel and series combination of two metallic resistors are shown in adjoining figure. Which graph represents parallel combination?
21. A slab of material of dielectric constant k has the same area as the plates of a parallel plate capacitor but has a thickness $3d / 4$, where d is the separation of

- the plates. How is the capacitance changed when the slab is inserted between the plates?
22. A parallel plate capacitor with air between the plates has a capacitance of $8\mu\text{F}$. What will be the capacitance if the distance between the plates is doubled and the space between them is filled with a substance of dielectric constant $K=6$?
23. Two dipoles, made from charges q and Q , respectively, have equal dipole moments. Give the (i) ratio between the 'separations' of these two pairs of charges (ii) angle between the dipole axis of these two dipoles.
- (b) Find out the amount of the work done to separate the charges at infinite distance.
- Q24. A beam of particles projected along $+x$ - axis, experiences a force due to a magnetic field along the $+y$ - axis. What is the direction of the magnetic field?
- Q25. Define the current sensitivity of a galvanometer. Write its S.I. unit figure shows two circuits each having galvanometer and a battery of 3 V. when the galvanometers in each arrangement do not show any deflection, obtain the ratio R_1/R_2 .

SUBJECT: CHEMISTRY

SOLID STATE

LOTS

Assertion and Reason Type Questions: (1 - 5)

In the following questions, a statement of Assertion (A) followed by a statement of Reason (R) is given. Choose the correct answer out of the following choices.

- (a) Assertion and Reason both are correct statements and Reason is the correct explanation for Assertion.
- (b) Assertion and Reason both are correct statements but Reason is not the correct explanation for Assertion.
- (c) Assertion is correct but Reason is wrong.
- (d) Assertion is wrong but Reason is correct.

Q1. Assertion (A): The packing efficiency is maximum for the fcc structure. Reason (R): The coordination number is 12 in fcc structures.

Q2. Assertion (A): Semiconductors are solids with conductivities in the intermediate range from

$$10^{-6} - 10^4 \text{ ohm}^{-1} \text{ m}^{-1}.$$

Q3. Assertion (A): Total number of octahedral voids present in unit cell of cubic close packing including the one that is present at the body centre, is four. Reason (R): Besides the body centre, there is one octahedral void present at the centre of each of the six faces of the unit cell and each of which is shared between two adjacent unit cells.

Q4. Assertion (A): Graphite is a good conductor of electricity; however, diamond belongs to the category of insulators.

Reason (R): Graphite is soft in nature on the other hand diamond is very hard and brittle.

Q5. Assertion (A): The total number of atoms present in a simple cubic unit cell is one.

Reason (R): Simple cubic unit cell has atoms at its corners, each of which is shared between eight adjacent unit cells.

Q6. Why is glass considered as super cooled liquid?

Q7. Classify the following as amorphous or crystalline solids: Polyurethane, naphthalene, benzoic acid, Teflon, potassium nitrate, cellophane, polyvinyl chloride, fibreglass, copper

Q8. Distinguish between:

(i) Hexagonal and monoclinic unit cells

(ii) Face-centred and end-centred unit cells.

Q9A compound forms hexagonal close-packed structure. What is the total number of voids in 0.5 mol of it? How many of these are tetrahedral voids?

(c). A compound is formed by two elements M and N. The element N forms ccp and atoms of the element M occupy $\frac{1}{3}$ of the tetrahedral voids. What is the formula of the compound? (C.B.S.E. Foreign 2015)

Q10. An element with molar mass $2.7 \times 10^{-2} \text{ kg mol}^{-1}$ forms a cubic unit cell with edge length 405 pm. If its density is $2.7 \times 10^3 \text{ kg m}^{-3}$, what is the nature of the cubic unit cell ?

HOTS

Q11. A group 14 element is to be converted into n-type semiconductor by doping it with a suitable impurity. To which group should this impurity belong?

Q12. Classify each of the following solids as ionic, metallic, molecular, network (covalent), or amorphous:

(i) Tetra phosphorus decoxide (P_4O_{10}) (ii) Ammonium phosphate, $(\text{NH}_4)_3\text{PO}_4$ (iii) SiC (iv) I_2 (v) P_4 (vi) Graphite (vii), Brass (ix) Rb (x) LiBr (xi) Si

Q13. Calculate the efficiency of packing in case of a metal crystal for (i) simple cubic, (ii) body centred cubic, and (iii) face centred cubic (with the assumptions that atoms are touching each other).

Q14. Silver crystallises in fcc lattice. If edge length of the cell is 4.07×10^{-8} cm and density is 10.5 g cm^{-3} , calculate the atomic mass of silver.

Q15. A cubic solid is made of two elements P and Q. Atoms Q are at the corners of the cube and P at the body centre. What is the formula of the compound? What is the co-ordination number of P and Q?

Q16. Niobium crystallises in a body centred cubic structure. If density is 8.55 g cm^{-3} , calculate atomic radius of niobium, using its atomic mass 93u.

Q17. Copper crystallises into a fcc lattice with edge length 3.61×10^{-8} cm. Show that the calculated density is in agreement with its measured value of 8.92 g cm^{-3} .

Q18. Analysis shows that nickel oxide has the formula $\text{Ni}_{0.98} \text{O}_{1.00}$. What fractions of nickel exist as Ni^{2+} and Ni^{3+} ions?

Q19. Non-stoichiometric cuprous oxide, Cu_2O can be prepared in laboratory. In this oxide, copper to oxygen ratio is slightly less than 2:1. Can you account for the fact that this substance is a p-type semiconductor?

Q20. A sample of ferrous oxide has actual formula $\text{Fe}_{0.93} \text{O}_{1.00}$. In this sample, what fraction of metal ions are Fe^{2+} ions? What is the type of non-stoichiometric defect present in this sample? '

UNIT: SOLUTIONS

LOTS

Q1. Define the following terms:

(i) Colligative properties

(ii) Molality (m)

Q 2. What is meant by 'reverse osmosis'?

Q3. Differentiate between molarity and molality of a solution

Q4. What are isotonic solutions?

Q5. State advantages of molality over molarity as the unit of concentration .

Q6. Some liquids on mixing form 'azeotropes'. What are 'azeotropes'?

Q7. Why are aquatic species more comfortable in cold water in comparison to warm water?

Q8. Why do gases always tend to be less soluble in liquids as temperature is raised?

Q9. 10cm^3 of a liquid A is mixed with 10cm^3 of liquid B. The volume of resulting solution was found to be 19.9 cm^3 . What do you conclude?

Q10.State Henry's law. What is the effect of temperature on the solubility of a gas in a liquid? Mention its two important applications.

Q11. State Raoult's law. Prove that it is a special case of Henry' law?

Q12. Explain ideal and non-ideal solutions with respect to intermolecular interactions in a binary solution of A and B.

Q13.What are minimum boiling and maximum boiling azeotropes? Can azeotropes be separated by fractional distillation?

Q14.How did Van't Hoff explain the abnormal molecular masses of electrolytes like KCl in water and non-electrolytes like benzoic acid in benzene?

Q15.Which property of solution depend only upon the number of moles of solute dissolved and not on the nature of the solute?

Q16.What happens when blood cells are placed in pure water?

Q17.What role does the molecular interaction play in the solution of alcohol and water?

Q18. Why a person suffering from high blood pressure is advised to take minimum quantity of common salt?

Q19.What happens to vapour pressure of water, if a table spoon of glucose is added to it?

Q20. Equimolar solutions of glucose and sodium chloride are not isotonic. Why?

HOTS

Q21. Two liquids A and B boil at 120 C and 160 C respectively. Which of them has higher vapour pressure at 70 C ?

Q22.Why cutting onions taken from the fridge is more comfortable than cutting onions lying at room temperature?

Q23.Henry law constant for two gases are 21.5 and 49.5 atm , which gas is more soluble.

Q24.What will be the van't Hoff factor for 0.1 M ideal solution?

Q25. When a pressure higher than the osmotic pressure is applied on the surface of the solution separated from a solvent by semi permeable membrane, what will happen?

Q26. The freezing depression of 0.1M sodium chloride solution is nearly twice that of 0.1 M glucose solution. Explain?

Q27. 100g of the solution contains 5g of urea and 10g of glucose. What will be the freezing point of the solution K_f for water is $1.86 \text{ K Kg mol}^{-1}$.

Q28. Henry's law constant for the molality of methane in benzene at 298K is $4.2 \times 10^5 \text{ mmHg}$. Calculate the solubility of methane in benzene at 298K under 760mmHg.

Q29. The mole fraction of He in a saturated solution at 20 C is 1.2×10^{-6} . Find the pressure of He above the solution. Given Henry's constant at 20 C = 144.97 kbar.

Q30. What concentration of N_2 should be present in a glass of water at room temperature? Assume a temperature of 25°C . A total pressure of 1 atm and mole fraction of N_2 in air as 0.78 [K_H for $\text{N}_2 = 8.42 \times 10^{-7} \text{ M/mmHg}$]

Q31. The vapour pressure of water is 12.3 kPa. At 300K. Calculate v.p of 1 molal solution of a solute in it.

Q32. Determine the amount of CaCl_2 ($i=2.47$) dissolved in 2.5 L of water such that its osmotic pressure is 0.75 atm at 27°C .

Q33. Two liquids A and B boil at 145°C and 190°C respectively. Which of them has a higher vapour pressure at 80°C .

Q34. Addition of HgI_2 to aq KI solution shows an increase in the vapour pressure. Why?

Q35. Semipermeable membrane of cupric ferrocyanide is not used for studying osmosis in non aqueous solutions. Why?

Q36. Why is camphor preferred as a solvent in the determination of ΔT_f ?

Q37. 13. An electrolyte AB is 50 % ionized in aq solution. Calculate the freezing point of 1m aq solution.

Q38. Arrange the following in the order of increasing i. boiling points and ii. freezing points

a. 1M aq acetic acid b. 1M aq NaCl c. 1M aq Na_2SO_4 d. 1M aq AlCl_3

Q39. Calculate the number of moles of methanol in 5 L in its 2m solution, if the density of the solution is 0.981 kgL^{-1}

Q40. Calculate the amount of ice that will separate out on cooling a solution containing 50 g of ethylene glycol in 200 g of water to $-9.3\text{ }^{\circ}\text{C}$.

Q41. The temperature at a hill station is $-10\text{ }^{\circ}\text{C}$. Will it be suitable to add ethylene glycol to water in the radiator sol that the solution is 30 % by mass. Why?

Q42. A 45 % solution of sucrose is isotonic with 3 % solution of an unknown substance. Calculate the molecular mass of the unknown substance.

UNIT: ELECTROCHEMISTRY

LOTS

Q1. Why does the conductivity of a solution decreases with dilution?

