



# DARSHAN ACADEMY

## SUMMER ASSIGNMENT 2023-24 CLASS: XII

Dear Student Innovators

“We need to turn the recovery into a real opportunity to do things right for the future.”

So here are some guidelines for the Summer Assignments. Follow them sincerely and let creativity flow in air:

All Summer Assignments should be done in subject notebooks / A-4 sheets /project files, as per the instructions given by Subject Teacher.

Do it in a neat and presentable manner.

Original work of students will receive greater recognition and appreciation.

These assignments carry extra marks in Internal Assessment (Subject Enrichment).

Hence, submission of work is compulsory for all students.

Read and revise all the subjects covered till date.



## ENGLISH CORE

### ART INTEGRATED PROJECT

1. Prepare colourful mind maps on a drawing sheet (A-4 size) highlighting the details related to the following chapters/poems:	<ul style="list-style-type: none"><li>➤ The Last Lesson</li><li>➤ Lost Spring</li><li>➤ Deep Water</li><li>➤ The Rattrap</li><li>➤ My Mother at Sixty-six</li><li>➤ Keeping Quiet</li><li>➤ A Thing of Beauty</li></ul>
2. Choose any one topic of your choice from the list of topics given below and prepare a Project file of the same. You have to make pictorial as well as graphical presentations on the left-hand side of the file. All data should be collected authentically and handwritten content must be on the right side of the file.	<b>TOPIC 1 - The Lost Spring</b> <ul style="list-style-type: none"><li>• Collect data about various slums in our country and living conditions there. Also, elaborate on whether children have access to education there.</li><li>• How are children below 14 years of age engaged in various kinds of work?</li><li>• collect other information about the slums.</li></ul>
	<b>TOPIC 2 - Deep Water</b> <ul style="list-style-type: none"><li>• Elaborate your any personal experience about any kind of fear that haunted you.</li><li>• How did you overcome that fear?</li><li>• Collect data about types of fear people have in your locality and how they are trying to overcome it.</li></ul>
	<b>TOPIC 3 - My Mother at Sixty-six</b> <ul style="list-style-type: none"><li>• Explain the importance of parents in the family.</li><li>• In the context of the poem how do you love and care for your mother?</li><li>• Collect data about the condition of any 3 old age homes in our country, living conditions there, amenities, merits and demerits of the old age homes.</li></ul>

### ADVANCED WRITING SKILLS

Answer the following questions on A-4 sheets/project sheets:

1. What is better for the environment: to build fewer factories or to create more wildlife preservation areas.? Write an article in about 120 - 150 words supporting your preference with facts and reasons.
2. A boy who was going to school on his bicycle was hit by an overspeeding car. The boy was very seriously injured. Write a letter to the editor of a national daily in about 120 - 150 words highlighting the rash, reckless, and negligent driving by some of the people in your city, causing accidents, injuries and even deaths sometimes. Suggest preventive measures also.

3. 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).

## LITERATURE

### **Answer the following questions on A-4 sheets/project sheets:**

1. "We've all a great deal to reproach ourselves with." Why does M. Hamel reproach himself for his students' unsatisfactory progress in studies? (The Last Lesson)
2. "When the people are enslaved, as long as they hold fast to their language, it is as if they had the key to their prison." In line with this statement of M. Hamel's comment on the value of loving one's own language and not running after another foreign language. (The Last Lesson)
3. The barefoot ragpickers of Seemapuri live on the periphery of Delhi yet, metaphorically speaking, miles away from it. Comment. (Lost Spring)
4. 'Lost Spring' explains the grinding poverty and traditions that condemn thousands of people to a life of abject poverty. Do you agree? Why/ why not?
5. Childhood fears are deeply entrenched in our minds. Determination, hard work, and the right training are needed to get rid of them. Comment on the statement the light of Douglas' efforts to overcome his fear of water. (Deep Water)

## ASSESSMENT OF LISTENING & SPEAKING (ASL) TASK

**Following is the list of some common topics for ASL. Out of these given topics, prepare yourself on any two topics for ASL to be conducted in July 2023.**

1. Need for patriotic spirit among the youth in India.
2. Child Labour - a blot on our society
3. Desire, determination and diligence lead to success
4. India - a society full of paradoxes
5. Kindness pays, rudeness never
6. Should Vocational Training be made compulsory in schools?
7. Significance of incorporating 21<sup>st</sup>-century skills among students
8. Women empowerment
9. Cyber bullying
10. Do exam results alone determine a child's worth?
11. What is better: Paper books or E-books?
12. Disaster Management
13. Importance of education in one's life
14. Impact of social media on children
15. Technology is changing our lives

# PHYSICS

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

### LOTS

<b>Q1</b>	Find out the electric field due to uniformly charged infinite plane charged sheet.
<b>Q2.</b>	Derive the formula for the capacitance of a parallel plate capacitor with a conducting slab between two plates.
<b>Q3.</b>	Electric field due to two infinite plane parallel sheets of charge (a) to the left of the sheets (b) to the right of the sheets (c) between two sheets.
<b>Q4.</b>	In a completely Four-point charge $q_A = 2 \mu\text{C}$ , $q_B = -5 \mu\text{C}$ , $q_C = 2 \mu\text{C}$ , and $q_D = -5 \mu\text{C}$ are located at the corners of a square ABCD of side 10 cm. What is the force on a charge of $1 \mu\text{C}$ placed at the Centre of the square?
<b>Q5.</b>	An electric dipole with dipole moment $4 \times 10^{-9} \text{C-m}$ is aligned at $30^\circ$ with direction of electric field of magnitude $5 \times 10^4 \text{N/C}$ . Calculate the magnitude of the torque acting on the dipole.
<b>Q6.</b>	Two large, thin metal plates are parallel and close to each other. On their inner faces, the plates have surface charge densities of opposite signs and of magnitude $17.0 \times 10^{-22} \text{C/m}^2$ . What is E: (a) in the outer region of the first plate, (b) in the outer region of the second plate, and (c) between the plates?
<b>Q7.</b>	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 $\theta$ with the field lines.
<b>Q8.</b>	Find the equivalent capacitance of the system across the terminals A and B. All the capacitors have equal capacitances.
<b>Q9.</b>	A thin straight infinitely long conducting wire having charge density $\lambda$ 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.
<b>Q10.</b>	A thin spherical shell of radius $R$ has charge $Q$ spread uniformly over its surface. Which of the following graphs, the figure most closely represents the electric field $E(r)$ produced by the shell in the range $R < r < \infty$ , where $r$ is the distance from the centre of the shell?
<b>Q11.</b>	State and explain the principle of Wheat Stone's principle. Deduce it using Kirchhoff's laws.
<b>Q12</b>	Two wires of equal length, one of copper and the other of manganin have the same resistance. Which wire is thicker?
<b>Q13</b>	A wire of 15-ohm resistance 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 drawn from the battery.
<b>Q14.</b>	Dielectric constant for kerosene is 2 what does it mean?
<b>Q15.</b>	Derive the expression $I = nAeV_d$
<b>Q16.</b>	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
<b>Q17.</b>	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

