

## **EAST POINT SCHOOL**

### **ENGLISH ASSIGNMENT**

#### **POEM-2 AN ELEMENTARY SCHOOL CLASSROOM IN A SLUM**

##### **HOTS:**

Q-1 What images and symbols has the poet used to describe the pathetic condition of the slum children?

Q-2 How is 'Shakespeare wicked' and the 'map a bad example' for the children of a school in a slum?

##### **SHORT QUESTIONS:**

Q1. In the opening stanza the imagery is that of despair and disease. Read the poem and underline the words /phrases that bring out these images.

Q2. Why does Stephen Spender use the images of despair and disease in the first stanza of the poem and with what effect?

Q3. In spite of despair and disease pervading the lives of the slum children, they are not devoid of hope. Give an example of their hope or dream.

Q4. How does Stephen Spender picturise the condition of the slum children?

Q5. What is the theme of the poem 'An Elementary School Classroom in a Slum' ? How has it been presented?

Q6. What message does Stephen Spender convey through the poem 'An Elementary School Classroom in a Slum' ? What solution does he offer?

Q7. Which images of the slums in the third stanza present the picture of social disparity, injustice and class inequalities?

Q8. Stephen Spender while writing about an elementary classroom in a slum, questions the value of education in such a milieu, suggesting that maps of the world and good literature may raise hopes and aspirations, which will never be fulfilled. Yet the poem offers a solution/hope. What is it?

Q9. How can powerful persons viz. governor, inspector, visitor may contribute to improve the lot of slum children?

## CBSE MIXED TEST PAPER-04

(Unit Test)

### CLASS - XII MATHEMATICS

[Time : 1.50 hrs.]

[M. M.: 50]

#### General Instructions:-

- (i) All questions are compulsory.
- (ii) There is no overall choice. However internal choice has been provided.
- (iii) Marks allotted to each question are indicated against it.

1. (a) Find  $\frac{dy}{dx}$ , if  $x = a \cos^4 \theta$ ,  $y = a \sin^4 \theta$ . 1 mark
- (b) Differentiate:  $\tan^{-1} \sqrt{\frac{1-\cos x}{1+\cos x}}$  w.r.t.x 1 mark
- (c) Differentiate  $y = \log(\sec x + \tan x)$  w.r.t.x 1 mark
- (d) Find the principle value of  $\cos^{-1} \frac{\sqrt{3}}{2}$  1 mark
- (e) If  $\sin(\sin^{-1} \frac{1}{5} + \cos^{-1} x) = 1$ , find the value of x. 1 mark
- (f) find the value of  $\cot(\tan^{-1} \alpha + \cot^{-1} \alpha)$  1 mark
2. Show that  $\sin^{-1} \frac{3}{5} - \sin^{-1} \frac{8}{17} = \cos^{-1} \frac{84}{85}$  6 marks
3. Differentiate  $\sin^{-1} \left( \frac{2x}{1+x^2} \right)$  w.r.t  $\cos^{-1} \left( \frac{1-x^2}{x+x^2} \right)$  3 marks
4. Express  $\tan^{-1} \left( \frac{\cos x}{1-\sin x} \right)$ ,  $-\frac{\pi}{2} < x < \frac{\pi}{2}$  in simplest form. 3 marks

## ACCOUNTANCY

### RATIO ANALYSIS

1. Two basic measures of liquidity are:
  - (A) Inventory turnover and Current ratio
  - (B) Current ratio and Quick ratio
  - (C) Gross Profit ratio and Operating ratio
  - (D) Current ratio and average Collection period
  
2. Current ratio is:
  - (A) Solvency Ratio
  - (B) Liquidity ratio
  - (C) Activity Ratio
  - (D) Profitability Ratio
  
3. Current Ratio is:
  - (A) Liquid Assets/Current Assets
  - (B) Fixed Assets/Current Assets
  - (C) Current Assets/Current Liabilities
  - (D) Liquid assets/Current Liabilities
  
4. Liquid Assets do not include:
  - (A) Bills Receivable
  - (B) Debtors
  - (C) Inventory
  - (D) Bank Balance
  
5. Ideal Current Ratio is:
  - (A) 1:1
  - (B) 1:2
  - (C) 1:3
  - (D) 2:1
  
6. Working Capital is the:
  - (A) Cash and Bank Balance
  - (B) Capital borrowed from Banks
  - (C) Difference between Current Assets and Current Liabilities
  - (D) Difference between Current Assets and Fixed assets
  
7. Current assets include only those assets which are expected to be realized within.....
  - (A) 3 months
  - (B) 6 months
  - (C) 1 year
  - (D) 2 years
  
8. A Company's liquid assets are Rs.5,00,000 and its current liabilities are Rs.3,00,000. Thereafter, it paid Rs.1,00,000 to its trade payables. Quick ratio will be:
  - (A) 1.33:1
  - (B) 2.5:1
  - (C) 1.67:1
  - (D) 2:1