Q2. What type of cell the lead storage battery is ? Write the anode cathode reaction and also the overall cell reactions occurring in the use of lead storage battery?

Q3. Calculate the emf of the galvanic cell given below :

$\text{Ag}/\text{AgNO}_3 (0.001\text{M}) // \text{AgNO}_3 (0.1) \text{Ag}$.

$E^{\circ}_{\text{Ag}^+/\text{Ag}} = 0.80\text{ V}$

Q4. If a current of 0.5 ampere flows through a metallic wire for 2 hours, then how many electrons flow through the wire?

Q5. What is the role of ZnCl_2 in the dry cell?

Q6. Why blocks of Mg are often strapped to the steel hulls of ocean going ships?

Q7. Which of the Li^+ and Na^+ have the greater mobility in aq solution? Why?

Q8. Corrosion of motor cars is of greater problem in winter when salts are spread on roads to melt ice and snow. Why?

Q9. Why is Li best reducing agent whereas Fluorine is best oxidizing agent?

Q10. Equilibrium constant is related to E^{θ}_{cell} but not to E_{cell} . Explain

HOTS

Q11. If E°_{red} for copper electrode is $+0.34\text{ V}$ How will you calculate its electrode . Potential when it is in contact with 0.1M Cu^{+2} ions ? how does electrode potential change if concentration of Cu^{+2} in solution is decreased ?

Q 12. The resistivity of a 0.8 M solution of electrolyte is $5 \times 10^{-3} \Omega \text{cm}$. Calculate its molar conductivity.

Q13. A voltaic cell is set up at 25 °C with the following half cells . Al/Al^{3+} (0.001M) and Ni/Ni^{2+} (0.50M) . calculate the cell voltage. ($E^{\circ}_{\text{Ni}^{2+}/\text{Ni}} = -0.25 \text{ V}$) , $E_{\text{Al}^{3+}/\text{Al}} = -1.66 \text{ V}$)

Q14. The molar conductivities of acetic acid at 298K at the concentration of 0.1M and 0.001M are 5.20 and 49.2 $\text{S cm}^2 \text{ mol}^{-1}$.respectively. Calculate the degree of dissociation of acetic acid at these concentrations. given that $\Lambda^{\circ}_{\text{H}^+}$ and $\Lambda^{\circ}_{\text{CH}_3\text{COO}^-}$ are 349.8 and 40.9 $\text{ohm}^{-1} \text{ cm}^2 \text{ mol}^{-1}$ respectively .

Q15. 1F of electricity deposits 1 mole of Na from the molten salt, but 1/3 mol of Al from an aluminium salt. Why ?

Q16. Which will have greater molar conductivity and why?

a. 1 mole KCl dissolved in 200 cc of the solution

b. 1 mole KCl dissolved in 500 cc of the solution.

Q17. Zn rod weighing 25 g was kept in 100 mL of 1M copper sulphate solution. After certain time interval, the molarity of Cu^{2+} was found to be 0.8 M. What is the molarity of SO_4^{2-} in the resulting solution and what should be the mass of Zn rod after cleaning and drying ? 2

Q18. How many faraday of charge is required for conversion of $\text{C}_6\text{H}_5\text{NO}_2$ into $\text{C}_6\text{H}_5\text{NH}_2$?

Q19. Explain why Zn dissolves in dil. HCl to liberate $\text{H}_2(\text{g})$ but from conc. H_2SO_4 , the gas evolved is SO_2 .

Q20. Cu does not dissolve in HCl but dissolves in nitric acid. Explain why?

Q21. Fluorine has a low electron gain enthalpy compared to chlorine, yet it is a more powerful oxidant. Explain why?

Q22. If Zn^{2+}/Zn electrode is diluted 100 times, then what will be the change in emf?

Q23. You are acquainted with the construction and working of a lead-storage battery. Give the plausible reasons for these facts:

1. There is only a single compartment unlike other electrochemical cells.

2. Replacement of water is necessary for maintenance.

Q24. For what concentration of $\text{Ag}^+(\text{aq.})$, will the emf of given cell be zero at 25°C , if the concentration of $\text{Cu}(\text{s}) \mid \text{Cu}^{2+}(0.1\text{M}) \parallel \text{Ag}^+(\text{aq.}) \mid \text{Ag}(\text{s})$? Given, $E^\circ_{\text{Ag}^+/\text{Ag}} = 0.80\text{V}$; $E^\circ_{\text{Cu}^{2+}/\text{Cu}} = 0.34\text{V}$.

Q25. In a small town along the coastal area, it is observed that iron objects rust easily. Being an industrial town, it also faces air pollution problem. Identify any 4 factors which are contributing to rusting phenomenon.

Q26. Iodine (I_2) and Bromine (Br_2) are added to a solution containing iodide (I^-) and bromide ions (Br^-). What reaction would occur if the concentration of each species is 1M ? The electrode potentials are $E^\circ_{\text{I}_2/\text{I}^-} = 0.54\text{V}$ and $E^\circ_{\text{Br}_2/\text{Br}^-} = 1.08\text{V}$

UNIT: CHEMICAL KINETICS

LOTS

Q1. Why molecularity applicable only for elementary reaction and order is applicable for elementary as well as complex reactions?

Q2. What will be the effects of temperature on rate constant?

Q3. What is the effect of adding catalyst on

(i) activation energy

(ii) Gibbs energy of reaction.

Q4. A first order reaction is 20% completed in 10 minutes. Calculate

(i) specific rate constant of reaction

(ii) the time taken for the reaction to go 75% completion

Q5. Catalytic decomposition of nitrous oxide of gold at 900°C at an initial pressure of 200 mm was 50% in 53 min and 73% in 100 min:

(i) What is the order of reaction?

(ii) how much will it decompose in 100 min at the same temperature but at an initial pressure of 600 mm of Hg?

HOTS

Q6. The rate constant of a reaction $1.5 \times 10^{-7} \text{ sec}^{-1}$ at 50°C and $4.5 \times 10^{-7} \text{ s}^{-1}$ at 100°C . Evaluate the Arrhenius parameter A and E_a .

Q7. The half life period of two samples are 0.1 and 0.4 seconds. Their initial concentrations are 200 and 50 mol L^{-1} respectively. What is the order of reaction? 1

Q8. What is the ratio of $t_{3/4} : t_{1/2}$ for a first order reaction ? 1

Q9. Higher molecularity reactions (viz. molecularity, 4 and above) are very rare. Why? 1

Q10. Consider the reaction $2A + B \rightarrow \text{Products}$. When concentration of B alone was doubled, half life time does not change. When conc. of A alone doubled, the rate increases by two times. What are the units of K and what is the order of reaction? 1

Q11. How is half life time related to initial conc. for a second order reaction? 1

Q12. The rate of reaction is given by $K = P.Z.e^{-E_a/RT}$. Name the factor which is to be decreased to bring an increase in the rate of reaction. 1

Q13. If rate law is; $\text{rate} = [A]^{3/2} [B]^{-1}$, determine the order.

Q14. In some cases, it is found that a large number of colliding molecules have energy more than threshold energy, yet the reaction is slow. Why?

Q15. A gas decomposition of AB follows the rate law; $\text{rate} = K[AB]^{3/4}$. Write units of K.

Q16. State any one condition under which a bimolecular reaction may be kinetically of first order.

Q17. Variation of concentration of a reactant with time for a given reaction is shown below. What is its order of reaction?

SUBJECT: BIOLOGY

A) Attempt the following questions: 1 mark each:

LOTS-

Q1. What is the reproductive organ in porifera and bryophyta ?

Q2. Where are the pollen grains formed in a plant?

Q3. How many autosomes are found in the human sperm?

Q4. What is the function and location of sertoli cells?

Q5. Pencillium reproduce asexually, how?

Q6. Choose the incorrect statement from the following:

a. In birds and mammals internal fertilization takes place.

b. Colostrum contains antibodies and nutrients

c. Polyspermy in mammals is prevented by the chemical changes in the egg surface.

d. In the human female implantation occurs almost seven days after fertilization.

Q7. Why do internodal segments of sugarcane fail to propagate vegetatively even when they are in contact with damp soil?

Q8. Name the component cells of the egg apparatus in an embryo sac.

HOTS-

1. Why is banana considered a parthenocarpic fruit?
2. A bilobed dithecous anther has 100 microspore mother cells per microsporangium. How many male gametophytes can this anther produce?
3. The meiocyte of rice has 24 chromosomes. How many chromosomes are present in its endosperm?
4. How many chromosomes do drones of honey bee possess?
5. What is the significance of epididymis in male fertility?
6. Where do the signals for parturition originate from in humans?
7. The number of chromosomes in the shoot tip cells of a maize plant is 20. What will be the number of chromosomes in microspore mother cells of the same plant?

2 mark each:

LOTS-

1. Give two adaptations of each-
 - a). wind pollinated plants
 - b). water pollinated plants
 - c). insect pollinated plant
2. Mention the function of each of the following-
 - a) tassels of corn cob
 - b) tapetum in the microsporangium
3. Why is tender coconut considered a healthy source of nutrition?

HOTS-

5. Discuss the endocrine functions of human placenta.
6. Cleistogamy can favour only autogamy. Justify.
7. How do leydig cells help in spermatogenesis?
8. Why do the pollen grains of Vallisneria have mucilaginous covering to protect themselves?
9. Name three different types of Intra Uterine devices. Why copper releasing device is more preferred than other?
10. Saheli is more in demands than other contraceptive pille present in market. Why?

3 marks each:

LOTS-

1. Explain any three advantages the seeds offer to angiosperms?
2. Why do meiosis and mitosis occur in germ cells?
3. What is apomixes. Comment on its significance. How it can be commercially used?
4. Draw a well labelled diagram of human sperm.

HOTS-

- 5.(a) In which part of the human female reproductive system do the following events take place?
 - I-Release of 1st polar body
 - II- Release of 2nd polar body
 - III-Fertilization
 - IV- Implantation
- (b) Discuss the role of hormones in the process of parturition.
6. With the help of mind map show the process of ovum formation in ovary.

7. Corpus luteum in pregnancy has a long life. However, if fertilization does not occur, it remains active for 10- 12 days. Explain.

8. All reproductive tract infections are STDs but all STDs are not RTIs. Justify with example.

5 marks each:

LOTS-

1. Explain the process of oogenesis with the help of mind map, describing the ploidy at each stage.

2. Give reasons why-

a) Most zygotes in angiosperms divide only after certain amount of endospermis formed.

b) Ground seeds are exalbuminous and castor seeds are albuminous

c) Micropyle remains as a small pore in the seed coat of a seed.

d) Integuments of an ovule harden and the water content is highly reduced, as the seed matures.

e) Apple and cashew are not called true fruits.