<b>Q18.</b>	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.
<b>Q19.</b>	Apply Ampere's circuital law to determine the magnetic field at a point due to a long straight current-carrying conductor.
<b>HOTS</b>	
<b>Q20</b>	The figure shows tracks of three charged particles in a uniform electrostatic field. Give the signs of the three charges. Which particle has the high charge-to-mass ratio?
<b>Q21</b>	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?
<b>Q22.</b>	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 $K=6$ ?
<b>Q23.</b>	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>Q24.</b>	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?
<b>Q25.</b>	Four charges are arranged at the corners of a square ABCD, as shown in the adjoining figure. The force on the charge kept at the centre O is
<b>Q26.</b>	A central particle of charge $-q$ is surrounded by two circular rings of charged particles, of radii $r$ and $R$ , such that $R > r$ . What are the magnitude and direction of the net electrostatic force on the central particle due to other particles?
<b>CASE STUDY:</b>	
<b>Q27.</b>	<p>When a glass rod is rubbed with silk, the rod acquires one kind of charge, and the silk acquires the second kind of charge. This is true for any pair of objects that are rubbed to be electrified. Now if the electrified glass rod is brought in contact with silk, with which it was rubbed, they no longer attract each other. They also do not attract or repel other light objects as they did on being electrified. Thus, the charges acquired after rubbing are lost when the charged bodies are brought in contact. What can you conclude from these observations? It just tells us that unlike charges acquired by the objects neutralise or nullify each other's effect. Therefore, the charges were named as positive and negative by the American scientist Benjamin Franklin. We know that when we add a positive number to a negative number of the same magnitude, the sum is zero. This might have been the philosophy in naming the charges as positive and negative. By convention, the charge on a glass rod or cat's fur is called positive and that on a plastic rod or silk is termed negative. If an object possesses an electric charge, it is said to be electrified or charged. When it has no charge, it is said to be electrically neutral.</p> <p>(1) When you charge a balloon by rubbing it on your hair this is an example of what method of charging?</p> <p>(a)Friction (b)Conduction (c)Grounding (d)Induction</p> <p>(2) Neutral atoms contain equal numbers of positive ___ and negative ___.</p> <p>(a)Electrons and Protons (b)Protons and Electrons</p>

(c)Neutrons and Electrons

(d)Protons and Neutrons

(3) Which particle in an atom can you physically manipulate?

(a)protons

(b)electrons

(c)neutrons

(d)you can't manipulate any particle in an atom

(4) If a negatively charged rod touches a conductor, the conductor will be charged by what method?

(a) Friction


(b)Conduction

(c)Induction

(d)Convection

## SUBJECT: CHEMISTRY

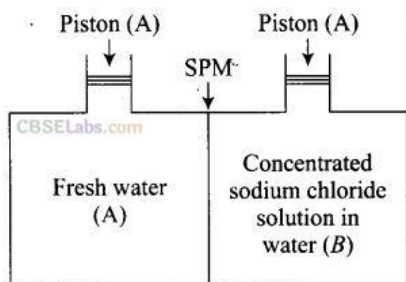
### ART INTEGRATED PROJECT ( Make on A4- Sheets )

<b><u>Topic</u></b>	<ul style="list-style-type: none"> <li>✓ Fuel cell</li> <li>✓ Types of conductance</li> <li>✓ Presence of oxalate ions in Guava fruit</li> <li>✓ Effect of potassium bi sulphate as a food preservative</li> <li>✓ Preparation of soya bean milk</li> </ul>	
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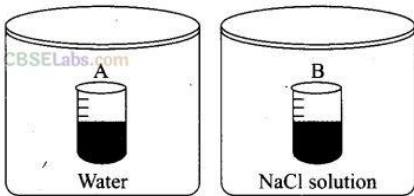
**NOTE: PRACTICE ASSIGNMENT ( To be done in homework notebook )**

### PRACTICE ASSIGNMENT FOR UNIT: SOLUTIONS

#### MCQ

Q1.	Consider the figure and mark the correct option.	<div style="text-align: center;">  </div> <p>1. (a) Water will move from side (A) to side (B) if a pressure lower than the osmotic pressure is applied on the piston (B).          (b) Water will move from side (B) to side (A) if a pressure greater than the osmotic pressure is applied the on piston (B).          (c) Water will move from side (B) to side (A) if a pressure equal to osmotic pressure is applied to the piston (B).          (d) Water will move from side (A) to side (B) if pressure equal to osmotic pressure is applied the on piston (A).</p>
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Q2.	<p>2. Two beakers of capacity 500 mL were taken. One of these beakers, labelled “A”, was filled with 400 mL water whereas the beaker labelled “B” was filled with 400 mL of 2 M solution of NaCl. At the same temperature both the beakers were placed in closed containers of the same material the and same capacity as shown in the figure.</p> <p>At a given temperature, which of the following statement is correct about the vapour pressure of pure water and that of NaCl solution</p>	 <p>(a) Vapour pressure in container (A) is more than that in container (B).  (b) Vapour pressure in container (A) is less than that in container (B).  (c) Vapour pressure is equal in both containers.  (d) Vapour pressure in container (B) is twice the vapour pressure in container (A).</p>
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## LOTS

Q1.	Calculate the mass percentage of benzene (C <sub>6</sub> H <sub>6</sub> ) and carbon tetrachloride (CCl <sub>4</sub> ) if 22 g of benzene is dissolved in 122 g of carbon tetrachloride.
Q2.	<p>(i) State Henry’s law. What is the effect of temperature on the solubility of a gas in a liquid? Mention its two important applications.</p> <p>(ii) Why a person suffering from high blood pressure is advised to take a minimum quantity of common salt?</p> <p>(iii) What happens when blood cells are placed in pure water?</p>

## HOTS

Q1.	10cm <sup>3</sup> of liquid A is mixed with 10cm <sup>3</sup> of liquid B. The volume of the resulting solution was found to be 19.9 cm <sup>3</sup> . What do you conclude?
Q2.	Henry's law constant for the molality of methane in benzene at 298K is 4.2 X 10 <sup>-5</sup> mmHg. Calculate the solubility of methane in benzene at 298K under 760 mmHg.

## PRACTICE ASSIGNMENT FOR UNIT: ELECTROCHEMISTRY

### MCQ

Q1.	Which of the following statements is not correct about an inert electrode in a cell?	<p>(a) It does not participate in the cell reaction.</p> <p>(b) It provides a surface either for oxidation or for reduction reactions.</p> <p>(c) It provides a surface for the conduction of electrons.</p> <p>(d) It provides surface for redox reaction</p>
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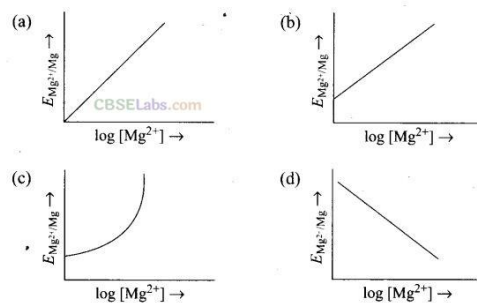


Q2.

Electrode potential for Mg electrode varies according to the equation

$$E_{\text{Mg}^{2+}/\text{Mg}} = E_{\text{Mg}^{2+}/\text{Mg}}^{\circ} - \frac{0.059}{2} \log \frac{1}{[\text{Mg}^{2+}]}$$

The graph of  $E_{\text{Mg}^{2+}/\text{Mg}}$  versus  $\log [\text{Mg}^{2+}]$  is



## LOTS

Q1.

