

12 A & 12 B

Class XII English Language

Instruction : The notes must be written in the English Language copy.

1. Write a newspaper report (in approximately 350 words) on the Corona epidemic that spread panic among the people globally.

[Place of origin- Date –reason for spreading - How the countries affected – casualties – infected people – the measures taken to stop spreading in your country.

2. As the Head Boy /Head Girl of your school, you have given the responsibility of organising Christmas Fete in your school to collect funds to donate to PM CARES FUND. Write a proposal, in not more than 150 words, stating the steps you would take to successfully organise this fete.

12 A & 12 B

Class XII English Literature

Instruction : The notes must be written in the English copy.

CHARACTER STUDY

Miranda.

Miranda, the only daughter of Prospero is the innocent child of Nature. She is the loveliest of all Shakespeare's heroines. She is a model of beauty and virtue. She has modesty, tenderness, innocence, purity, and natural grace. She is matchless in her beautiful features and angelic face, she seems to be peerless.

Miranda is a tender-hearted girl. She moves to pity on seeing the passengers suffering in the shipwreck. Her heart is deeply moved to hear the story related by her father. She feels like weeping on hearing the story of her uncle, Antonio's treachery. She hates sin and deception. She cannot think of any evil or wickedness in Ferdinand.

She is very affectionate and obedient to her father. She looks upon him as her protector and tutor. Her sense of right and wrong has been formed by the advice of her father.

Miranda is simple, innocent and guileless. She is not at all secretive. She cannot hide her true feelings. That is why she is said to wear her heart on her sleeves. In the romantic atmosphere of the island, she is like a pure and flawless pearl brought ashore from the stormy ocean. In her love affair with Ferdinand, she hides nothing and tells no lies. She does not know how to use her feminine charm to advantage. She makes a frank and open confession of her love to Ferdinand. She surrenders to Ferdinand expecting nothing in return. Her submission to her father's wishes and later to Ferdinand raises her very high in our estimation. She is absolutely meek. This is clear from her words to Ferdinand:

"I am your wife, if you will marry me;

If not, I shall die your maid."

Miranda's love for Ferdinand is pure and selfless. It is of a spiritual kind. She gives us the impression of being a bride from India as she is very innocent, untainted and unsullied. She does not revolt against the authority of her father. She does not forget her lover. She does not play with Ferdinand like a flirt. In her love with Ferdinand, she maintains decorum (decency) up to the last moment. This adds to her grace all the more. Besides she is willing to make any sacrifice for her lover. She offers to carry logs for him.

Miranda is a worthy daughter of a worthy father. Prospero is proud of her. He thinks that Miranda is a priceless possession. He tells Ferdinand that Miranda is beyond all praise. Her presence in the deserted island and her continued stay with Prospero enables Prospero to pass the period of his exile very comfortably. She is such a fine specimen of Nature that even Caliban, the savage, falls madly in love with her. He wants to possess her physically. He becomes poetic while describing her. Almost everyone in the play seems to be dazzled by Miranda's exceptional beauty.

Miranda hates villainy. Prospero asks her to go and visit Caliban. She protests with the words ' 'Tis a villain, Sir, I do not want to look on.' Caliban's previous attempts to rape her makes her very angry. That is why she even refuses to see the face of Caliban **hereafter**.

She also feels hurt to know about the treachery of her uncle who threw her father out of his dukedom. She is pure, innocent and desirable.

Prospero.

Prospero was once the Duke of Milan. He lacked worldly wisdom and practical sense. As duke, he did not take interest in the affairs of the state. He led a life of study and meditation. He handed over the affairs of his state to his brother, Antonio. He had full trust in Antonio. But Antonio was very ambitious. He conspired against Prospero and turned him out of his kingdom. After settling on the island he showed great tact and wisdom in dealing with his enemies.

Prospero was a lovable man. As a ruler he was, no doubt, loved and honoured by all. He was generous and humane. For these qualities, his people loved him. His courtiers also had great respect for him. When he was put in a boat, Gonzalo supplied him with books, provision and water. Gonzalo's love for Prospero shows Prospero's lovable nature.

He was a very affectionate father. He had unlimited love for his daughter. He taught his daughter on the island. The education given by him was excellent. He devoted all his energies and magical powers in bringing a union between the royal families of Milan and Naples. The presence of his daughter on the island enabled him to spend his time comfortably. He worked as the guide and tutor of Miranda.