3. (a) Draw a longitudinal section of a pistil of an angiosperm showing the growth of the pollen tube up to the micropyle of the ovule. Label:- (i) stigma (ii) embryo sac (iii) pollen tube(iv) micropyle.

(b) Explain the events that occur, up to fertilization, when the compatible pollen grain lands on the stigma.

HOTS-

3. Describe the roles of pituitary and various hormones during the menstrual cycle is in a Human female.

4. Draw a diagrammatic sectional view of the female reproductive system of human and label the parts-

a) Where the secondary oocytes develop

b) Which helps in collection of ovum after ovulation

c) Where fertilization occurs

d) Where implantation of embryo occurs

e) Birth canal

III Project work:

Investigators Project /Case Study based on any topic that you are interested or have studied till now.

SUBJECT: MATHEMATICS

Relation & Function

LOTS

Q1 Consider the function $f : [0, \frac{\pi}{2}] \rightarrow \mathbb{R}$, given by $g(x) = \cos x$. show that

(I) f is one – one (II) g is one – one (III) $f + g$ is not one – one

Q2. If $\mathbb{R} \rightarrow \mathbb{R}$ be defined by $f(x) = \frac{x}{\sqrt{1+x^2}}$, then find $(f \circ f \circ f)(x)$.

Q3 Show that the exponential function , $f : \mathbb{R} \rightarrow \mathbb{R}$ given by , $f (x) = e^x$, is one – one but not onto .

Q4 Let $f : \mathbb{R} \rightarrow \mathbb{R}$ be a function given by $f (x) = ax + b$, for all $x \in \mathbb{R}$. Find the constants ‘ a ’ and ‘ b ’ such that $f \circ f = I_{\mathbb{R}}$

Q5 If $f : \mathbb{R} \rightarrow (- 1 , 1)$ defined by $f (x) = \frac{10^x - 10^{-x}}{10^x + 10^{-x}}$ is invertible , find f^{-1}

HOTS

Q6. Find the inverse of the function $f(x) = \frac{e^x - e^{-x}}{e^x + e^{-x}} + 2$.

Q7 Let $A = \{ 1 , 2 , 3 \}$. Find the number of relation on a containing $(1 , 2)$ & $(1 , 3)$ which are reflexive , symmetric but not transitive

Q8 Show that , $f : \mathbb{R} \rightarrow \mathbb{R}$ given by , $f (x) = x - [x]$, is neither one – one nor onto , where $[x]$ denotes greatest integer less than or equal to x .

Inverse trigonometric function

LOTS

Q1 Solve : $\cos (\tan^{-1} x) = \sin (\cot^{-1} \frac{3}{4})$

Q2 Solve : $\sin [2 \cos^{-1} \cot 2 \tan^{-1} x] = 0$

Q3. Prove that : $\tan (\frac{\pi}{4} + \frac{1}{2} \cos^{-1} \frac{a}{b}) + \tan (\frac{\pi}{4} - \frac{1}{2} \cos^{-1} \frac{a}{b}) = \frac{2b}{a}$

Q4. Prove that : $2 \tan^{-1} (\sqrt{\frac{a-b}{a+b}} \tan \frac{\theta}{2}) = \cos^{-1} (\frac{a \cos \theta}{a + b \cos \theta})$

Q5 Solve : $\sin^{-1} (6 \sqrt{3} x) + \sin^{-1} (6 x) = \frac{\pi}{2}$

Q6 If $y = \cot^{-1}(\sqrt{\cos x}) - \tan^{-1}(\sqrt{\cos x})$, then prove that $\sin y = \tan^2 \left(\frac{x}{2} \right)$

HOTS

Q7 Solve : $\sin^{-1} \frac{15}{x} + \sin^{-1} \frac{8}{x} = \frac{\pi}{2}$

Q8 If $\cos^{-1} \left(\frac{x}{2} \right) + \cos^{-1} \left(\frac{y}{3} \right) = \alpha$, then prove that

$$9x^2 - 12xy \cos \alpha + 4y^2 = 36 \sin^2 \alpha$$

Q9 If $\cos^{-1} x + \cos^{-1} y + \cos^{-1} z = \pi$, then prove that $x^2 + y^2 + z^2 + 2xyz = 1$

Q10 If $x, y, z \in [-1, 1]$ such that $\sin^{-1} x + \sin^{-1} y + \sin^{-1} z = \frac{3\pi}{2}$, then

$$\text{prove that } x^{2006} + y^{2007} + z^{2008} - \frac{9}{x^{2006} + y^{2007} + z^{2008}} = 0$$

Matrix

LOTS

Q1 Show that a matrix which is both symmetric & skew symmetric is a null matrix

Q2 If A & B commute, then prove that $AB^n = B^n A$, for all $n \in \mathbb{N}$.

Q3. If $A = \begin{bmatrix} \frac{-1+\sqrt{3}i}{2i} & \frac{-1-\sqrt{3}i}{2i} \\ \frac{1+\sqrt{3}i}{2i} & \frac{1-\sqrt{3}i}{2i} \end{bmatrix}$ and $f(x) = x^2 + 2$, then find $f(A)$.

Q4. Prove that the product of $\begin{bmatrix} \cos^2 \theta & \cos \theta \sin \theta \\ \cos \theta \sin \theta & \sin^2 \theta \end{bmatrix}$ and $\begin{bmatrix} \cos^2 \phi & \cos \phi \sin \phi \\ \cos \phi \sin \phi & \sin^2 \phi \end{bmatrix}$ is null matrix, when θ & ϕ differ by an odd multiple of $\frac{\pi}{2}$

Q5. If $A = \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$, then find value(s) of α such that $A^T + A = I_2$

Q6. If $A = \begin{bmatrix} 0 & 2b & c \\ a & b & -c \\ a & -b & c \end{bmatrix}$, then find the values of a , b , c & d such that $A^T A = I$

HOTS

Q7. If $A = \begin{bmatrix} -1 & 3/2 \\ -1/2 & 1/2 \end{bmatrix}$, then find the value of $I + A + A^2 + A^3 + \dots \infty$.

Q8. If $A = \begin{bmatrix} 0 & -\tan \frac{\theta}{2} \\ \tan \frac{\theta}{2} & 0 \end{bmatrix}$, then show that $I + A = (I - A) \begin{bmatrix} \cos \theta & -\sin \theta \\ \sin \theta & \cos \theta \end{bmatrix}$

Q9 Show that all the diagonal elements of a skew symmetric matrix are zero

Q10 Show that every square matrix can be uniquely expressed as the sum of a symmetric & a skew symmetric matrix

Determinant

LOTS

Q1 If A is a square matrix such that $A^T A = I$, write the value of $|A|$

Q2 If A is a matrix of order 3×3 such that $A(\text{adj } A) = \begin{bmatrix} 5 & 0 & 0 \\ 0 & 5 & 0 \\ 0 & 0 & 5 \end{bmatrix}$, then find $|\text{adj } A|$

Q3 Solve the matrix equation $A \begin{bmatrix} 1 & -2 \\ 1 & 4 \end{bmatrix} = \begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix}$

- (1) By using concept of inverse
- (2) Without using concept of inverse

Q4 Using properties of determinants, evaluate $\begin{vmatrix} (a^x + a^{-x})^2 & (a^x + a^{-x})^2 & 1 \\ (a^y + a^{-y})^2 & (a^y + a^{-y})^2 & 1 \\ (a^z + a^{-z})^2 & (a^z + a^{-z})^2 & 1 \end{vmatrix}$

where $a > 0$ & $x, y \in \mathbb{R}$

Q5 Without expanding, prove that $\begin{vmatrix} b^2 c^2 & bc & b+c \\ c^2 a^2 & ca & c+a \\ a^2 b^2 & ab & a+b \end{vmatrix} = 0$

HOTS

Q6. Without expanding at any stage show that

$$\begin{vmatrix} x^2 + x & x + 1 & x - 2 \\ 2x^2 + 3x - 1 & 3x & 3x - 3 \\ x^2 + 2x + 3 & 2x - 1 & 2x - 1 \end{vmatrix} = xA + B, \text{ where } A \text{ and } B \text{ are constants.}$$

Q7. If $a \neq p, b \neq q, c \neq r$ and $\begin{vmatrix} p & b & c \\ a & q & c \\ a & b & r \end{vmatrix} = 0$, then find the value of $\frac{p}{p-a} + \frac{q}{q-b} + \frac{r}{r-c}$.

Q8. Solve the matrix equation $\begin{bmatrix} 3 & 2 \\ 7 & 5 \end{bmatrix} A \begin{bmatrix} -1 & 1 \\ -2 & 1 \end{bmatrix} = \begin{bmatrix} 2 & -1 \\ 0 & 4 \end{bmatrix}$

Q9 Using properties of determinants , evaluate

$$\begin{vmatrix} 9! & 10! & 11! \\ 10! & 11! & 12! \\ 11! & 12! & 13! \end{vmatrix}$$

Q10 If a, b, c are p^{th} , q^{th} & r^{th} terms respectively of a G.P , prove that

$$\begin{vmatrix} \log a & p & 1 \\ \log b & q & 1 \\ \log c & r & 1 \end{vmatrix} = 0$$

Q11 Prove that

$$\begin{vmatrix} -bc & b^2 + bc & c^2 + bc \\ a^2 + ac & -ac & c^2 + ac \\ a^2 + ab & b^2 + ab & -ab \end{vmatrix} = (ab + bc + ca)^2$$

Continuity & differentiability

LOTS

Q1 If $\tan(x + y) + \tan(x - y) = \frac{\pi}{4}$, then find $\frac{dy}{dx}$

Q2 Differentiate $(x^x)^x$ w.r.t x

Q3 If $x = e^\theta \left(\theta + \frac{1}{\theta}\right)$; $y = e^{-\theta} \left(\theta - \frac{1}{\theta}\right)$, then find $\frac{dy}{dx}$

Q4. If $y = x\sqrt{a^2 - x^2} + a^2 \sin^{-1}\left(\frac{x}{a}\right)$, then prove that $\frac{dy}{dx} = 2\sqrt{a^2 - x^2}$.

Q5. If $\cos^{-1}\left(\frac{x^2 - y^2}{x^2 + y^2}\right) = \tan^{-1}a$, prove that $\frac{dy}{dx} = \frac{y}{x}$.