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

Q2.

Which of the  $\text{Li}^+$  and  $\text{Na}^+$  have the greater mobility in solution? Why?

Q3.

Match the terms given in Column I with the units given in Column II.

Column I		Column II	
(i)	$\Lambda_m$	(a)	$\text{S cm}^{-1}$
(ii)	$E_{\text{cell}}$	(b)	$\text{m}^{-1}$
(iii)	$\kappa$	(c)	$\text{S cm}^{-2} \text{mol}^{-1}$
(iv)	$G^*$	(d)	V

Q4.

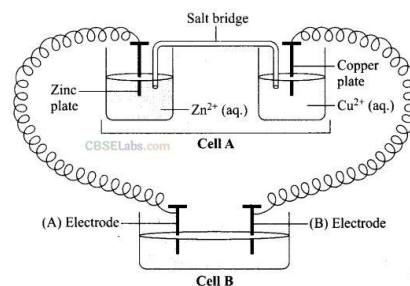
Match the items of Column I and Column II.

Column I		Column II	
(i)	$\kappa$	(a)	$I \times t$
(ii)	$\Lambda_m$	(b)	$\Lambda_m / \Lambda_m^{\circ}$
(iii)	$\alpha$	(c)	$\frac{\kappa}{c}$
(iv)	$Q$	(d)	$\frac{G^*}{R}$

## HOTS


Q1.

Consider the following figure and answer the following questions.



(i) Cell 'A' has  $E_{\text{cell}} = 2 \text{ V}$  and cell 'B' has  $E_{\text{cen}} = 1.1 \text{ V}$  which of the two cells 'A' or 'B' will act as an electrolytic cell. Which electrode reactions will occur in this cell?

(ii) If cell 'A' has  $E_{\text{cen}} = 0.5 \text{ V}$  and cell 'B' has  $E_{\text{cen}} = 1.1 \text{ V}$ , what will be the reactions at the anode and cathode?

Q2.	The molar conductivities of acetic acid at 298K at the concentration of 0.1M and 0.001M are 5.20 and 49.2 S cm <sup>2</sup> mol <sup>-1</sup> .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 ohm <sup>-1</sup> cm <sup>2</sup> mol <sup>-1</sup> respectively .	
Q3.	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.
Q4.	Consider the following diagram in which an electrochemical cell is coupled to an electrolytic cell. What will be the polarity of electrodes 'A' and 'B' in the electrolytic cell?	
Q5.	In a small town along the coastal area, it is observed that iron objects rust easily. Being an industrial town, it also faces an air pollution problem. Identify any 4 factors which are contributing to the rusting phenomenon.	

## PRACTICE ASSIGNMENT FOR UNIT : CHEMICAL KINETICS

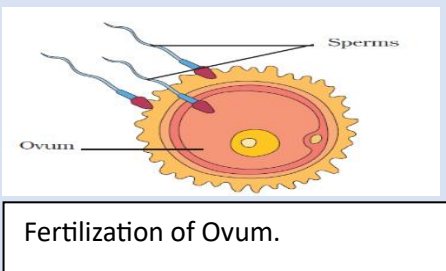

### LOTS

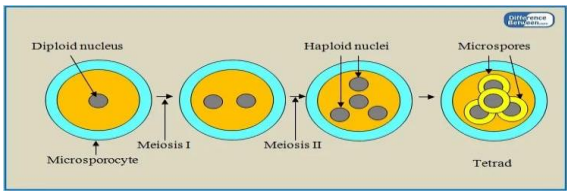
Q1.	A first-order reaction is 20% completed in 10 minutes. Calculate	(i) specific rate constant of the reaction (ii) the time taken for the reaction to go to 75% completion
Q2.	Catalytic decomposition of nitrous oxide of gold at 900° C at an initial pressure of 200 mm was 50% in 53 min and 73% in 100 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 600mm of Hg?

### HOTS

Q1.	The rate constant of a reaction is $1.5 \times 10^{-7} \text{ sec}^{-1}$ at 50° C and $4.5 \times 10^{-7} \text{ s}^{-1}$ at 100° C . Evaluate the Arrhenius parameter A and Ea.	
Q2.	Consider the reaction $2\text{A} + \text{B} \rightarrow \text{Products}$ . When the concentration of B alone was doubled, half-lifetimes did not change. When conc. of A alone doubled, the rate increased by two times	What are the units of K and what is the order of reaction? 1

# BIOLOGY

Give Answers to the Given Multiple-Choice Questions:		
1	Which of the following group of hormones are produced during pregnancy? a. Progestogens, hPL and relaxin b. Estrogens, hPL and relaxin c. hCG, Estrogens and relaxin d. hCG, hPL and relaxin	
2	Which one is correctly matched pair a) Colostrum: secretion found in seminal fluid b) Clitoris: male external gene c) Coitus: Sexual intercourse d) Ovary: the pigmented circular area around the nipple.	
3	In human beings, fertilization of an egg takes place in a) Ovary b) Oviduct c) Vagina d) Uterus	
4	Five oogonia yield 10 primary oocytes, then how many ova are produced on completion of oogenesis? a. 40 b. 20 c. 5 d. 10	
5	.Fill in the missing words: Pollen mother cell → Pollen tetrad → Pollen grain → Vegetative cell, ? _____	
6	In the following events, indicate the stages where mitosis and meiosis occur (1,2,3). --Megaspore mother cell →(1)→Megaspores→(2)→Embryo sacs→(3)→Egg	
7	Arrange them sequentially according to how they appear in the artificial hybridization programme.	
8	Study the following flow chart Name the hormones involved at each state. Explain their functions.	<p><b>Hypothalamus</b></p> <p>↓</p> <p><b>Pituitary</b></p> <p>↓</p> <p><b>Ovary</b></p> <p>↓</p> <p><b>Pregnancy</b></p>

9	Case study	
	<p>a).What would have been the minimum no. of ovules present in per-pollinated pistil?</p> <p>b) How many microspore mother cells would minimally be required to produce requisite number of pollen grains?</p> <p>c) How many pollen grains must have minimally pollinated the carpel?</p> <p>d) How many male gametes would have been used to produce these 200 viable seeds?</p> <p>e) How many megaspore mother cells were required in this process?</p>	 <p>The diagram illustrates the process of microsporogenesis in four stages: 1. A microsporocyte containing a single diploid nucleus. 2. After Meiosis I, the cell contains two haploid nuclei. 3. After Meiosis II, the cell contains four haploid nuclei. 4. The final stage shows four haploid microspores arranged in a tetrad. Labels include: Diploid nucleus, Microsporocyte, Meiosis I, Haploid nuclei, Meiosis II, Microspores, and Tetrad.</p>
10	Lactational amenorrhea is a contraceptive method. List two advantages.	
11	Why are non-medicated methods not as effective as the copper ions releasing Intra-Uterine Devices?	
12	Define self-incompatibility. How do self-incompatible plants pollinate?	
13	Arrange them sequentially according to how they appear in the <a href="#">artificial hybridization</a> programme.	
14	The zygote divides only after the division of the primary endosperm cell. Give reasons in support of the statement.	
15	Name and explain the role of inner and middle walls of human uterus.	
16	Why did Mendel self-pollinate the tall F1 plants to get the F2 generation and crossed a pure breeding tall plant with a pure breeding dwarf plant to obtain the F1 generation?	
17	<b>Differentiate between dominance, co-dominance and incomplete dominance.</b>	