Prospero was a kind-hearted man. He was very kind with his daughter and Ariel. As duke of Milan, he had great affection for his brother, Antonio. He loved him only next to his daughter. His affectionate nature is also seen in his great regard for the old lord Gonzalo.

Prospero did not misuse his magical powers. He controlled the forces of nature but he did not allow his own nature to go wrong.

He used his powers to achieve a noble purpose. He has full control over his feelings and passions.

Prospero is very strict in matters of discipline and obedience. He punished Caliban from time to time to keep him on the right path. He gives a hard task to Ferdinand to test the sincerity of his love for Miranda. His ends are always noble. His use of power is always judicious and wise.

Prospero is not revengeful. He believes that forgiveness is the noblest form of revenge. Although he has vast powers to punish his enemies, yet he is very soft towards them. He knows that "the rarer action is in virtue than in vengeance". He forgives all his enemies despite the harm done by them to him. In this respect he is seen as a super-human character.

Prospero seems to stand for poetic justice. Gonzalo is honoured for his loyalty and goodness. Ferdinand is rewarded for his sincerity in love. Ariel is set free for his obedience and faithfulness. The three sinners Alonso, Sebastian and Antonio are punished with the rods of mercy. Stephano and Trinculo are chased for their conspiracy against Prospero's life. Thus Prospero is seen no less than a divine Providence. He rewards the virtuous and punishes the villains.

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Prospero creates a very good impression on us by his kind and sympathetic nature, by his nobility and spirit of forgiveness . But he is not free from faults. He cannot be called perfect. He is stern and strict towards Caliban. He wants to achieve a noble objective by reforming the evil-doers. That is why he does not hit back at his enemies. He pardons all of them. He loses his temper with Caliban who rises in revolt against him. He is kind to Ariel and sets him free as promised. He is affectionate to his daughter and takes keen interest in her up-bringing.

Home work:

Write about the following characters :

1. Ariel

2. Caliban

3. Ferdinand

Electric Charges and fields.

module - 1.

1. When two bodies made up of different materials are rubbed against each other, they get electrified.

The cause due to which this property is developed is known as 'frictional electricity'. On being electrified, the material is said to have acquired 'charge'.

Hence, an electrified material is also called charged material.

2. Conservation of electric charge.

The total amount of charge in an isolated system remain constant. Charge can neither be created nor be destroyed. This is the law of Conservation of charge.

Example: $\gamma = e^- + e^+$ (pair production).

The net charge is zero both before and after the event.

3. Quantisation of charge:-

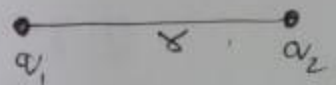
Electric charge cannot be divided indefinitely. This property of charge is called quantisation or atomicity of charge. Since, e is the smallest unit of charge, it is called elementary charge. No charge is found in the fraction of e (as $0.7e$ or $2.5e$).

Charge of electron = $-e$, Charge of proton = $+e$.

Charge of α -particle = $+2e$.

4. Coulomb's law:-

Two point charges q_1 and q_2 separated by a distance r , then force acting between them is given by



$$F = \frac{1}{4\pi\epsilon_0} \cdot \frac{q_1 q_2}{r^2} = k \frac{q_1 q_2}{r^2}$$

$k \rightarrow$ proportionality constant. It depends on unit of distance, force and charge.

if unit of F is in N.
 r is in m.

q_1 & q_2 are measured in C.

and these charges are situated in vacuum or air then

$$F = 9 \times 10^9 \frac{q_1 q_2}{r^2}$$

$$\text{Here } \frac{1}{4\pi\epsilon_0} = 9 \times 10^9 \text{ Nm}^2\text{C}^{-2}$$

Value and unit of ϵ_0 :

$$\frac{1}{4\pi\epsilon_0} = 9 \times 10^9 \text{ Nm}^2\text{C}^{-2}$$

$$\epsilon_0 = \frac{1}{4\pi \times 9 \times 10^9} \text{ C}^2/\text{Nm}^2 = 8.85 \times 10^{-12} \text{ C}^2/\text{Nm}^2$$

Dimensions of ϵ_0 :

$$\epsilon_0 = \frac{1}{4\pi} \cdot \frac{q_1 q_2}{F r^2}$$

$$\text{Dimensions of } \epsilon_0 = \frac{[A^2 T^2]}{[M L T^{-2}] [L^2]} = [M^{-1} L^{-3} T^4 A^2]$$

Assignment:-

(i) Calculate the coulombian force between a proton and an electron separated by $0.8 \times 10^{-15} \text{ m}$.