Q6. Differentiate $\log_9 x + \log_x 9 + \log_x x + \log_9 9$

Q7 Differentiate the following w.r.t x : $\tan^{-1}\left[\frac{\sqrt{x(3-x)}}{1-3x}\right]$

Q8 Differentiate the following w.r.t x :

$$\sin^{-1} X - x^2 \sqrt{1 - x^2}$$

Q9 If $f(x) = \begin{vmatrix} x + a^2 & ab & ac \\ ab & x + b^2 & bc \\ ac & bc & x + c^2 \end{vmatrix}$, prove that $f'(x) = 3x^2 + 2x(a^2 + b^2 + c^2)$

Q10. If $y = 1 + \frac{x}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n!}$, then prove that $\frac{dy}{dx} - y + \frac{x^n}{n!} = 0$

HOTS

Q11. Does there exist a function which is continuous but not differentiable at $x = 2$ & $x = 3$? justify your answer

Q12 Differentiate $y = f(x^3)$ & $f(x) = e^{8x}$, then find $\frac{dy}{dx}$

Q13 If $x^2 + y^2 = a - \frac{1}{a}$ & $x^4 + y^4 = a^2 + \frac{1}{a^2}$, then prove that $\frac{dy}{dx} = \frac{1}{x^3 y}$

Q14 Given that $\cos\frac{x}{2} \cos\frac{x}{4} \cos\frac{x}{8} \dots = \frac{\sin x}{x}$, then prove that $\frac{1}{2^2} \sec^2 \frac{x}{2} + \frac{1}{2^4} \sec^2 \frac{x}{4} + \dots = \operatorname{cosec}^2 x - \frac{1}{x^2}$

Q15 If $\sqrt{1-x^6} + \sqrt{1-y^6} = \alpha (x^3 - y^3)$, then prove that $\frac{dy}{dx} = \frac{x^2}{y^2} \sqrt{\frac{1-y^6}{1-x^6}}$

SUBJECT: PHYSICAL EDUCATION

UNIT-1 PLANNING IN SPORTS

- Q.1. What is knock-out tournament?
- Q.2. What is seeding?
- Q.3. What is Bye?
- Q.4. Briefly explain about Intramural.
- Q.5. Explain briefly any three specific sports programme.
- Q.6. Draw a fixture of 24 teams on knock-out basis.

UNIT-7 PHYSIOLOGY AND INJURIES IN SPORTS

Q.1 When the bone is broken into many into many pieces at one place or different places, it is called -----fracture.

- (a) Comminuted
- (b) simple
- (c) Compound
- (d) Greenstick

- Q.2 Discuss in brief the Soft Tissue Injuries.
- Q.3 Explain briefly Ageing.
- Q.4 List the causes of sports injuries. Explain in detail their preventive measures.

PROJECT WORK: -

- (i) Physical Fitness Test (Write any five test)
- (ii) Project file on any one game/sport given below:
(Basket Ball, Volley Ball, Hand Ball and Hockey etc)

SUBJECT: PAINTING

- Q1. Write an essay in about 200 words on Rajasthani school of Painting.

Q2. Appreciate any of the following painting based of its Artist, sub school, subject matter & composition.

(a). Bharat Meet Rama at chitrakoot

(b). MaruRagini

Q3. Why do you like or dislike Pahari or Rajasthani school of paintings. Justify your opinion with suitable examples.

Q4. Which human life value are depicted in the painting?

Nand and yashoda & Krishna with Kinsmen going to Vrindavan.

Practical:-

Draw and colour

LANDSCAPE - 4

STILL LIFE - 4

COMPOSITION ON DAILY LIFE - 4

Use only Poster colours or nature colours for Paintings.

SUBJECT: INFORMATICS PRACTICES

Numpy

LOTS

1. What is the significance of Pandas Library?
2. Explain Data Visualization.
3. Write the python command to install matplotlib library.
4. Write the Python command to print the indexes of the series object Seal.
5. Which function is used to create line chart?
6. What is CSV?

HOTS

7. Find the output of following program.

Stationery = ['pencils', 'notebooks', 'scales', 'erasers']

```
s= pd.Series([20,33,52,10],index=Stationery)
s2=pd.Series([10,23,22,15],index=Stationery)
print(s=s2)
s=s+s2
print(s+s2)
```

8. Why does the following code cause error?

```
s1=pd.Series(range 1,15,5),index=list('ababa')
print(s1['ab'])
```

9. Which argument would you give to `read.csv()` if you only want to read top 10 rows of data?

10. Create two dataframes of salary of five employees and do the following:

- a) Display both the dataframes
- b) Add 5000 as bonus in both dataframes and display them.

Data Visualization using Pyplot

1. What are the various types of plots offered by matplotlib?
2. Name the functions used to create a (i) scatter chart (ii) bar chart
3. Mr. Harry wants to draw a line chart using a list of elements named LIST. Complete the code to perform the following operations:
 - i) To plot a line chart using the given LIST
 - ii) To give a y-axis label to the line chart named "Sample Numbers"
4. Why is the following code not producing any result? Why is it giving error?(Note that all required libraries have been imported and are available)

```
a=range(10,50,12)
b=range(90,200,20)
matplotlib.pyplot.plot(a,b)
```

MySQL

LOTS

1. What is the purpose of GROUP BY clause?
2. How are NULL values treated by aggregate functions?

HOTS

3. Consider the table SPORTS given below. Write commands in MySQL for (i) to (v) and output for (vi) &(vii).

SPORTS

Sr No	S Name	Class	Game	Grade	Fees
1	Rahul	12	Cricket	A	53000
2	Sugandha	10	Football	B	88000
3	Saumil	11	Cricket	NULL	44000
4	Pradip	10	Football	B	23000
5	Amit	11	Carrrom	A	75000
6	Vivek	12	Tennis	C	11000

- (i) To display the S Name and Fees as annual Fees.(consider fees is monthly shown)
- (ii) To display different games
- (iii) To display the count of students in each game.
- (iv) To display the sum of fees where GRADE is NULL

SUBJECT: ECONOMICS

TOPIC- Unit – I Introduction

LOTS

Macro Economics- Money and Banking

1. Central Bank is a/an,

- a) Apex Bank
- b) Rural Bank
- c) Regional bank
- d) Commercial Bank

2. Legal reserve ratio is equal to,

- a) CRR &SLR
- b) CRR – SLR
- c) SLR – CLR
- d) CRR + SLR

3. Calculate the value of money multiplier and the total deposit created if the initial amount is 700 crores and LRR is 10%.

4. Calculate LRR, if the initial deposit of. 500 crores lead to the establishment of total deposits of 4,000 crores.

5. If total deposits created by the commercial banks are . 12,000/-, LRR is 25%. Calculate the initial deposit.

6. One of the measures of the money supply is,

- a) O1
- b) N1
- c) M1
- d) P1

HOTS

7. Money is a medium of,

- a) Communication
- b) Barter
- c) Exchange
- d) Speculation

8. Money is something that is,
- a) Universally accepted
 - b) Locally accepted
 - c) Accepted by banks
 - d) Regionally accepted
9. One drawback of barter exchange is,
- a) Lack of trust
 - b) Lack of coincidence of wants
 - c) Lack of double coincidence of wants
 - d) Lack of goods
10. Money overcomes the issues of the barter system.
- a) Can't say
 - b) Yes
 - c) Both a and b
 - d) None of these

Government Budget and the Economy

LOTS

- Q1. A direct tax is a tax which is imposed on,
- a) Corporations only
 - b) None of these
 - c) Individuals only
 - d) Individuals and corporations
- Q2. Budgetary policies are implemented by the,
- a) Foreign sector
 - b) Finance ministry

- c) Government
- d) Private sector

Q3. What is Budget?

Q4. Mention the 4 different concepts of deficits.

Q5. What are the 2 types of revenue receipts?

Q6. What are direct and indirect taxes? Explain with the examples.

HOTS

Q7. Which of the following is not the major source of revenue receipts for the government- ?

- a) Tax revenue
- b) Income tax
- c) Wealth tax
- d) Profits

Q8. What are the main items of the capital receipt?

Q9. Furnish 2 examples of Developmental expenditure.

Q10. Give two examples of non developmental expenditures.

Q11. Disinvestment is a,

- a) Capital expenditure
- b) Revenue expenditure
- c) Capital receipts
- d) Revenue receipts

Foreign Exchange Rate

LOTS

Q1. A source of supply of foreign exchange is,

- a) Donations given
- b) Imports

- c) Exports
- d) Gifts

Q2. A source of demand for foreign exchange is,

- a) Brokerage of goods and services
- b) Smuggle of goods and services
- c) Export of goods and services
- d) Import of goods and services

Q3. What is the flexible exchange rate?

Q4. Provide 2 examples and explain why there is a rise in demand for foreign currency when its price decreases.

Q5. What determines the flow of foreign exchange into the nation?

Q6. What is the foreign exchange and foreign exchange rate?

HOTS

Q7. What is meant by the appreciation of currencies?

Q8. Point out a merit of fixed exchange rate.

- a) None
- b) Ensures the supply of the fixed exchange rate
- c) Ensures demand for the fixed exchange rate
- d) Ensures stability for the fixed exchange rate

Q9. Point out a demerit of the fixed exchange rate.

- a) Promotes the objectives of free markets
- b) Ensures the supply of the fixed exchange rate
- c) None
- d) Contradicts the objectives of free markets

Q10. Distinguish between autonomous and accommodating transaction of the balance of payment account.

Balance of payment

LOTS

Q1. Explain the meaning of Balance of payments.

Q2. What do you mean by Unilateral Transfers?

Q3. Explain the various components of current accounts in BOP.

Q4. State any two differences between visible and invisible items of BOP.

Q5. State the formula to calculate Balance of Trade.

HOTS

Q6. Why are the Autonomous item are called as “above the line items”?

Q7. Why are the Accommodating items are called as “Below the line items”?

Q8. Explain the meaning of official reserve transactions in BOP.

Q9. Explain the various components of capital accounts in BOP.

Q10. State the meaning of BOT.

INDIAN ECONOMIC DEVELOPMENT

Indian Economy on the Eve of Independence

LOTS

Q1. What was the condition of agriculture sector at the time of Independence?

Q2. What was the condition of Industrial sector at the time of Independence?

Q3. What was the condition of foreign trade under the British rule ?

HOTS

Q4. Mention the demographic profile during the British Rule. State the condition of occupational structure at the time of Independence.

Q5. what was the condition of Infrastructure in India at the time of Independence?

Indian Economy (1950-1990)

LOTS

1. What is Economic Planning?
2. When was planning commission set up ?
3. When was National development council set up?
4. Mention the objectives or goals of planning in India. Briefly explain it.
5. State the development of Agriculture sector between 1950-1990
6. Mention the development of Industrial sector between 1950-1990
7. Discuss the development of foreign trade between 1950-1990
8. what is marketed Surplus?

Economic Reforms

- Q1.What is economic reforms?
- Q2.Why there was need for economic reforms?
- Q3 what is New Economic Policy? Briefly explain it.