# MATHEMATICS

## MATRICES

Q1	If $\begin{bmatrix} 1 & 2 \\ -2 & -b \end{bmatrix} + \begin{bmatrix} a & 4 \\ 3 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 0 \end{bmatrix}$	then $a^2 + b^2$ is equal to  a. 20 b. 22 c. 12 d. 10
Q2	If the product of two matrices is a zero matrix, then a. atleast one of the matrix is a zero matrix b. both the matrices are zero matrices c. it is not necessary that one of the matrices is a zero matrix d. None of these	
Q3	The matrix $P = \begin{bmatrix} 0 & 0 & 4 \\ 0 & 4 & 0 \\ 4 & 0 & 0 \end{bmatrix}$ is not a	a. Square matrix b. Diagonal matrix c. Unit matrix d. None of these
Q4	Construct a 3 X 4 matrix, whose elements are given by	$a_{ij} = \frac{1}{2}i - 3j + j$
Q5	If $2\begin{bmatrix} 1 & 3 \\ 0 & x \end{bmatrix} + \begin{bmatrix} y & 0 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 8 \end{bmatrix}$ ,	then find the value of (x + y).
Q6	If $A = \begin{bmatrix} 8 & 0 \\ 4 & -2 \\ 3 & 6 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & -2 \\ 4 & 2 \\ -5 & 1 \end{bmatrix}$ ,	then find the matrix X, such that $2A + 3X = 5B$ .
Q7	if $X + Y = \begin{bmatrix} 7 & 0 \\ 2 & 5 \end{bmatrix}$ and $X - Y = \begin{bmatrix} 0 & 3 \\ 3 & 0 \end{bmatrix}$ .	Find X and Y
Q8	If $A = \begin{bmatrix} 1 & 0 & 2 \\ 0 & 2 & 1 \\ 2 & 0 & 3 \end{bmatrix}$	$A^3 - 6A^2 + 7A + KI_3 = 0$ , find k.
Q9	If $X_{m \times 3} Y_{p \times 4} = Z_{2 \times b}$ , for three matrices X, Y and Z,	then find the values of m, p and b.
Q10	Prove that the square matrix $\begin{bmatrix} 5 & 2 \\ 3 & -6 \end{bmatrix}$	can be expressed as a sum of symmetric and skew-symmetric matrices.
Q11	Show that all the diagonal elements of a skew – symmetric matrix are zero.	
Q12	If $A = [a_{ij}]$ is a square matrix such that $a_{ij} = i^2 - j^2$ ,	then check whether A is symmetric or skew – symmetric matrix.

## DETERMINANTS

Q1	If $\begin{vmatrix} x & 2 \\ 18 & x \end{vmatrix} = \begin{vmatrix} 6 & 2 \\ 18 & 6 \end{vmatrix}$ ,	then x is equal to a. 6 b. $\pm 6$ c. -6 d. zero
Q2	Let $\Delta = \begin{vmatrix} Ax & x^2 & 1 \\ By & y^2 & 1 \\ Cz & z^2 & 1 \end{vmatrix} \wedge \Delta_1 = \begin{vmatrix} A & B & C \\ x & y & z \\ zy & zx & xy \end{vmatrix}$ ,	then a. $\Delta_1 = -\Delta$ b. $\Delta \neq \Delta_1$ c. $\Delta - \Delta_1 = 0$ d. None of these
Q3	If $A = \begin{vmatrix} 2 & \lambda & -3 \\ 0 & 2 & 5 \\ 1 & 1 & 3 \end{vmatrix}$ ,	then $A^{-1}$ exists, if a. $\lambda = 2$ b. $\lambda \neq 2$ c. $\lambda \neq -2$ d. None of these
Q4	Given, $2x - y + 2z = 2$ , $x - 2y + z = -4$ and $x + y + \lambda z = 4$	then the value of $\lambda$ such that the given system of equation has no solution is a. 3 b. 1 c. 0 d. -3
Q5	If A is an invertible matrix of order 2,	then $\det(A^{-1})$ is equal to a. $\det(A)$ b. $\frac{1}{\det(A)}$ c. 1 d. zero
Q6	Find the maximum value of $\Delta = \begin{vmatrix} 1 & 1 & 1 \\ 1 & 1 + \sin\theta & 1 \\ 1 + \cos\theta & 1 & 1 \end{vmatrix}$	where $\theta$ is real number
Q7	If area of a triangle is 35 sq units with vertices (2,-6),(5,4) and (k,4), then find the values of k.	
Q8	the matrix $\begin{bmatrix} 1 & \lambda & 0 \\ 3 & -1 & 2 \\ 4 & 1 & 5 \end{bmatrix}$ is singular?	For what value of $\lambda$ ,
Q9	Given $A = \begin{bmatrix} 2 & -3 \\ -4 & 7 \end{bmatrix}$ ,	compute $A^{-1}$ and show that $2A^{-1} = 9I - A$ .

## INVERSE TRIGONOMETRIC FUNCTIONS

Q1	$\sin\left(\frac{\pi}{3} - \sin^{-1}\left(\frac{-1}{2}\right)\right)$	is equal to a. 1/2 b. 1/3 c. 1/4
----	---	---

		d. 1
Q2	The value of $\tan^{-1} \left[ 2\sin \left( 2\cos^{-1} \frac{\sqrt{3}}{2} \right) \right]$	is a. $\frac{\pi}{3}$ b. $\frac{2\pi}{3}$ c. $\frac{-\pi}{3}$ d. $\frac{\pi}{6}$
Q3	The value of $\tan^{-1} \left( \tan \frac{5\pi}{6} \right) + \cos^{-1} \left( \cos \frac{13\pi}{6} \right)$	is a. 0 b. $\frac{\pi}{3}$ c. $\frac{\pi}{6}$ d. $\frac{2\pi}{3}$
Q4	Evaluate $\cos^{-1} \left( \frac{1}{2} \right) + 2\sin^{-1} \left( \frac{1}{2} \right)$ .	
Q5	Find the value of	$\cos^{-1} \left( \frac{-1}{2} \right) + \tan^{-1}(-\sqrt{3}) - \operatorname{cosec}^{-1}(2)$ .
Q6	Find the domain of the function defined by	$f(x) = \sin^{-1} \sqrt{x-1}$ .
Q7	Find two branches other than the principal value branch of $\tan^{-1}x$ .	
Q8	Simplify $\operatorname{cosec} \left( \sin^{-1} \frac{1}{5} \right) + \sec \left( \cos^{-1} \frac{1}{3} \right)$ .	
Q9	Evaluate $\sin \left[ \frac{\pi}{3} - \sin^{-1} \left( \frac{-1}{2} \right) \right]$ .	
Q10	Evaluate $\tan \left( \sin^{-1} \frac{3}{5} + \cot^{-1} \frac{3}{2} \right)$ .	