(ii) Two positive charges, distant 0.1 m apart, repel each other with a force of 18 N . If the sum of the charges be $9 \mu\text{C}$, then calculate their separate values.

12 A

CHEMISTRY CLASS XII

P-BLOCK ELEMENTS

Q1. Why H_2O is a liquid and H_2S is gas?

(Hint: H_2O – inter molecular hydrogen bond; H_2S – X)

Q2. Name the most electronegative element of the periodic table.

Q3. Why HClO_4 is stronger acid than HOCl ?

Ans: The acidic character of oxoacids of same halogen increases with increase in oxidation state of the halogen. Since oxidation numbers of chlorine in HClO_4 and HOCl are +7 and +1 respectively, therefore HClO_4 is a stronger acid than HOCl .

Q4. What are Chalcogens?

(Ans. The elements of group 16 are called chalcogens)

Q5. Write balanced equations when chlorine is treated with

a) hot concentrated NaOH

b) cold dilute NaOH

Q6. Why Fluorine forms only one oxo acids? (hint: Fluorine lacks vacant d)

Q7. Give two examples of

a. Basic oxides – (Na_2O , Fe_2O_3)

b. Acidic oxides – (SO_2 , CO_2)

c. Amphoteric oxides – (ZnO , PbO)

d. Neutral oxides – (NO , CO)

(Instruction: Learn the definitions of the above four oxides from your book)

Q8. Name the three allotropic forms of Sulphur and write two properties of each of the allotropic forms. (Read the following notes)

7.14 Sulphur — Allotropic Forms

Sulphur forms numerous allotropes of which the yellow rhombic (α -sulphur) and monoclinic (β -sulphur) forms are the most important. The stable form at room temperature is rhombic sulphur, which transforms to monoclinic sulphur when heated above 369 K.

Rhombic sulphur (α -sulphur)

This allotrope is yellow in colour, m.p. 385.8 K and specific gravity 2.06. Rhombic sulphur crystals are formed on evaporating the solution of roll sulphur in CS_2 . It is insoluble in water but dissolves to some extent in benzene, alcohol and ether. It is readily soluble in CS_2 .

Monoclinic sulphur (β -sulphur)

Its m.p. is 393 K and specific gravity 1.98. It is soluble in CS_2 . This form of sulphur is prepared by melting rhombic sulphur in a dish and cooling, till crust is formed. Two holes are made in the crust and the remaining liquid poured out. On removing the crust, colourless needle shaped crystals of β -sulphur are formed. It is stable above 369 K and transforms into α -sulphur below it. Conversely, α -sulphur is stable below 369 K and transforms into β -sulphur above this. At 369 K both the forms are stable. This temperature is called transition temperature.

Both rhombic and monoclinic sulphur have S_8 molecules. These S_8 molecules are packed to give different crystal structures. The S_8 ring in both the forms is puckered and has a crown shape. The molecular dimensions are given in Fig. 7.5(a).

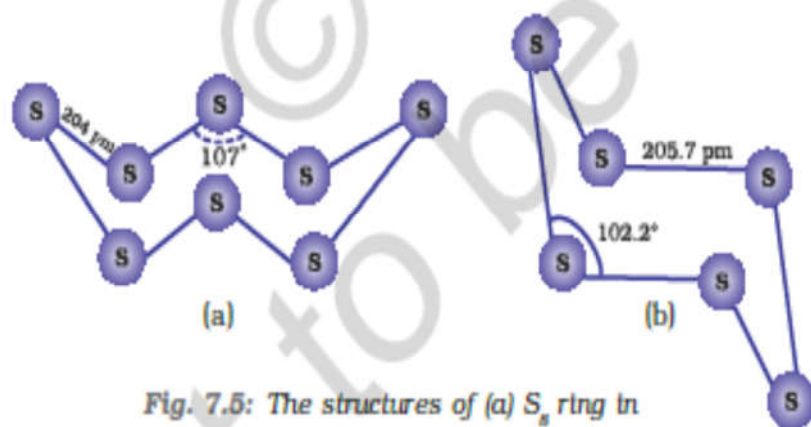


Fig. 7.5: The structures of (a) S_8 ring in rhombic sulphur and (b) S_6 form

Several other modifications of sulphur containing 6-20 sulphur atoms per ring have been synthesised in the last two decades. In cyclo- S_6 , the ring adopts the chair form and the molecular dimensions are as shown in Fig. 7.5 (b). At elevated temperatures (~ 1000 K), S_2 is the dominant species and is paramagnetic like O_2 .