HOTS

- Q4. Mention the positive impact of LPG polices
- Q5 Mention the negative impact of LPG polices.

Poverty

LOTS

1. Define poverty?
2. Name two measures to determine the extent of poverty?
3. What is the minimum calorie intake estimated for rural & urban areas?
4. why has higher calorie intake fixed for rural areas?

5. How can creation of income earning assets address the problem of poverty?
6. What is meant by absolute poverty?
7. The poverty has shifted from overall to urban areas. Why?
8. Name the program initiated by government to help the elderly people & poor & destitute women?
9. What is meant by head count ratio?
10. What is the amount of consumption expenditure to determine poverty line in India?
11. Which Organization collects data on poverty in India?

HOTS

12. Distinguish between absolute and relative poverty.
13. Where do you think the incidence of poverty is greater? Rural areas or urban areas?
14. What percentage of population was below the poverty line in the year 2004-05?
15. What are the characters of poor people?
16. Explain the measures of poverty – relative & absolute.
17. Explain the concept of poverty line?
18. Incidence of Poverty, by Social Groups, 1993 – 94 and 2004 – 05 (Percent).

Year	Rural			Urban		
	SC	ST	ALL	SC	ST	ALL
1993 – 94	48.3	52.0	37.3	48.8	40.1	32.4
2004 – 05	36.8	47.7	28.3	39.8	33.9	25.7

(Indian Human Development Report 2011, page 116).

Answer the following questions on the basis of above data:

- a) For which social group incidence of poverty was higher than the national average in rural areas in 1993 – 94
- b) During 1993 – 94 to 2004 – 05, which social group in urban area experienced higher reduction in poverty?
- c) To reduce poverty, on which social group, the Government should pay more attention.

SUBJECT: BUSINESS STUDIES

PROJECT WORK: (Any one)

1. Select any one product from the list of products provided by CBSE , conduct survey , design logo and label , decide price , profit margin ,write tag line and USP etc for your product.(Refer CBSE guidelines on project work)
2. Select any one organization and prepare project on applicability of Fayol/ Taylor's principles on this organization.
3. Changes witnessed over the last few years on modes of packaging and its economic impact.
4. Project on stock market.

*Answer following chapter wise questions on separate sheets.

NATURE AND SIGNIFICANCE OF MANAGEMENT

HOTS

1. Coordination is required at all levels of management in all management functions because of it's nature:

- | | |
|---------------|---------------|
| a) Continuous | c) Intangible |
| b) Flexible | d) Pervasive |

2. Identify the Nature of Management highlighted here:

Management Principles have been evolved over a period of time based on repeated experimentation and observation.

3. Coordination is a continuous process.(True/False)

4. Policy formation is the function of:

- a) Top level managers
- b) Middle level managers
- c) Operational management
- d) All of the above

5. Which of the following is not a feature of art?

- a) Cause and effect relationship
- b) Systematized body of knowledge
- c) Personalized application
- d) Practice and creativity

6. The following is not an objective of lower management:

- a) Quality products
- b) Growth and development
- c) Innovation
- d) Policy formation

7. "Management involves the decisions by a manager and it is not a group activity."
T/F

8. Why is management considered a multi-faced concept?

9. "Effect of management can always be noticed in every successful and unsuccessful organization." Identify and discuss the feature of management depicted in the given statement

10. "Through e-Chaupal, ITC aims to change the quality of life and the entire outlook of Indian farmers." Which initiative is being highlighted by this initiative of ITC?

11. "Management helps to implement new changes in the organization." Which importance of management is referred in the statement?

12. "In an organization, the objective of marketing department is to increase sales by 10% by offering discounts. However, the finance department is reluctant to offer discounts as it means loss of revenue." One of the importance of coordination helps to resolve the conflict. Identify and explain it.

13. Ahlcon International (leading shoes manufacturers) requires less labour hours and inputs to manufacture a pair of shoes as compared to its competitors. However,

the company always fails to achieve its target production. Whether the Ahlcon International is effective and efficient in its working? Can the company be successful in the long run?

14. Kamal, Khan and David are partners in a firm engaged in the distribution of dairy products in Madhya Pradesh. Kamal is a holder of Senior Secondary School Certificate from Central Board of Secondary Education with Business Studies as one of his elective subjects. Khan had done his post-graduation in Hindi Literature and David in Dairy farming. One day, there was a serious discussion between Khan and David regarding the nature of 'Management as a Science'. Khan argued that Management was not a science, whereas, David was of the opinion that Management was a science. Kamal intervened and corrected both Khan and David about the nature of Management as a Science with the help of his knowledge of Business Studies.

Explain, how Kamal would have been able to satisfy both Khan and David.

LOTS

1. Management is

- | | |
|--------------|-------------------------|
| a) A science | c) Both science and art |
| b) An Art | d) Neither |

2. Management is multidimensional because it has.....dimensions.

- | | |
|--------|----------|
| a) one | c) three |
| b) two | d) four |

3. "Coordination is required at all levels of management in all management functions." T/F

4. What is meant by 'effectiveness' in management?

5. How does management help in achieving personal objectives? State.

6. 'Management is the process of working with and through others'. State the meaning of the term process used in this statement.

7. Explain briefly any four features of management

8. If a manager is able to achieve the target production of 10000 units at a high cost, is he efficient or effective?

9. How is management intangible in nature?

10. 'Management is multidimensional.' Enumerate any two dimensions of management.
11. 'Co-ordination' is the essence of Management'. Explain.
12. How coordination does ensures unity in action in Management.
13. Why is 'Profit' essential organizational objective of an organization?
14. "Management is regarded as an Art by some, as science or as an inexact Science by others. The truth seems to be somewhere in between." In the light of this statement explain the true nature of management.
15. Describe in brief, any five functions of middle-level management in an organization.

PRINCIPLES OF MANAGEMENT

HOTS

1. Principles of management are NOT:

- | | |
|--|----------------|
| a) Applicable only in large firms | c) Flexible |
| b) Formed by practice and experience of managers | d) Contingent. |

2. principle of management puts emphasis on judicious application of penal ties by the management

- | | |
|--------------------|---------------------|
| a) Esprit de corps | b) Division of work |
| b) Order | d) Discipline |

3. Scalar chain involves direct communication between two employees at horizontal level. T/F.

4. What makes principles of management flexible?

5. One of the principles of scientific management emphasizes that to make the employees learn the 'best method' of production, training to workers is essential. It further emphasizes that each person should be scientifically selected and the work assigned to the employees should suit physical, mental and intellectual capabilities.

a) Name and explain the principle of scientific management involved.

6. Vaibhav, an employee in Yamuna Ltd., was instructed by Mr. Vinayak (Production manager) to increase production of steel due to excess stock of steel. On the other hand, Mr. Madhav (Sales manager) directed him not to increase the steel production as the demand for steel in the market was low. Vaibhav got confused regarding whose order to follow and hence was unable to work in a proper manner. Because of

overlapping orders and instructions, Vaibhav was unable to satisfy both the bosses which led to conflict in the organization.

- a) Name and explain the principle not being followed.
- b) Give any two advantages of following this principle.

7. Shiva Ltd. was not performing well. After detailed analysis it was discovered that Workers of the Production Department were not satisfied with the behavior of Mr. Ajay, the production manager, as workers were forced to work for long hours without any rest. Keeping this in view this the management decided to replace Mr. Ajay with Mr. Vijay who had recently completed his M.B.A. from IIM Ahmedabad. Mr. Vijay did a detailed analysis of work which involved heavy manual labour. He allowed small pauses to the workers so that they could recharge their energy for optimum contribution.

- a) Name and explain the technique of Scientific Management adopted by Mr. Vijay.
- b) He further desires to find out the best ways of doing a job. Suggest to him the technique of scientific management.

8. Tanya and Sharma, having same educational qualifications are working as managers in Alfa Ltd. Tanya belongs to a rural area where employment opportunities are very less whereas Sharma belongs to a urban area. Ignoring many other differences between the two management of Alfa Ltd. appointed them as assistant manager, on the same salary package of Rs.45000 per month. Name and briefly explain the principle of management being followed in the above case.

LOTS

1. Henry Fayol was a/an
 - a) Mining engineer
 - b) accountant
 - c) doctor
 - d) professor
2.involves harmony and team spirit among employees
 - a) Discipline
 - b) Esprit de corps
 - c) Order
 - d) standardization
3. Time study involves analyzing movements involved in performing an activity. T/F
4. How are principles of management formed?
5. Why is it said that the principles of management are universal?
6. State the objective of 'Motion Study'.
7. Define 'Scientific Management'.

8. State the role of 'route clerk' in functional foremanship?
9. Explain any four characteristics of 'Principles of Management.'
10. Explain 'Cooperation, not Individualism' as a principle of scientific management.

BUSINESS ENVIRONMENT

HOTS

1. Demonetisation can be applied to:
 - a) Coins
 - b) Bank notes
 - c) both
 - d) none of these
2. Business environment consists of factors which are certain by nature. T/F
3. "Baby milk powder should necessarily inform the buyers that mother's milk is the best for the baby." Which component of business environment is highlighted in this case?
4. Identify the dimension of environment highlighted in the points below:
 - a) Booking movie tickets online
 - b) 70% women workers employed in ABC Ltd.
 - c) Bank reduces interest rates on loans
 - d) Swachh Bharat Abhiyan by BJP
5. Lately many companies have planned for significant investment in organised retailing in India. Several factors have prompted their decisions in this regard. Customer income is rising. People have developed a taste for better quality products even though they may have to pay more. The aspiration levels have increased. The government has also liberalised its economic policies in this regard and permitted even cent percent foreign direct investment in some sectors of retailing.
 - a) Identify changes in business environment under different heads—economic, social, technological, political and legal that have facilitated the companies' decisions to plan significant investments in organised retailing.
 - b) What has been the impact of these changes with regard to globalisation and privatisation?
6. "In the present day market, the retailers have direct link with the suppliers who replenish their stocks as and when needed and at the same time the manufacturers follow flexible manufacturing system". This has been possible due to change in one of the dimensions of business environment.
 - a) Identify and state the dimension given in the above statement.
 - b) Explain any other two dimensions of business environment
7. 'Falcon' Ltd. is a firm involved in manufacturing of readymade garments. The firm recently had a tough time against competitors as all the competitors were having latest hi-tech machines which were not available to the firm. The firm was following traditional methods of production hence they became too slow and competitors took

advantage of it. The managing director of 'Falcon' Ltd. soon realised that following traditional tactics and techniques of production is not good for the firm therefore he installed new hi-tech machines for the purpose of manufacturing garments. The workers of the firm were not aware about the use of these machines. This again created a problem for the company. The workers were not able to operate on the machines which became a great concern for the firm.