## PHYSICAL EDUCATION

Q.1.	Which of them are the part of Sports Management? (a) Organizing and Staffing (b) Planning (c) Directing and Controlling (d) All of the above																																													
Q.2.	Total number of matches in Knock-Out Tournament of 34 teams are..... (a) 33 (b) 35 (c) 32 (d) 30																																													
Q.3.	Yoga means : (a) Union of Atma and Parmatma (b) Disease free life (c) Tension free life (d) Performing asanas																																													
Q.4.	Which of the following asana can be performed immediately after meal? (a) Chakra asana (b) Dhanura asana (c) Sukha asana (d) Vajra asana																																													
Q.5.	ABC school has been given the responsibility to conduct a CBSE Zonal Volleyball competition. As a Head Boy of the student council you have been asked to make various teams of students to help teacher in-charges for smooth conduct of the tournament. Based on the case answer the given questions. (a) Students good at art and craft and creative designing will be assigned with ..... Committee. (b) Few students will be assigned with..... committee for prize distribution. (c) To help about the food and stay arrangements of teams, a group of students will be assigned with ..... committee.																																													
Q.6.	Match list- I with list- II and select the correct answer from the codes given below: <table><tr><td></td><td><b>LIST-I</b></td><td></td><td><b>LIST-II</b></td></tr><tr><td>(i)</td><td>FINANCE COMMITTEE</td><td>1</td><td>Head of Organization Committee</td></tr><tr><td>(ii)</td><td>CHAIRPERSON</td><td>2</td><td>Responsible for Budget of the event</td></tr><tr><td>(iii)</td><td>TOURNAMENT</td><td>3</td><td>Series of contest between a number of competitions</td></tr><tr><td>(iv)</td><td>FICTION</td><td>4</td><td>A sports match that has been arranged for a particular time and date</td></tr></table> <b>CODES:</b> <table><tr><td></td><td>(i)</td><td>(ii)</td><td>(iii)</td><td>(iv)</td></tr><tr><td>(a)</td><td>2</td><td>1</td><td>3</td><td>4</td></tr><tr><td>(b)</td><td>2</td><td>1</td><td>4</td><td>3</td></tr><tr><td>(c)</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>(d)</td><td>2</td><td>2</td><td>4</td><td>3</td></tr></table>		<b>LIST-I</b>		<b>LIST-II</b>	(i)	FINANCE COMMITTEE	1	Head of Organization Committee	(ii)	CHAIRPERSON	2	Responsible for Budget of the event	(iii)	TOURNAMENT	3	Series of contest between a number of competitions	(iv)	FICTION	4	A sports match that has been arranged for a particular time and date		(i)	(ii)	(iii)	(iv)	(a)	2	1	3	4	(b)	2	1	4	3	(c)	1	2	3	4	(d)	2	2	4	3
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(d)	2	2	4	3																																										
Q.7.	Draw a fixture of 5 teams on the basis of League Tournament.																																													
Q.8.	Explain any three importance of Yoga.																																													
Q.9.	What is the procedure of performing Kapal Bhati?																																													

<b>Q.10.</b>	What is Knock out tournament? Draw a fixture of 15 teams on the basis of Knock out tournament with all specification.
<b>Q.11.</b>	What is Obesity? Explain the procedure and benefits of any two asanas to cure Obesity.
	<b>PROJECT WORK</b>
<b>Practical -1</b>	<b>Fitness Test Administration. (SAI Khelo India Test):</b> Write any four fitness tests with their procedure and scoring.
<b>Practical -1</b>	Procedure of Asanas, Benefits and Contraindication of any two Asanas for lifestyle disease.

## INFORMATION PRACTICES

1	<p>Predict the output of the given Python code:</p> <pre>import pandas as pd list1=[-10,-20,-30] ser = pd.Series(list1*2) print(ser)</pre>																														
2	<p>Write output for the following:</p> <pre>import pandas as pd s = pd.Series([1, 2, 3, 4, 5], index = ['a', 'b', 'c', 'd', 'e']) print(s*3) print(s&gt;2) s['e'] = 6 print(s)</pre>																														
3	<p>Complete the given Python code to get the required output as: Rajasthan</p> <pre>import _____ as pd di = {'Corbett': 'Uttarakhand', 'Sariska': 'Rajasthan', 'Kanha': 'Madhya Pradesh', 'Gir': 'Gujarat'} NP = _____. Series( _____ ) print(NP[ _____ ])</pre>																														
4	<p>Create a DataFrame in Python from the given list:</p> <pre>[['Divya','HR',95000],['Mamta','Marketing',97000],['Payal','IT',980000], ['Deepak','Sales',79000]]</pre> <p>Also give appropriate column headings as shown below:</p> <table><thead><tr><th></th><th>Name</th><th>Department</th><th>Salary</th></tr></thead><tbody><tr><td>0</td><td>Divya</td><td>HR</td><td>95000</td></tr><tr><td>1</td><td>Mamta</td><td>Marketing</td><td>97000</td></tr><tr><td>2</td><td>Payal</td><td>IT</td><td>980000</td></tr><tr><td>3</td><td>Deepak</td><td>Sales</td><td>79000</td></tr></tbody></table>		Name	Department	Salary	0	Divya	HR	95000	1	Mamta	Marketing	97000	2	Payal	IT	980000	3	Deepak	Sales	79000										
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5	<p>Assume a dataframe df1 that contains data about climatic conditions of various cities with C1, C2, C3, C4, and C5 as indexes and give the output of any four questions from (i) to (v).</p> <table><thead><tr><th></th><th>City</th><th>MaxTemp</th><th>MinTemp</th><th>RainFall</th></tr></thead><tbody><tr><td>C1</td><td>Delhi</td><td>40</td><td>32</td><td>24.1</td></tr><tr><td>C2</td><td>Bengaluru</td><td>31</td><td>25</td><td>36.2</td></tr><tr><td>C3</td><td>Chennai</td><td>35</td><td>27</td><td>40.8</td></tr><tr><td>C4</td><td>Mumbai</td><td>29</td><td>21</td><td>35.2</td></tr><tr><td>C5</td><td>Kolkata</td><td>39</td><td>23</td><td>41.8</td></tr></tbody></table> <p>a. &gt;&gt;&gt;df1.shape b. &gt;&gt;&gt;df1[1 : 2] c. &gt;&gt;&gt;df1.iloc['C1' : 'C3', 'city'] d. &gt;&gt;&gt;df1.iloc[2] e. &gt;&gt;&gt;df.city</p>		City	MaxTemp	MinTemp	RainFall	C1	Delhi	40	32	24.1	C2	Bengaluru	31	25	36.2	C3	Chennai	35	27	40.8	C4	Mumbai	29	21	35.2	C5	Kolkata	39	23	41.8
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# ECONOMICS

## Macro Economics – Ch – 1 - Money and Banking

### LOTS

1	What is the other name of Money Multiplier:	a) Credit Multiplier b) Deposit Multiplier c) Cash reserve ratio d) None of these.
2	Calculate the value of money multiplier and the total deposit created if the initial amount is ₹700 crores and LRR is 10%.	
3	Calculate LRR, if the initial deposit of ₹. 500 crores lead to the establishment of total deposits of ₹ 4,000 crores.	

### HOTS

4	Which bank controls the banking and monetary structure of India?	a) SBI b) Punjab national bank c) RBI d) ICICI
5	If total deposits created by the commercial banks are ₹. 12,000/-, LRR is 25%. Calculate the initial deposit.	
6	Explain the 'open Market operations' method of credit control used by a central bank.	