Q9. Why oxygen (the first member of group 16) shows anomalous behavior?

Ans:

- Small size
- High electronegativity
- Absence of vacant d

Q10. Give examples of reactions that exhibit the following properties of sulphuric acid:

- a) Strong affinity for water
- b) Low volatility
- c) Oxidizing nature

12 A

BIOLOGY

STD-12

- Q1)What is heredity?Who coined the term of 'Genetics'?
- Q2)Define the term allele?Who coined the term allele?
- Q3)Mention the limitations of Laws of Segregation?
- Q4)What is incomplete dominance?Explain with an example the phenomenon of incomplete dominance.
- Q5)Define a)Pleiotropy. b)Polygenic traits c)Co-dominance d)Linkage
- Q6)What is menarche?Which hormone help in secondary sexual charecters in female?
- Q7)Draw the section of testis and label the various structures present?
- Q8)Explain the Menstrual Cycle?
- Q9)Draw the section of ovum and label the various layers.
- Q10)Explain the processes in fertilization ?

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MATHS CLASS XII

General direction for the students :-Whatever be the notes provided , everything must be copied in the Maths Copy and then do the Home work in the same Copy.

CHAPTER 3 (MATRICES)

- * It is an arrangements of elements into Rows and Columns.
- * Horizontal lines are known as Rows.
- * Vertical lines are known as Columns.
- * Order of a matrix is equal to Number of Rows X number of columns.
- * Types of Matrices

Rectangular matrix, Square matrix , Column matrix, Row matrix , Identity (Unit) matrix , Zero (Null) matrix, Upper triangular matrix, Lower triangular matrix , Scalar matrix and Diagonal matrix.

- * Identity matrix is denoted by I

$$I_2 = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}, I_3 = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}, \text{ etc}$$

- * General form of a Matrix

$$\begin{bmatrix} a_{11} & a_{12} & a_{13} & - & - & - & a_{1n} \\ a_{21} & a_{22} & a_{23} & - & - & - & a_{2n} \\ a_{31} & a_{32} & a_{33} & - & - & - & a_{3n} \\ - & - & - & - & - & - & - \\ - & - & - & - & - & - & - \\ a_{n1} & a_{n2} & a_{n3} & - & - & - & a_{nn} \end{bmatrix}$$

- * General element of a matrix is a_{ij} . (element in the i^{th} Row and j^{th} Column)

- *Equality of Matrices .

If two matrices are equal , then their corresponding elements are equal.

EXERCISE 3.1

Q6iv) Given $a_{ij} = i + 2j$

$$\Rightarrow a_{11} = 1 + 2 \cdot 1 \Rightarrow 3, a_{12} = 1 + 2 \cdot 2 \Rightarrow 5, a_{21} = 2 + 2 \cdot 1 \Rightarrow 4, a_{22} = 2 + 2 \cdot 2 \Rightarrow 6$$

$$\text{Required matrix} = \begin{bmatrix} 3 & 5 \\ 4 & 6 \end{bmatrix}$$

Q10. Given $\begin{bmatrix} x + y + z \\ x + z \\ y + z \end{bmatrix} = \begin{bmatrix} 9 \\ 5 \\ 7 \end{bmatrix}$

$\Rightarrow x + y + z = 9$ -----A

$x + z = 5$ -----B

$y + z = 7$ -----C

Sub. B in A $\Rightarrow 5 + y = 9 \Rightarrow y = 4$

Sub. Y in C $\Rightarrow z = 3$

Sub. z in B $\Rightarrow x = 2$

HOME WORK

Exercise 3.1 , Question number 7 , 9 , 13

* *Addition of Matrices :- Add their corresponding elements.*

* *Subtraction of matrices:- Subtract their corresponding elements.*

* *Scalar multiplication of Matrices:- Multiply all the elements with the Scalar.*