- a) Name the dimension of business environment because of which 'Falcon' Ltd. installed new hi-tech machines.
- b) Suggest a remedy to the firm to get rid of the problem currently faced by it.
- c) Also state certain benefits that the firm will derive from your suggestion

LOTS

1. Privatisation involves freedom for doing business. T/F
2. Which of the following is not a characteristic of business environment?
 - a) Absolute
 - b) Integral
 - c) Dynamic
 - d) Complexity
3. State the three branches New Economic Policy.
4. Why is it said that Business environment is a 'relative concept'?
5. 'Demand for reservation in jobs for minorities refers to an example of key component of general environment of business. Name this component.
6. Define 'Liberalisation' as a process of economic reforms.
7. Mention any two features of 'Business environment'.
8. Why is business environment called dynamic?
9. Explain by giving any five reasons why understanding of Business Environment is important for managers?

PLANNING

HOTS

1. Name the step in the process of planning which is considered the "real point of decision making".
2. The time bound plans with measurable outcomes are.....
3. The CEO of XYZ Ltd. an automobile enterprise dreams of his company becoming the best player in future, for which he sets the objectives, forecasts the future and develops various courses of action.
 - a) Identify the management function which is highlighted here.
 - b) What are the various values the CEO is striving to achieve?
4. A company needs a detailed plan for its new project- construction of shopping mall. What type of plan is it?
5. In which step of planning process the planners make prediction and assumptions regarding future?

6. With an aim to compete with its competitors, Sigma Ltd. made its annual plan for ensuing year on the assumption that the sales of its products will rise in near future. Sigma Ltd. manufactures 1000 pens in a week with the help of existing machine. But due to changes in technology a new machine with low cost and more production was launched in the market and the competitors captured the market. Due to this Sigma Ltd. could not achieve the objectives. Identify and explain limitation of planning discussed in the above para.
7. Naman, working as supervisor in Rainbow Ltd, is given a target of producing 100 shirts a day. Due to his habit of doing things differently, an idea struck him which would not only give job opportunities to the disabled people but also help in reducing per unit cost and increasing the production per day. However, Hari Singh, the Production Manager, does not give any importance to Naman's creativity and hence does not allow Naman to deviate from the pre-decided methods and techniques.
 - a) By not allowing Naman from deviating from the pre-decided methods and techniques, Mr. Hari Singh gave rise to one of the limitations of management function. Identify the management function and the limitation.
8. Mr. Ramnujam, Director of Blossom Ltd., does the entire planning for the organisation. He wants that the lower and middle level managers should only implement the plans laid down by him and does not allow them to deviate from the set plans. The lower management only carries out the order. There is nothing new or innovative in the organisation.
 - a) Name the limitation of planning referred to above.
 - b) State any other two limitations of planning.
 - c) Name the value that can be emphasized by removing the above limitation of planning.

LOTS

1. Decision making is the case of.....
 - a) Planning
 - b) Organising
 - c) Staffing
 - d) Directing
2. The last step in the process of planning is "Plan Implementation." T/F
3. Rule is a specific statement that prescribes what is to be done or not to be done. T/F
4. Name the type of plan which serve as a guide for overall business planning and define the future state of affair which the organization strive to realize?

5. State the first two steps in the process of planning.
6. Define 'Objectives' as types of plans.
7. How is planning a pervasive function?
8. How does planning help in controlling?
9. In which type of plan, sequence of activities is determined to complete a job?
10. State the type of plan that does not allow any flexibility.
11. Differentiate between 'Policy' and 'rule' as types of plans.
12. State any five limitations of planning.
13. Explain any five points of importance of planning for a large business enterprise.
14. Defining 'Organisational objectives' is the first step in the process of planning. Explain, in brief, the other steps of this process.
15. Explain how does planning help reducing uncertainties?

SUBJECT: ACCOUNTANCY

CHAPTER: 1

ACCOUNTING FOR PARTNERSHIP FIRMS- (FUNDAMENTALS)

LOTS

- Q.1 What share of profit would a sleeping partner who has contributed 70% of the total capital, get in the absence of partnership deed.
- Q.2 Name the account which is prepared to record the adjusting amount of assets & liabilities.
- Q.3 M/S Gobind & Sons maintain the capital accounts under which it prepares partner's capital account as well as partner's current account. M/S Gobind & Sons are using _____ way/method of maintaining capital A/C.
- Q.4 Tamika, Avni & Kashvi were partners in a firm sharing profits & losses in 3:2:1 ratio respectively. From next year they decided to share profits & losses in 1:2:3 ratio respectively, among them who Sacrificed?
- | | |
|------------|-----------------------|
| (a) Tamika | (b) Avni |
| (c) Kashvi | (d) None of the above |
- Q.5 The agreement of partnership may be:

- (a) Oral
- (c) both (a)&(b)

- (b) Written
- (d) None of these

Q.6 The Maximum number of partners allowed in a firm are 50, this information is written under which Act?

Q-7 What is the nature of Revaluation Account?

Q.8 X and Y are partners in a firm, X without informing Y use the stock of the firm worth Rs 1,00,000 for personal benefits and as a result suffered a loss of Rs 60,000. Now, X want his firm to bear the loss. What is the Solution available to X:

- (a) Y should bear the loss
- (b) Firm should bear the loss
- (c) X should bear loss & return the stock taken for personal use
- (d) Non-of-these

Q.9 Funny and Bunny are two partners, they draw for private use Rs 1,90,000 and Rs 1,10,000. Interest is changeable @ 6% p/a on drawings. What is the interest on drawing of both the partners?

Q.10 Sazzy & Mizzy contribute Rs 8,00,000 and Rs 4,00,000 respectively by way of capital on which they agree to pay interest @ 10% p.a. Their profit-sharing ratio is 2:3 and the firms profit before distributing interest for the year is Rs 6,00,000. Prepare the relevant account to show the treatment of 'Interest on capital'.

Q.11 Xyo & Yen are partners in a firm, at the end of the year, it was discovered that in arriving at the profit for 31st March 2021, the following two items have been omitted.

- (i) Interest on Capital of Rs 3,50,000 and Rs 2,50,000 respectively.
- (ii) Salary of Rs 1,50,000 and Rs 2,50,000 respectively.

Make Single Journal entry for the above adjustments.

Q.12 A, B and C shared the net profit of Rs 8,00,000 in the ratio of 2:2:1 without providing for Interest on B's loan, B advanced a loan of Rs 4,00,000 in the beginning of accounting year. Whereas the partnership deed is silent on the interest on loan. Calculate the amount of Interest on Loan:

- (a) Rs 24,000
- (b) Rs 2,40,000
- (c) Rs 60,000
- (d) Rs 42,000

Q.13 What will be the interest on Z's drawings @ 10% p.a. if he withdrew Rs 20,000 p.m. on the last day of every month during the year:

- (a) Rs 11,000
- (b) Rs 20,000
- (c) Rs 121,000
- (d) Non-of-these.

Q.14 Calculate interest on P's drawings @ 13% p.a if he withdrew Rs 13,000 p.m.during the year.

Q.15 Is a partner entitled to salary if he works more than other partners? Give your answers assuming the partnership deed is silent.

Q.16 Distinguish between Active Partner & Sleeping Partner. (Any One.)

Q.17 Rolex & Lil formed a partnership orally. Rolex is a whole-time partner whereas Lil does not attend business regularly. Rolex claims Rs 3,000 salary p.m. & 60% of balance profits Rs 24,600. Lil advanced Rs 10,000 as loan and now she claims 10% interest. State how you will settle the accounts.

Q.18 Pink, Black and White are partners sharing 5:3:2, White is guaranteed a minimum amount of Rs 10,000 as share of profit every year. Any deficiency shall be met by Black. The profit for the year ending 31st March 2021 was Rs 60,000. Prepare profit & loss Appropriation Account.

Q.19 S & M partners sharing profits & losses in the ratio of 2:3 with the capitals of Rs 5,00,000 & Rs 6,00,000 respectively. On 1/Jan/ 2021 S & M granted loans of Rs 20,000 & Rs 10,000 respectively to the firm. Show the distribution of profit & losses for the year ended 31st March 2021 if the loss before interest for the year amounted to Rs 2,500.

Q.20 Ramesh and Dinesh are partners sharing the profits and losses in the ratio of 3:2 with capital of Rs 6,00,000 & Rs 4,00,000 respectively. Show the distribution of Profit & Loss for the year ended 31st March, 2021, by preparing the relevant account if the partnership deed provides for interest on capital @10% p.a. and profit for the year ending is Rs 15,000

Q.21 Mala and Bala are partners in a business their fixed capitals at the end of the year were Rs 48,000 & Rs 36,000 respectively. During the year ended March 31,2021,Mala's drawings and Bala's drawings were Rs 8,000 & Rs 12,000 respectively. Profits (before interest on capital) during the year were Rs 32,000. Calculate interest on capital and interest on drawings @ 5%p.a. & @ 6% p.a. respectively for the year ending 31st March 2021.

Q.22 P, Q and R shared the profits of Rs 15,00,000 in the ratio of 2:2:1 without providing for interest on Q's loan . Q granted a loan of Rs 10,00,000 in the beginning of accounting year whereas the deed is silent on interest on loan and the profit sharing ratio. Give necessary adjusting entries.

Q.23 The firm distributed the profits for the year ended 31/March/2021; Rs 3,00,000 equally without providing for the following adjustments:

- (i) Reema and Rita were entitled to a Salary of Rs 5,000 per annum.
- (ii) Neha was entitled a Commission of Rs 5,000
- (iii) Reema& Rita had guaranteed a minimum profit of Rs 1,20,000 p.a. to Neha
- (iv) Profit were 2:2:1 between Reema : Rita : Neha

Prepare necessary journal entries.

Q.24 Young and Old are two partners sharing profits and losses equally and contributed Rs 1,00,000 and Rs 2,00,000 respectively. Interest on capital is provided @10%p.a. Journalise the above assuming capitals are fixed.

Q.25 Gurdas and Aakaal are partners sharing profits in capital ratio. Their capitals were Rs 5,00,000 and Rs 7,00,000 respectively. They withdraw Rs 50,000 & Rs 70,000 for the year ending 31st March 2021. Interest on drawings was provided @ 8%p.a. Journalise

HOTS

Q.26 Which of the following item is not recorded on the credit side of current account of partners?

- | | |
|-------------------------------|-------------------------|
| (a) Interest of Partners Loan | (b) Interest on Capital |
| (c) Profit of Partners | (d) Salary of Partners |

Q.27 On which side interest on partner's drawings will be recorded when their capital are fixed?