## Ch – 2 - Government Budget and the Economy

### LOTS

1	A direct tax is a tax which is imposed on	a) Corporations only b) None of these c) Individuals only d) Individuals and corporations
2	Budgetary policies are implemented by the	a) Foreign sector b) Finance ministry c) Government d) Private sector
3	Mention the 4 different concepts of deficits	
4	What are the 2 types of revenue receipts?	

### HOTS

5	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
6	What are the main items of the capital receipt?	
7	Furnish 2 examples of Developmental expenditure.	

## Ch – 3 - Foreign Exchange Rate

### LOTS

1	Imports of goods and services raises the ..... of foreign exchange	a) Supply b) Demand c) Both (a) and (b)
---	--	---

		d) None of these.
2	What is the flexible exchange rate?	
3	What is the foreign exchange and foreign exchange rate?	
<b>HOTS</b>		
4	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
5	Distinguish between autonomous and accommodating transaction of the balance of payment account.	
6	What is meant by the appreciation of currencies?	
<b>INDIAN ECONOMIC DEVELOPMENT</b>		
<b>Ch – 1 - Indian Economy on the Eve of Independence</b>		
<b>LOTS</b>		
1	What was the condition of occupational structure at the time of Independence?	
2	State any four positive impacts of British rule in India during the colonial period.	
<b>HOTS</b>		
3	Mention the demographic profile during the British Rule. State the condition of occupational structure at the time of Independence.	
4	what was the condition of Infrastructure in India at the time of Independence.	
<b>Ch – 2 - Indian Economy (1950-1990)</b>		
<b>LOTS</b>		
1	Difference between economic planning and economic plan.	
2	When was planning commission set up?	
<b>HOTS</b>		
3	State the development of Agriculture sector between 1950-1990	
4	Mention the development of Industrial sector between 1950-1990	
<b>Ch – 3 - Economic Reforms since 1991</b>		
<b>LOTS</b>		
1	Explain new economic policy 1991 in brief.	
2	Why there was need for economic reforms?	
<b>HOTS</b>		
3	Mention the positive impact of LPG polices	
4	Mention the negative impact of LPG polices.	

# BUSINESS STUDIES

1. Prepare the project work on the topic allotted-

❖ **Project A: MARKETING MANAGEMENT**

❖ **Project B: BUSINESS ENVIRONMENT**

❖ **Project C: PRINCIPLES OF MANAGEMENT**

Guidelines to be followed:

## Project A: MARKETING MANAGEMENT

(A.) On the basis of the work done by the students the project report should include the following:

1. Why have they selected this product/service?
2. Find out '5' competitive brands that exist in the market.
3. What permission and licenses would be required to make the product?
4. What are your competitors Unique Selling Proposition [U.S.P.]?
5. Does your product have any range give details?
6. What is the name of your product?
7. Enlist its features.
8. Draw the 'Label' of your product.
9. Draw a logo for your product.
10. Draft a tag line.
11. What is the selling price of your competitor's product?
  - a. Selling price to consumer
  - b. Selling price to retailer
  - c. Selling price to wholesaler
- What is the profit margin in percentage to the?
  - a. Manufacturer.
  - b. Wholesaler.
  - c. Retailer.
12. How will your product be packed?
13. Which channel of distribution are you going to use? Give reasons for selection?
14. Decisions related to warehousing, state reasons.
15. What is going to be your selling price?

- (i) To consumer
- (ii) To retailer
- (iii) To wholesaler

16. List 5 ways of promoting your product.

17. Any schemes for

- (i) The wholesaler
- (ii) The retailer
- (iii) The consumer



18. What is going to be your 'U.S.P'?
  19. What means of transport you will use and why?
  20. Draft a social message for your label.
  21. What cost effective techniques will you follow for your product.
  22. What cost effective techniques will you follow for your promotion plan.
- At this stage the students will realize the importance of the concept of marketing mix and the necessary decision regarding the four P's of marketing.
- A. PRODUCT B. PLACE C. PRICE D. PROMOTION

### Project B: BUSINESS ENVIRONMENT

1. Changes witnessed over the last few years on mode of packaging and its economic impact. It may include the following changes:
  - a) The changes in transportation of fruits and vegetables such as cardboard crates being used in place of wooden crates, etc. Reasons for the above changes.
  - b) Milk being supplied in glass bottles, later in plastic bags and now in tetra pack and through vending machines.
  - c) Plastic furniture [doors and stools] gaining preference over wooden furniture.
  - d) The origin of cardboard and the various stages of changes and growth.
  - e) Brown paper bags packing to recycled paper bags to plastic bags and cloth bags.
  - f) Re use of packaging [bottles, jars and tins] to attract customers for their products.
  - g) The concept of pyramid packaging for milk.
  - h) Cost being borne by the consumer/manufacturer.
  - i) Packaging used as means of advertisements.
2. The reasons behind changes in the following:
 

Coca – Cola and Fanta in the seventies to Thums up and Campa Cola in the eighties to Pepsi and Coke in nineties.

### Project B: BUSINESS ENVIRONMENT

Changes witnessed over the last few years on mode of packaging and its economic impact. It may include the following changes:

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2. The reasons behind changes in the following:

Coca – Cola and Fanta in the seventies to Thums up and Campa Cola in the eighties to Pepsi and Coke in nineties.

The teacher may guide the students to the times when India sold Coca Cola and Fanta were being manufactured in India by the foreign companies.

The students may be asked to enquire about





- a. Reasons of stopping the manufacturing of the above-mentioned drinks in India THEN.
- b. The introduction of Thums up and Campa cola range.
- c. Re-entry of Coke and introduction of Pepsi in the Indian market.
- d. Factors responsible for the change.
- e. other linkages with the above.
- f. Leading brands and the company having the highest market share.
- g. Different local brands venturing in the Indian market.
- h. The rating of the above brands in the market.
- I. The survival and reasons of failure in competition with the international brands.
- j. other observations made by the students.
3. Changing role of the women in the past 25 years relating to joint families, nuclear families, women as a bread earner of the family, changes in the requirement trend of mixers, washing machines, micro. wave and standard of living.
4. The changes in the pattern of import and export of different Products.
5. The trend in the changing interest rates and their effect on savings.
6. A study on child labour laws, its implementation and consequences.
7. The state of 'anti plastic campaign,' the law, its effects and implementation.
8. The laws of mining /setting up of industries, rules and regulations, licences required for running that business.
9. Social factors affecting acceptance and rejection of an identified product. (Dish washer, Atta maker, etc)
10. What has the effect been on the types of goods and services? The students can take examples like:
  - a. washing machines, micro-waves, mixers and grinder.
  - b. Need for crèche, day care centre for young and old.
  - c. Ready to eat food, eating food outside, and tiffin centres.
11. Change in the man-machine ratio with technological advances resulting in change of cost structure.
12. Effect of changes in technological environment on the behaviour of employee.