* *Addition of matrices is Commutative and Associative*

$A+B = B+A , A + (B + C) = (A + B) + C$

EXERCISE 3.2

Q6. A= diagonal [1 , -2 , 5] , B=diagonal [3, 0, -4] , C=diagonal[-2, 7,0]

$\Rightarrow A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & -2 & 0 \\ 0 & 0 & 5 \end{bmatrix} , B = \begin{bmatrix} 3 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & -4 \end{bmatrix} , C = \begin{bmatrix} -2 & 0 & 0 \\ 0 & 7 & 0 \\ 0 & 0 & 0 \end{bmatrix}$

$\Rightarrow A + 2B - 3C = \begin{bmatrix} 1 & 0 & 0 \\ 0 & -2 & 0 \\ 0 & 0 & 5 \end{bmatrix} + 2 \begin{bmatrix} 3 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & -4 \end{bmatrix} - 3 \begin{bmatrix} -2 & 0 & 0 \\ 0 & 7 & 0 \\ 0 & 0 & 0 \end{bmatrix}$

$= \begin{bmatrix} 1+6+6 & 0+0+0 & 0+0+0 \\ 0+0+0 & -2+0-21 & 0+0+0 \\ 0+0+0 & 0+0+0 & 5-8+0 \end{bmatrix}$

$= \begin{bmatrix} 13 & 0 & 0 \\ 0 & -23 & 0 \\ 0 & 0 & -3 \end{bmatrix}$

Q14. $2X - Y = \begin{bmatrix} 6 & -6 & 0 \\ -4 & 2 & 1 \end{bmatrix}$ -----A

$X + 2Y = \begin{bmatrix} 3 & 2 & 5 \\ -2 & 1 & -7 \end{bmatrix}$ -----B

$$2A \Rightarrow 4X - 2Y = \begin{bmatrix} 12 & -12 & 0 \\ -8 & 4 & 2 \end{bmatrix} \text{-----C}$$

$$B + C \Rightarrow 5X = \begin{bmatrix} 15 & -10 & 5 \\ -10 & 5 & -5 \end{bmatrix}$$

$$\Rightarrow X = \begin{bmatrix} 3 & -2 & 1 \\ -2 & 1 & -1 \end{bmatrix}$$

Sub. X in B

$$\Rightarrow 2Y = \begin{bmatrix} 3 & 2 & 5 \\ -2 & 1 & -7 \end{bmatrix} - \begin{bmatrix} 3 & -2 & 1 \\ -2 & 1 & -1 \end{bmatrix} \Rightarrow Y = \begin{bmatrix} 0 & 2 & 2 \\ 0 & 0 & -3 \end{bmatrix}$$

HOME WORK:- Exercise 3.2 , Question numbers 2,5,8,11,13,17.

Multiplication of Matrices:-

Two Matrices A and B are conformable for matrix multiplication of AB , if and only if the number of columns of A is equal to the number of rows of B.

Properties:-

** Matrix multiplication is Associative and Distributive over addition but not commutative.*

$$\text{ie } (AB)C = A(BC) , A(B+C) = AB+AC , AB \neq BA$$

$$* A^2 = A.A$$

$$* A^3 = A.A.A$$

$$= A^2.A \text{ or } A.A^2 \text{ by associative property}$$

** If a polynomial f(x) is satisfied by a matrix A means f(A)=0, where 0 is the zero Matrix.*

** I^n = I where I is the unit matrix.*

$$* I.A = A.I = A$$

EXERCISE 3.3

$$\text{Q5 iv) } \begin{bmatrix} 3 & -1 & 3 \\ -1 & 0 & 2 \end{bmatrix} \times \begin{bmatrix} 2 & -3 \\ 1 & 0 \\ 3 & 1 \end{bmatrix}$$

$$\Rightarrow \begin{bmatrix} 3.2 - 1.1 + 3.3 & 3.-3 - 1.0 + 3.1 \\ -1.2 + 0.1 + 2.3 & -1.-3 + 0.0 + 2.1 \end{bmatrix} \text{ check the process and understand}$$

$$\Rightarrow \begin{bmatrix} 14 & -6 \\ 4 & 5 \end{bmatrix}$$

Q12. Given $A^2 = I$

$$(A - I)^3 = (A - I)(A - I)(A - I)$$

$$= (A^2 - A - A + I)(A - I)$$

$$\begin{aligned}
&= (2I - 2A)(A - I) \\
&= -2(A - I)(A - I) \\
&= 4A - 4I
\end{aligned}$$