- (a) Cr side of Partner's Current A/C
- (b) Cr side of Partner's Capital A/C
- (c) Dr side of Partner's Current A/C
- (d) Dr side of Partner's Capital A/C

Q.28 Interest on Drawings of a partner is credited to:

- | | |
|---------------------------|---------------------------|
| (a) P&L Appropriation A/C | (b) P&L A/C |
| (c) Partner's Capital A/C | (d) Partner's Current A/C |

Q.29 On 1st of Jan, 2021 Capital of Ram & Mohan was Rs 20,00,000 & Rs 10,00,000. From 1st July, 2021 they decided that their capital should be Rs 15,00,000 each. Interest on capital of partners @ 10%p.a. for the year 2021 will be:

- | | |
|--------------------------|--------------------------|
| (a) Rs 175000; Rs 125000 | (b) Rs 200000; Rs 100000 |
| (c) Rs 20000; Rs 10000 | (d) Rs 150000 each |

Q.30 If fixed amount is withdrawn for 6 months ending 31st Dec 2021 at the beginning of each month, interest on whole amount will be charged for how many months?

Q.31 Cori withdrew Rs 5,000 p.m. as drawings from the firm for first 6 months of the year at the end of each month, interest on Rs. 30,000 will be calculated for _____ months for the year ending 31st March 2021.

Q.32 State True or False

Interest on Partner's loan is debited to Profit & Loss Appropriation A/C

Q.33 State Yes or No, with reason

Can a Minor be admitted into partnership?

Q.34 State Yes or No, with reason

Is, Profit & Loss Appropriation A/C the Substitute for Profit & Loss A/C

Q.35 Ajay presents the following Profit & Loss Appropriation account to his partner Vijay :

Profit & Loss appropriation Account For the year ended 31st March 2019

Dr.	Cr.
Particulars	Particulars
To Salary to Ajay	20,000
To Salary to Vijay	17,000
To Interest on capital @ 6%	
Ajay on `1,00,000 = `6,000	
Vijay on `40,000 = <u>`2,400</u>	
To Interest on Ajay's Loan	2,000
To Profit transferred to	
Ajay's capital a/c `5000	
Vijay's capital a/c `2000	7,000
54,400	54,400

There is no partnership deed. Vijay feels that he has not been treated fairly. Point out the provisions of law that Ajay has contravened and draw Profit and Loss Appropriation account.

Q.36 If capital accounts are fixed, where will you record the following items

(i) Drawings (ii) Interest on capital (iii) Withdrawal of capital

Q.37 Calculate the interest on drawings of Ramesh @ 10%p.a for the year ended 31st Dec.2020 in each of the following alternative cases.

1. If he withdraw ` 6,000 in the beginning of each quarter.

2. If he withdraw ` 6,000 at the end of each quarter.
3. If he withdraw ` 6,000 during the middle of each quarter.
4. If he withdraw ` 6,000 per quarter.

Q.38 On April 1, 2019 an existing firm had assets of ` 1,50,000 including cash of ` 10,000. The partner's capital a/c showed a balance of ` 1,20,000 and the reserve contributed the rest. If the normal rate of return is 10% & the goodwill of the firm is valued at ` 48,000 at four year's purchase of super profits, find the average profits of the firm.

Q.39 From the following information, calculate the value of goodwill of Kamlesh and Jignesh

1. At three years purchase of average profits.
2. On the basis of capitalization of super profits
3. On the basis of capitalization of average profits

Information:

- a) Average capital employed in the business ` 5,00,000
- b) Net trading results of the firm for the past years Profit

Year	Profit/Loss
2017	`1,47,600
2018	(`1,48,100)
2019	`4,48,700

(c) Rate of interest expected from the capital having regard to the risk involved – 10%

(d) Remuneration to each partner for his service ` 500 p.m.

(e) Assets (excluding goodwill) `7,54,762&Liabilities ` 31,329

Q.40 A and B are partners sharing profits & Losses in the ratio of 3:1. Their capitals were `60,000 and `40,000 respectively. As from 1st Jan 2020 it was agreed to change the profit sharing ratio to 3:2. According to the partnership deed good will should be valued at three years purchase of the average of five year's profits. The profits of the previous five years were as following:

Year	Profit/Loss
2014	`30,000
2015	`40,000
2016	`50,000

Q.12. A and B who shared profits in the ratio of 3:1 admit C as a partner for 1/5 share in profits, which he acquires equally from the old partners. What will be New Profit Sharing ratio & sacrificing ratio?

Q.13. Abdul and Babul as partners sharing profits in the ratio of 2:1. Cabal is admitted with 1/3 share in profits. Cabal acquires 2/3 of his share from Abdul and 1/3 of his share from Babul. What will be New Profit Sharing ratio & sacrificing ratio?

Q.14. Paul and Lee are partners sharing profits in the ratio of 3:1. They admit Nina as a partner. Paul surrenders 1/3rd of his share and Lee 1/4th of his share in respect of Nina. What will be new profit sharing ratio of Paul:Lee:Nina?

Q.15. Batman and Superman are partners sharing profits in the ratio of 5:3. Spiderman is admitted as a new partner and the new ratio is 4:3:2. What will be sacrificing ratio?

Q.16. Mina and Nina are partners. Pena is admitted for 1/4 shares. What is the ratio in which Mina and Nina will sacrifice their share in favor of Pena?

Q.17. Explain the accounting treatment of Goodwill when goodwill account already appears in the books of the firm and new partner brings his share of goodwill in cash.

Q.18. Explain the accounting treatment of Goodwill when new partner cannot bring his share of goodwill in cash.

Q.19. Justin, Lil and Snoop are partner's sharing profits in the ratio of 3:2:1. They admitted Honey for 1/6th share. It is agreed that Lil would retain his original share. Calculate new ratios and sacrificing ratios.

Q.20. A, B and C are partners, sharing profits in the ratio of 4:3:2. D is admitted for 2/9share of profits & bring ` 30,000 & `10,000 for his share of goodwill. The new profit sharing ratio will be A:B:C:D=3:2:2:2. Journalise the above transactions in the books.

HOTS

Q.21. Krishna and Suresh are partners in a firm sharing profits as 3:2.

Balance Sheet as at 31stDec 2020

Liabilities	,	Assets	,
-------------	---	--------	---

Creditors	15,000	Plant & Machinery	30,000
Reserves	5,000	Patents	5,000
Capital account		Furniture	3,000
Krishna 30,000	50,000	Stuck	16,000
Suresh 20,000		Debtors	15,000
	70,000	Cash	1,000
			70,000

On that data Mohan is admitted as partner for 1/5 share as follow:

(a) He is to contribute ` 14,000 as his share of capital which includes his share of premium for goodwill.

(b) Goodwill is valued at 2 years purchase of the average profits of the last four years which were ` 10,000; ` 9,000; ` 8,000 & ` 13,000 respectively.

(c) Plant to be written down to ` 25,000 & patents written up by ` 8,000.

(d) A joint life policy taken in the name of the partner for ` 50,000 on which premiums have been paid & has a surrender value of ` 7,000. Prepare Revaluation a/c, Partner's capital a/c & the balance sheet of the new firm.

Q.22. A and B are partners in a firm.

Balance sheet as on 31/12/2019

Liabilities	`	Assets	`
Prov. for Doubtful Debt		Cash	10,000
Workmen Compensation fund	4,000	Sundry Debtors	80,000
Outstanding Expenses	5,000	Stock	20,000
Creditors		Fixed Assets	38,000
Capitals: A-50,000	3,000	Profit & loss A/C	4,000
B-60,000	30,000		
	1,10,000		
	1,52,000		1,52,000

C was taken into partnerships as from 01.01.2020. C brought ` 40,000 as his capital but he is unable to bring any amount for goodwill. New profit sharing ratio is 3:2:1. Following terms were agreed upon:

1. Claim on account of workmen's Compensation is ` 3,000.
2. To write off Bad Debts amounting to ` 6,000.
3. Creditors are to be paid ` 2,000 more.
4. ` 2,000 be provided for an unforeseen liability.
5. Outstanding expenses be brought down to ` 1,200
6. Goodwill is valued at 1 ½ years purchase of the average profits of last three years, less ` 12,000. Profits of 3 years amounting to ` 12,000; ` 18,000, and ` 30,000.

Prepare Journal Entries, capital accounts and balance sheet.

Q.23. A and B who share profits in the ratio of 2:1. Have Balance Sheet as:

Liabilities	`	Assets	`
Bank overdraft	15,000	Debtors:	
Reserve fund	12,000	40,000	36,400
Sundry Creditors	20,000	Less: Provision: <u>3,600</u>	20,000
Capitals: A	40,000	Stock	25,000
B	30,000	Building	2,000
		Patents	33,600
		Machinery	
	1,17,000		1,17,000

They admitted C into partnership on this date. New profit sharing ratio is agreed as 3:2:1. C brings in proportionate capital after following adjustments.

1. C brings in ` 10,000 in cash as his share of Goodwill.
2. Provision for doubtful debts is to be reduced by ` 2,000
3. There is an old typewriter valued ` 2,600. It does not appear in the books of the firm. It is now to be recorded.

4. Patents valueless.

5. 2 % discount is to be received from creditors.

Prepare revaluation A/C, Capital A/Cs and Balance Sheet.

Q.24. A,B and C sharing profits and losses in Proportion of 6:5:3 respectively.

Balance Sheet as on 31.March.2020

Liabilities	Amt(Rs)	Assets	Amt(Rs)
Creditors	18,900	Cash	1,890
Bills Payable	6,300	Debtors	26,460
General Reuse	10,500	Stock	29,400
Capitals:-		Furniture	7,350
A 35,400		Land & building	45,150
B 29,850			5,250
C 14,550	79,800	Goodwill	
	1,15,500		1,15,500

They agreed to take D into partnership and give him 1/8 the share on the following terms.

- (1) That furniture be depreciated by ` 920.
- (2) An old customer, whose account was written off as bad, has promised to pay ` 2,000 in full settlement of his full debt.
- (3) That a provision of ` 1,320 be made for outstanding repair bills.
- (4) That the value of land and building have appreciated be brought up to ` 54,910
- (5) That D should bring in ` 14,700 as his capital.
- (6) That D should bring in ` 14,070 as his share of goodwill.
- (7) That after making above adjustment, the capital accounts of old partners be adjusted on the basis of the proportion of D's capital to his share in business i.e. actual cash to be paid off or brought in by the old partners, as the case may be.

Prepare Journal Entries and prepare the balance sheet of new firm.