## Project C: PRINCIPLES OF MANAGEMENT:

The students are required to visit any one of the following:

1. A departmental store.
  2. An Industrial unit.
  3. A fast food outlet.
  4. Any other organisation approved by the teacher.
- They are required to observe the application of the general Principles of management advocated by Fayol. Fayol's principles are:
1. Division of work

Henri Fayol's 14 principles of Management



2. Unity of command.
3. Unity of direction.
4. Scalar chain
5. Espirit de corps
6. Fair remuneration to all
7. Order
8. Equity
9. . Discipline
- 10 . Subordination of individual interest to general interest.
11. Initiative.
12. Centralisation and decentralisation.
13. Stability of tenure.

OR

They may enquire into the application of scientific management techniques by F.W. Taylor in the unit visited.

Scientific techniques of management.

1. Functional foremanship.
2. Standardization and simplification of work.
3. Method study.
4. Motion Study.
5. Time Study.
6. Fatigue Study
7. Differential piece rate plan.

#### PRESENTATION AND SUBMISSION OF PROJECT REPORT OF PROJECT A, B AND C (Make Project on anyone)

The following essentials are required to be fulfilled for its preparation and submission.

- 1.The total length of the project will be of 25 to 30 pages.
- 2.The project should be handwritten.
- 3.The project should be presented in a neat folder.
- 4.The project report should be developed in the following sequence-
  - a) The cover page should include the title of the Project, student information, school and year.
  - b)List of contents.
    - a. Acknowledgements and preface (acknowledging the institution, the places visited and
    - b.the persons who have helped).
    - c. Introduction.
    - d. Topic with suitable heading.
    - e Planning and activities done during the project, if any.
    - f. Observations and findings of the visit.
    - g. Conclusions (summarised suggestions or findings, future scope of study).
    - H. Photographs (if any).
    - i. Appendix.
    - j. Teacher's observation.
    - K. Signature of the teacher.
  - I instructions:
    - 1.The work has to be done on A4 size interleaf sheets.
    - 2.It should be written in neat handwriting.
    - 3.The file should not be spiraled.
    - 4.The project should be hand written and no print-outs to be used for content writing.

2. Revise Chapter 1,2,3 and 11 and while revising follow the Practice Manual and solve the questions in the Practice Manual Registers:-

a)Ch- 1 Nature and Significance of management (Q1 to 13 Case study based questions)

b)Ch- 2 Principles of management (Q1 to 10 Case study based questions)

c)Ch – 3 Business Environment ( Q1 to 10 Case study based questions)

3. Prepare either 20 MCQs / True or false / Fill in the blanks from each chapter ( 1,2,3 and 11).

Questions to be answered. Submit in the form of hard copy.

1. Which characteristic of the business environment is highlighted when changes are taking place too frequently and it becomes difficult to predict the future?
2. Identify the reason which makes management important in the light of the fact that it is generally seen that individuals in an organization resist change, as a change often means moving from a familiar, secure environment into a newer and a more challenging one.
3. Raman and Vasudev were two employees who were embezzling an import-export company in Varanasi where they were working. The finance manager of the company Sampat Singh became suspicious of the two employees when he realized that their activities were not being performed as per the plans. He installed a software program that could secretly log every single stroke of the suspects' computer keys and send an encrypted email report to the Cyber police. The police were able to catch the two dishonest employees red handed and arrest them. Identify the function of management being discussed above.
4. One of the following is considered to be an extension of the marketing concept, which apart from customer satisfaction pays attention to ethical and ecological aspects of marketing. Identify the concept.
5. Briefly explain any three of the following techniques of Scientific Management as given by F.W. Taylor:

- a. Method study
- b. Functional foremanship
- c. Standardization
- d. Differential piece wage system

OR

Briefly explain any three of the following principles of management given by Henry Fayol:

- a. Unity of command
- b. Equity
- c. Remuneration
- d. Initiative

6. Choco Ltd. offers a wide variety of chocolate products. It has an action program of not selling its products by their generic name but under different names like Choco-silk bar, Choco-Munchy and Choco-crunchy etc. for different customer segments. All these names have great popularity and acceptability in the markets.

As the company policy the products were offered at reasonable and affordable prices for targeting a mass customer base.

During the festive season the company launched a massive promotional campaign to increase its revenue and achieve its communication objectives. The company introduced free gifts for the customers.

Their on-ground sales team delivers the product not only to the departmental stores but also to small shops, so that all segments of customers can easily get the products. They also provide information and support services to customers to ensure repeat sales.

From the viewpoint of the management function, briefly explain any four activities of marketing which the firm will be involved in, apart from the above-mentioned ones it's already performing.



7. Identify the dimensions of the business environment illustrated by the picture given in which Sapna who has joined the workforce recently is working on an accounting software.





- a. Technological and social.
- b. Technological and political
- c. Political and economic
- d. Social and legal

## ACCOUNTANCY

LOTs	
------	--

- |    |   |
|----|---|
| 1) | HB is a Partnership Firm have Nine Partners with equal ratio. How many new partners can be admitted in this Firm. |
|    | a) 41                      b) 91                      c) 11                      d) 31                            |

- |    |   |             |            |                 |
|----|---|-------------|------------|-----------------|
| 2) | “Profit & Loss Appropriation Account” is which type of Account? |             |            |                 |
|    | a) Real   | b) Personal | c) Nominal | d) Non-of-these |

- 3) X and Y are partners in a firm, having profit sharing ratio 3:1. Which of the following figure show X's Share correctly.
- a)  b)  c)  d) 



- |    |  |
|----|--|
| 4) | Tamika and Param are two partners & they withdraw 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. Also Pass necessary Journal Entry. |
|----|--|

- |    |  |
|----|--|
| 5) | 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'. |
|----|--|

- |    |   |
|----|---|
| 6) | What share of profit would a sleeping partner who has contributed 70% of the total capital, get in the absence of partnership deed. |
|----|---|

- |    |  |
|----|--|
| 7) | Name the account which is prepared to record the adjusting amount of assets & liabilities. |
|----|--|

- |    |  |
|----|--|
| 8) | 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. |
|----|--|

- |           |   |
|-----------|---|
| <b>9)</b> | Toni, 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) Toni                  (b) Avni                  (c) Kashvi                  (d) None of the above   |

- |     |                                      |             |                  |                   |
|-----|--------------------------------------|-------------|------------------|-------------------|
| 10) | The agreement of partnership may be: |             |                  |                   |
|     | (a) Oral                             | (b) Written | (c) both (a)&(b) | (d) None of these |

- |     |                                      |             |                  |                   |
|-----|--------------------------------------|-------------|------------------|-------------------|
| 10) | The agreement of partnership may be: |             |                  |                   |
|     | (a) Oral                             | (b) Written | (c) both (a)&(b) | (d) None of these |

11)	The Maximum number of partners allowed in a firm are 50, this information is written under which Act?
12)	<p>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:</p> <p>(a) Y should bear the loss  (b) Firm should bear the loss  (c) X should bear loss &amp; return the stock taken for personal use  (d) Non-of-these</p>
13)	<p>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:</p> <p>(a) Rs 11,000 (b) Rs 20,000  (c) Rs 121,000 (d) Non-of-these.</p>
14)	Calculate interest on P's drawings @ 13% p.a if he withdrew Rs 13,000 p.m. During the year.
15)	Is a partner entitled to salary if he works more than other partners? Give your answers assuming the partnership deed is silent.
16)	W, X and Y shared profits in the ratio of 3:2:1. They admitted Z to partnership for One-by-Seventh (1/7th) share in the future profits. What will be New Profit Sharing ratio & Sacrificing ratio?
17)	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?
18)	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?
19)	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?
20)	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?
21)	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?
22)	<p>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.</p> <p>Q.18. Explain the accounting treatment of Goodwill when new partner cannot bring his share of goodwill in cash.</p>
23)	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.
24)	A, B and C are partners, sharing profits in the ratio of 4:3:2. D is admitted for 2/9share of profits & bring Rs. 30,000 &Rs.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.
25)	Under what circumstances premium for goodwill paid by the incoming partner would never be recorded in the books of account?