Now, similarly $(A + I)^3 = 4A + 4I$

$$\text{Now } (A - I)^3 + (A + I)^3 - 7A = (4A - 4I) + (4A + 4I) - 7A \Rightarrow = A$$

Q16i) Given $A = \begin{bmatrix} \cos 2\alpha & \sin 2\alpha \\ -\sin 2\alpha & \cos 2\alpha \end{bmatrix}$

$$\begin{aligned}
A^2 &= \begin{bmatrix} \cos 2\alpha & \sin 2\alpha \\ -\sin 2\alpha & \cos 2\alpha \end{bmatrix} \times \begin{bmatrix} \cos 2\alpha & \sin 2\alpha \\ -\sin 2\alpha & \cos 2\alpha \end{bmatrix} \\
&= \begin{bmatrix} \cos^2 2\alpha - \sin^2 2\alpha & \cos 2\alpha \cdot \sin 2\alpha + \sin 2\alpha \cdot \cos 2\alpha \\ -\sin 2\alpha \cdot \cos 2\alpha - \cos 2\alpha \cdot \sin 2\alpha & -\sin^2 2\alpha + \cos^2 2\alpha \end{bmatrix} \\
&= \begin{bmatrix} \cos 4\alpha & \sin 4\alpha \\ -\sin 4\alpha & \cos 4\alpha \end{bmatrix} \text{ by formula of } \sin 2A \text{ and } \cos 2A
\end{aligned}$$

Q16ii) $M(\theta) = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$

$$\begin{aligned}
M(x) \cdot M(y) &= \begin{bmatrix} \cos x & \sin x \\ -\sin x & \cos x \end{bmatrix} \cdot \begin{bmatrix} \cos y & \sin y \\ -\sin y & \cos y \end{bmatrix} \\
&= \begin{bmatrix} \cos x \cdot \cos y - \sin x \cdot \sin y & \cos x \cdot \sin y + \sin x \cdot \cos y \\ -\sin x \cdot \cos y - \cos x \cdot \sin y & -\sin x \cdot \sin y + \cos x \cdot \cos y \end{bmatrix} \\
&= \begin{bmatrix} \cos(x + y) & \sin(x + y) \\ -\sin(x + y) & \cos(x + y) \end{bmatrix} = M(x + y)
\end{aligned}$$

HOME WORK :- Exercise 3.3, Question numbers 6, 9,10,13,15,17,18,21,22,24,25,27,28 and 29.

12A & 12B

COMPUTER APPLICATIONS

STD 12

Solve the Computer Science Practical Questions of 2011, 2012 and 2013.

The programs must be solved using OOP concept. The classes along with the data members and methods must be well defined. Break down the task into multiple functions applying modularity. Write the main() method to make it an application.

st of suggested Projects is given below : (any two) - ACCOUNTS

1. Preparation of Journal/Sub-division of Journal, Ledger, Trial balance and Financial Statements of a partnership form of business on the basis of a case study.

- Develop a case study showing how two or more friends decide to come together and start a business with a certain amount of capital.
- Prepare their Partnership Deed including interest on Capital, partner's salary, commission, interest on drawings, interest on partner's loan and rent paid to a partner.
- Write in detail, their transactions during the year : purchases – cash and credit, sales – cash and credit, expenses, purchase of fixed assets and depreciation charged on them, any outstanding expenses, prepaid expenses, accrued income, drawing bills of exchange, accepting bills payable etc.
- From this case study developed (which should have at least 15 transactions), pass the journal entries, post them into the ledger, prepare a Trial Balance and the Trading and Profit and Loss Account, Profit and Loss Appropriation Account and Balance Sheet.
- The various expenses, for comparison purpose, could be depicted in the form of bar diagrams, pie charts.
- Calculate relevant accounting ratios like liquidity, solvency, activity and profitability – giving their formulae and computation (all this could be part of the viva-voce).
- The ratios could also be shown graphically and/or pictorially (bar diagrams, pie charts) and if possible, could be compared with the ratios of the industry.