Q.25.A, B and C were partners in a firm sharing profits in the ratio of 3:2:1. On 31st March, 2019 their balance sheet was as follows

Balance Sheet
as at 31st March,2020

Liabilities	`	Assets	`
Creditors	84,000	Bank	17,000
General Reserve	21,000	Debtors	23,000
Capital A/C		Stock	1,10,000
A-60,000		Investments	30,000
B-40,000		Furniture and Fittings	10,000
C-20,000	1,20,000	Machinery	35,000
	2,25,000		2,25,000

On the above date, D was admitted as a new partner and it was decided that

1. The new profit sharing ratio between A, B, C and D will be 2: 2: 1: 1.
2. Goodwill of the firm was valued at ` 90,000 and D brought his share of goodwill premium in cash.
3. The market value of investments was ` 24,000.
4. Machinery will be reduced to ` 29,000.
5. A creditor of ` 3,000 was not likely to claim the amount and hence to be written-off.
6. D will bring proportionate capital so as to give him 1/6th share in the profits of the firm.

Prepare Revaluation account, Partner's capital accounts and Balance sheet of the reconstituted firm.

SUBJECT: HISTORY

LOTS

1. What are the opinions archaeologists about the status of Harappan society? Explain briefly. Which theory seems the most plausible?
2. "The problems of archaeological interpretation are perhaps most evident in attempts to reconstruct religion practices' How? Explain briefly.
3. What do you mean by Mahajanapadas? Name the most important Mahajanapadas and their Salient features?
4. What you mean by Jatakas? Narrate one example to show the relationship of kings and subjects?
5. Explain the three explanations given by the authors for Draupadi's marriage? Why do you think the author's offered three explanations for a single episode?
6. Summarize the central teaching of Buddhism and Jainism.

HOTS

1. Why do you think rulers made arrangements for irrigation?
2. "Epigraphy alone cannot provide a complete understanding of history"
Analyse this statement.
3. Mahabharata is a good source to study the social values of ancient times.
Support this statement with suitable arguments.
4. "Buddhist literature needs to be studied to understand the sculpture at Sanchi and other places." Justify this statement with examples.
5. Write a note on heritage site – Sanchi Stupa.
6. Why is most of our understanding about Indus valley civilisation based on archaeological sources? Give two striking features of Harappan writing.

7. Map Work

On political map of India locate the following points

- a) Mature Harappan Sites
- b) Mahajanpadas and cities
- c) Distribution of Ashokan inscriptions
- d) Important kingdoms and town
- e) Major Buddhist sites

8. Individual Project

Collect illustrations of ten things made of stone, metal, and clay produced and used at present. Compare these with the pictures of Harappan civilization in this chapter and discuss the similarities and differences that you find.

SUBJECT: POLITICAL SCIENCE

LOTS

Chapters- 1 to 6, Book 1 (Contemporary World Politics)

Chapter-1 (The Cold War Era and NAM)

1. Name the two superpowers responsible for Cold War. When did the world become unipolar?
2. What was the difference in the ideology of Western Alliances and that of Eastern Alliances?
3. What is meant by the Cuba Missile Crisis?
4. What do you understand by Least Developed Countries?
5. Why did India distance itself from the two camps led by the U.S. and the Soviet Union? Explain.
6. Name any two founders of Non-aligned Movement. The first NAM Summit was the culmination of which three factors?
7. Describe any six factors responsible for the disintegration of USSR.
8. Explain various arms control treaties.
9. Explain any four objectives on Non- aligned Movement.
10. When did NATO come into existence? How many states joined it?

Chapter 2 (The End of Bipolarity)

1. What was Shock Therapy?

2. What is the new name of former USSR?
3. What was Socialist Bloc?
4. What does CIS stand for?
5. What was the immediate cause of disintegration of USSR?
6. Mention some features of Soviet Society.
7. Who was Gorbachev? Why did he seek to reform Soviet Society?
8. What were the political reasons for disintegration of Soviet Union?
9. "India and the USSR enjoyed mutual dimensional relationship." Justify the statement.
10. What were the major consequences of the disintegration of the Soviet Union for countries like India?

Chapter 3 (New Centres of Power)

1. Name the pillars and objectives of ASEAN community.
2. Identify the contentious issues between China and India. How could these be resolved for greater cooperation? Give your suggestions.
3. What does ASEAN stand for?
4. What does the circle with golden stars on the European Union flag stand for?
5. What was Marshall Plan?
6. What is the significance of ASEAN flag?
7. Which four common symbols make the European Union look like a nation state?
8. What are the objectives of ASEAN Economic Community?
9. What role has been played by European Union in solving the problems of the European countries?
10. Why was European Union founded? What were its objectives and significance?

Chapter 4 (South Asia and the Contemporary World)

1. What was the reason for the formation of SAARC?
2. How long did East and West Pakistan remain together?
3. What is the full form of SAARC?
4. Mention changes that occurred in Maldives.

5. Mention the names of member states of SAARC.
6. Explain the problems that India have with Pakistan.
7. What is Indus River Water Treaty? Mention its significance also.
8. Mention some points of agreement between India and Nepal.
9. Describe any four consequences of Bangladesh war of 1971.
10. Explain any two points of conflict between India and Bangladesh.

Chapter 5 (United Nations and its Organizations)

1. What are the functions of Security Council?
2. As a citizen of India, how would you support India's candidature for the permanent membership of Security Council? Justify your proposal.
3. Who is present Secretary General of the United Nations?
4. Mention any two agencies of the United Nations.
5. Mention any two advantages of having international organisation in the world?
6. What reforms in the UN are required?
7. What is the veto power? Should it be modified?
8. What are the main objectives of the United Nations?
9. Name any two member states of the European Union who are permanent members of the UN Security Council.

Chapter 6 (Security in Contemporary World)

1. What is the difference between traditional and non-traditional security? Which category would the creation and sustenance of alliances belong to?
- 2 Define security.
- 3 Suggest any one effective step which would limit war or violence between countries.

HOTS

Chapters- 1 to 6, Book 1 (Contemporary World Politics)

Chapter-1 (The Cold War Era)

1. "Non-alignment does not imply neutrality or equidistance." What does this statement mean?
2. "The drop of bombs on Hiroshima and Nagasaki by the US was a political game." Justify the statement.
3. "Non-alignment posture was in the interest of India". How?

4. "India's policy of non-alignment was criticised on a number of counts." Explain.
5. What led to the emergence of bipolar world? What were the arenas of Cold War between the two power blocs?

Chapter 2 (The End of Bipolarity)

1. "The Soviet Union lagged behind the West". Comment.
2. Mention the methods of 'Shock Therapy' amongst the former Second World countries.
3. "During the Cold War era India and the USSR enjoyed a special relationship which made critics to say that India was part of Soviet camp". Examine the statement.

Chapter 3 (New Centres of Power)

1. The emerging economies of China and India have great potential to challenge the unipolar world. Do you agree with the statement? Substantiate your arguments.
2. "The European Union is a nation state more than an Economic Union". Justify the statement.
3. Explain the political, diplomatic influence of European Union as a super national organisation.
4. Why India and China both view themselves as rising powers in global politics in spite of tensions between them? Substantiate your answer by giving any four events that have brought cordiality in their relationship.
5. How did China rise to be an economic superpower? Assess.

Chapter 4 (South Asia and the Contemporary World)

1. "Democracy in South Asia has expanded the global imagination of democracy". Do you agree? Justify.
2. "Military rule and democracy are the two sides of a coin in Pakistan". Examine the statement.
3. Assess the positive and negative aspects of India's relations with Bangladesh.
4. What are the major differences between SAARC and European Union as an alternative centre of power?
5. How is the South Asian Association for Regional Cooperation (SAARC) a major regional initiative by South Asian States to evolve co-operation through multilateral means? Assess.

Chapter 5 (United Nations and its Organizations)

1. Critically evaluate the difficulties involved in implementing the suggested reforms to reconstruct the UN.
2. Though the UN has failed in preventing wars and related miseries, nations prefer its continuation. What makes the UN an indispensable organization?
3. How far did the UN perform its role successfully in maintaining peace in the world? Explain.

Chapter 6 (Security in Contemporary World)

1. Explain any four components of India's security strategy.
2. Give a comparative analysis of Indian expenditure on traditional and non-traditional security.

SUBJECT: HINDUSTANI MUSIC (034)

LOTS

1. ग्राम के कितने प्रकार हैं ।
2. संगीत रत्नाकर की रचना किसने की।
3. तान किसे कहते हैं ? इसका राग में क्या महत्व है?
4. अलंकार किसे कहते हैं।
5. वर्ण किसे कहते हैं?
6. वादी स्वर किसे कहते हैं?
7. संवादी स्वर का वर्णन करे।
8. उस्ताद अब्दुल करीम खाँ ने संगीत शिक्षा कहा से प्राप्त की?
9. पंडित अहोबल ने किस ग्रन्थ की रचना की।
10. संगीत परिजात ग्रंथ किस ने लिखा?
11. ताल रूपक को एक गुन में लिखो।
13. ताल झपताल की ताली , खाली और सम कोनसी मात्रा पे है।
14. राग भैरव का गायन समय क्या है।
15. राग भैरव की जाती क्या है।

HOTS

1. भारतीय संगीत के इतिहास में संगीत रत्नाकर के महत्व के बारे में विस्तृत रूप से लिखिए।
2. रागों के वर्गीकरण के महत्व के बारे में लिखिए।
3. राग भैरव का परिचय देते हुए उसकी बंदिश (स्वरलिपि) लिखिए।

4. संगीत परिजात ग्रन्थ के बारे में अपने शब्दों में लिखिए।
5. उस्ताद फियाज़ खाँ की संगीत में क्या देन है? उनका जन्म परिचय दीजिये।
6. रागों के समय सिद्धान्त का विस्तृत वर्णन कीजिए।
7. संगीत में आलाप किसे कहते हैं? इसके बारे में बताएं।
8. तान किसे कहते हैं? इसके कई प्रचलित प्रकारों का नाम बताकर वर्णन करें।
9. वर्ण किसे कहते हैं? इसके कितने प्रकार हैं?
10. गमक का क्या अर्थ है? अपने शब्दों में लिखिए।

SUBJECT: RETAIL

Assignment based on chapter- 1 and 2 (Retail)

- Q1. Analyze 'The Store Planning Procedure'.
- Q2. Evaluate effective merchandising and state the specific merchandising.
- Q3. Analyze the imperatives Of Customer Centric Retailing.
- Q4. Analysis how to communicate the information effectively with the stakeholders?
- Q5. Discuss various advantages and disadvantages of E- Marketing?
- Q6. Distinguish Between E-Marketing and Traditional Marketing?
- Q7. Analyze the procedure of telemarketing?
- Q8- Suggest some factors of telemarketing?
- Q9- Discuss in detail the telemarketing technologies required by the organisations?
- Q10.Explain Internet Business Models with the help of suitable examples?