## HOTS

- 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
- 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
- 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
- 29)** On 1<sup>st</sup> of Jan, 2021 Capital of Ram & Mohan was Rs 20,00,000 & Rs 10,00,000. From 1<sup>st</sup> 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

- 30)** Krishna and Suresh are partners in a firm sharing profits as 3:2.  
 Balance Sheet as at 31stDec 2020

Liabilities	Rs.	Assets	Rs.
Creditors	15,000	Plant & Machinery	30,000
Reserves	5,000	Patents	5,000
Capital account		Furniture	3,000
Krishna 30,000		Stuck	16,000
Suresh 20,000	50,000	Debtors	15,000
		Cash	1,000
	<b>70,000</b>		<b>70,000</b>

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

- (a) He is to contribute Rs. 14,000 as his share of capital which includes his share of premium for goodwill.  
 (b) Goodwill it valued at 2 years purchase of the average profits of the last four years which were Rs. 10,000; Rs. 9,000; Rs. 8,000 & Rs. 13,000 respectively.  
 (c) Plant to written down to Rs. 25,000 & patents written up by Rs. 8,000.  
 (d) A joint life policy taken in the name of the partner for Rs. 50,000 on which premiums have been paid & has a surrender value of Rs. 7,000. Prepare Revaluation A/c, Partner's Capital A/c & the balance sheet of the new firm.



31)

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

Liabilities	(Rs)	Assets	(Rs)
Bank overdraft	15,000	Debtors: 40,000	
Reserve fund	12,000	Less: Provision: <u>3,600</u>	36,400
Sundry Creditors	20,000	Stock	20,000
Capitals: A	40,000	Building	25,000
Capitals: B	30,000	Patents	2,000
		Machinery	33,600
	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 Rs. 10,000 in cash as his share of Goodwill.
2. Provision for doubtful debts is to be reduced by Rs. 2,000
3. There is an old typewriter valued Rs. 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 & Partners Capital A/Cs..

32)

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

Balance Sheet as on 31.March.2020

Liabilities	(Rs)	Assets	(Rs)
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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		Goodwill	5,250
C 14,550	79,800		
	1,15,500		1,15,500

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

- (1) That furniture be depreciated by Rs. 920.
- (2) An old customer, whose account was written off as bad, has promised to pay Rs. 2,000 in full settlement of his full debt.
- (3) That a provision of Rs. 1,320 be made for outstanding repair bills.
- (4) That the value of land and building have appreciated be brought up to Rs. 54,910
- (5) That D should bring in Rs. 14,700 as his capital.
- (6) That D should bring in Rs. 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 of new firm.

# HISTORY

## LOTS Very Short Answers/ Objective Type Questions (1 Mark)

	Topics - Theme-1, Theme-2, Theme-3
1	Indus valley civilization flourished during A 5000-3500 BCE                      B 3000-1500BCE C 2000- 1750 BCE                      D 2600- 1900 BCE
2	Use of plough has been evidenced at A. Kalibangan                      B. Lothal C. Cholistan                      D. Banawali
3	Match the following. List-1.                      List-2 Lothal.                      Ploghted field Kalibangan.                      Dockyard Shortughai.                      Terracotta replica of a plough Banawali.                      Traces of canal
4	The name by which Asoka is generally referred to in his inscriptions is . A. Piyadassi                      B.Dharmadeva                      C.Chakravarti                      D. Dharmakirti
5	Who deciphered Brahmi and kharoshthi?
6	Who wrote Harshacharitra?
7	What was an "Agrahara Grant"?
8	The task of preparing a critical edition of Mahabharata was entrusted to A. V.S Sukthankar                      B. R.K Bannerji                      C. S.N Roy                      D. John Marshall
9	Mahabharata described a war between the_____and_____.
10	Who was the most famous king of Satvahana dynasty?
11.	<u>DEFINE THE FOLLOWING TERM</u> 1. Archaeobotanist 2.Archaeo-Zoologists3. Culture 4.Stratigraphy 5.Inscriptions 6.Epigraphy 7.Numismatics 8.Oligarchy 9.Votive Inscriptions 10.Janapada. 11.Jati 12.Kula 13. Matriliny 14.Patriliny 15.Exogamy

## HOTS (SHORT ANSWER TYPE QUESTIONS ( 3 MARKER)

1	"The drainage system in Harappan Civilization indicates town planning"Support the statement with example.
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2	Why do archaeologist and historians find the Harappan script enigmatic? Explain reasons.
3	Why did Cunningham miss the significance of Harappa?
4	" The mid first millennium BCE is regarded as a major turning point in Indian History? Explain.
5	Describe the features of coinage from sixth century BCE till sixth century CE. <sup>o</sup>
6	What were the main principles of Ashoka's Dhamma? Why was it introduced?
7	The Kanyadana regarded as an important religious duty of father, Why? Explain in detail.
8	In what ways the Buddhist theory of Social contract different from the Brahmanical view of society derived from the purusha Sukta?

### LONG QUESTIONS

1.	How did architectural features of Mohenjo daro indicate planning? support with suitable examples.
2.	What were the different explanations offered by the early writers and historians for the growth of Magdha as a powerful Mahajanapada? Explain.
3.	Describe the "ideal of patriliney" and "Gender access to property" prevailing during sixth CENTURY BCE to sixth Century C.E.

### MAP ACTIVITY

1.	Locate major Harappan sites on political map of India. Kalibangan, Banawali, Dholavira, Chanhudaro, Nageshwar, Balakot, Shortughai
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# RETAIL

## LOTS

	Fill In the Blanks.
1	_____ help in gaining new customers for the store.
2	The main function of sales manager is the _____ of sales operations.
3	_____ encryption has generally solved the problem of credit card numbers being intercepted between the _____ and the merchant.
4	With _____ different content in internet marketing the delivery of different based on the _____ and other personal information is automated.
5	_____ concern deals with the existence of roof in a transaction.

## HOTS

1	Explain business models with the help of suitable examples.
2	Write a note on issues related to the internet marketing in today's context.
3	What is e- business or internet business?
4	Identify the advantages and disadvantages of telemarketing.
5	Distinguish between traditional marketing and e-marketing.
6.	Explain the leadership attributes for current and prospective leaders in retail sector.
7.	What are the characteristics of a sales supervisor?
8	Explain the strategies of developing maintenance and asset management.
9	Discuss the strategic imperatives for Customer- Centric Retailing.
10	How to evaluate effective merchandising and state the specific merchandising suggestions.

# MUSIC

## 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 लिखें।
12.	ताल झपताल की ताली , खाली और सम कोनसी मात्रा पे है।
13.	राग भैरव का गायन समय क्या है।
14.	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।