2. Preparation of a Cash Flow Statement with the help of audited/ unaudited/imaginary Balance Sheets of a company for two consecutive accounting years or two consecutive quarters of an accounting year could be taken along with at least five additional information (depreciation, purchase/sale of fixed assets, Dividend paid/proposed, Tax paid/proposed, amortization of intangible assets, profit or loss on sale of fixed assets including provision for depreciation on them and profit or loss on sale of investment).

- The results of the operating, investing and financing activities could be shown graphically and/or pictorially (bar diagrams and pie charts).

3. Preparation of Common Size and Comparative Income Statement of Profit and Loss and Balance Sheet of a company by taking into account its audited/unaudited/imaginary financial results of two consecutive quarters of an accounting year or of two consecutive accounting years.

- The comparison has to be made in the form of Common Size and Comparative Income Statement and Balance Sheet.
- The comparison could also be shown graphically and/or pictorially (bar diagrams, pie charts).

4. Taking the audited/unaudited/imaginary financial results of any leading company, its liquidity, solvency, activity and profitability ratios of two consecutive years or of two consecutive quarters of an accounting year should be calculated and the comparison of the ratios of both the years or quarters should be shown graphically and/or pictorially (bar diagrams, pie charts).

NOTE : No question paper for Practical Work will be set by the Council.

A list of suggested Projects is given below: (any two) - COMMERCE

1. Compare marketing strategies adopted by two different companies of the same industry (FMCG / Telecommunication / media / education industry etc.) keeping in mind the following:
 - Product mix
 - Price Mix
 - Place Mix
 - Promotion Mix
2. Collect newspaper/magazine clippings of five cases filed by consumers in the Consumer Court. Find out the rights violated, and the redressal mechanism used. What was the outcome of each case?
3. Visit a commercial Bank. Find out the procedure to open a savings account. Find out the details of various Agency & General utility services provided by the bank.
4. Compare the interest rates offered by five different commercial banks on fixed deposits under various categories (general and senior citizens) and various time durations. Find out the procedure and formalities for opening a fixed deposit account. What is the procedure for closing the account on maturity and before maturity period?
5. Select five different companies across varying industries such as I.T., textiles, FMCG, Health Care, etc., included in the SENSEX. Keeping a hypothetical base money of Rupees One Lakh, invest in the shares of the selected companies. The movement of share prices selected by you should be monitored over a period of one month on a daily basis. A uniform / standard practice of either using the opening price or the closing price on a particular day of the week should be used by all students in the class.
At the end of the month, analyse your investment in a spread sheet and give reasons for your choice of scripts.
6. Find out the names of companies under various sectors (FMCG, Pharma, automobile, etc.) included in the NIFTY and the SENSEX. Make a chart of the same and track its movements over a period of one week.
7. (a) Study the sources of recruitment and steps involved in the selection procedure adopted by two companies of the same industry.
(b) Compare and evaluate the sources of recruitment and the selection process adopted by the selected companies.
8. Formulate a capital plan for a hypothetical business organisation. Justify your formulated plan.
9. Choose two companies of the same industry. Study their organisational structure. Also give information with regard to:
 - (i) Hierarchy
 - (ii) Centralisation and delegation of authority
 - (iii) Flow of information (scalar chain)
 - (iv) Span of control
 - (v) Channel of communication.
10. Select any business undertaking. Study the selected business in terms of ownership, capital and profitability. Make a S.W.O.T. analysis and present it in a tabular form.

Note: No question paper for Practical work will be set by the Council.

STD. XII — ECONOMICS

PROJECT WORK FOR: ISC BOARD EXAM - [2021]

PROJECT (1): Study a Public sector enterprise with reference to its relevance to the Indian economy and its future prospects. Analyse the trend of its growth for the last ten years. (Refer to the Economics textbook of Std XII for guidelines)
No. of sheets → 12-15

PROJECT (2): Conduct a socio-economic survey of a locality (minimum sample size should be 30 households) with reference to:

(a) Demographic features

(b) Consumption pattern - expenditure on necessities, comforts and luxuries.

(c) Occupational structure

(Refer to the Economics textbook of Std XII for guidelines)

No. of sheets → 12-15

NOTE: Use Cambii sheets of one side ruled and the other side blank. Collect relevant data and pictures (coloured) from the Internet, keep graph sheets and coloured pens ready. Requirements for both the projects and relevant information need to be kept ready along with one cardboard file. Additional information regarding (Project 1) can be accessed from the Internet.... and then wait for further instructions from me.

- Moushumi Kundu