9. A Company's Quick Ratio is 1.5:1; Current Liabilities are Rs.2,00,000 and Inventory is Rs.1,80,000. Current Ratio will be:
- (A) 0.9:1
  - (B) 1.9:1
  - (C) 1.4:1
  - (D) 2.4:1
10. Fixed Assets Rs.5,00,000; Current Assets Rs.3,00,000; Equity Share Capital Rs.4,00,000; Reserve Rs.2,00,000; Long-term debts Rs.40,000. Proprietary Ratio will be:
- (A) 75%
  - (B) 80%
  - (C) 125%
  - (D) 133%
11. If Debt equity ratio exceeds ....., it indicates risky financial position.
- (A) 1:1
  - (B) 2:1
  - (C) 1:2
  - (D) 3:1
12. Equity Share Capital Rs.20,00,000; Reserves Rs.5,00,000; Debentures Rs.10,00,000; Current Liabilities Rs.8,00,000. Debt-equity ratio will be:
- (A) 0.4 : 1
  - (B) 0.32 : 1
  - (C) 0.72 : 1
  - (D) 0.5 : 1
13. On the basis of following data, the Debt-Equity Ratio of a Company will be: Equity Share Capital Rs.5,00,000; General Reserve Rs.3,20,000; Preliminary Expenses Rs.20,000; Debentures Rs.3,20,000; Preliminary Expenses Rs.20,000; Debentures Rs.3,20,000; Current Liabilities Rs.80,000.
- (A) 1:2
  - (B) 0.52:1
  - (C) 0.4:1
  - (D) 0.37:1
14. On the basis of the following information received from a firm, its Proprietary Ratio will be: Fixed Assets Rs.3,30,000; Current Assets Rs.1,90,000; Preliminary Expenses Rs.30,000; Equity share Capital Rs.2,44,000; Preference Share capital Rs.1,70,000; Reserve Fund Rs.58,000.
- (A) 70%
  - (B) 80%
  - (C) 85%
  - (D) 90%
15. On the basis of the following information received from a firm, its Total Assets-Debt ratio will be:
- (A) 40%
  - (B) 60%
  - (C) 30%
  - (D) 70%



16. Opening Inventory Rs.1,00,000; Closing Inventory Rs.1,50,000; Purchases Rs.6,00,000; Carriage Rs.25,000; wages Rs.2,00,000. Inventory Turnover Ratio will be:  
(A) 6.6 Times  
(B) 7.4 Times  
(C) 7 Times  
(D) 6.2 Times
17. Revenue from Operations Rs.2,00,000; Inventory Turnover ratio 5; Gross Profit 25%. Find out the value of Closing Inventory, if Closing Inventory is Rs.8,000 more than the Opening Inventory.  
(A) Rs.38,000  
(B) Rs.22,000  
(C) Rs.34,000  
(D) Rs.26,000
18. Total revenue from operations Rs.9,00,000; Cash revenue from operations Rs.3,00,000; Debtors Rs.1,00,000; Debtors Rs.1,00,000; B/R Rs.20,000. Trade Receivables Turnover Ratio will be:  
(A) 5 Times  
(B) 6 Times  
(C) 7.5 Times  
(D) 9 Times
19. A firm's credit revenue from operations is Rs.3,60,000, cash revenue from operations is Rs.70,000. Cost of revenue from operations is Rs.3,61,200. Its gross profit ratio will be:  
(A) 11%  
(B) 15%  
(C) 18%  
(D) 16%
20. Revenue from Operations Rs.6,00,000; Gross Profit 20%; Office Expenses Rs.30,000; Selling Expenses Rs.48,000. Calculate operating ratio.  
(A) 80%  
(B) 85%  
(C) 96.33%  
(D) 93%
21. State whether the following statement is True or False:  
Solvency refers to the ability of the enterprise to meet its current obligations.
22. State whether the following statement is True or False:  
Current ratio improves with increase in sales at profit.
23. Fill in the blanks with appropriate word:  
An ideal Quick Ratio is .....
24. Fill in the blanks with appropriate word:  
.....is the process of determining and interpreting numerical relationship between figures of the financial statements.
25. State whether the following statement is True or False:  
Lower the Gross Profit Ratio, higher will be the profitability of a company.

## BUSINESS STUDIES

**Q1.** . Planning cannot foresee everything and thus, there may be obstacles to effective planning. Identify the related limitation of planning.

- (a) Planning leads to rigidity
- (b) Planning may not work in a dynamic environment
- (c) Planning does not guarantee success
- (d) Planning reduces creativity

**Q2.** In order to enhance the easy marketability of the products, Dev, a producer gets the home furnishing products manufactured in confirmation to the predetermined specifications. Identify the type of marketing function being described in the given case:

- (a) Standardisation and grading
- (b) Warehousing
- (c) Physical distribution
- (d) Transportation

**Q3.** Identify the level at which the directing function takes place in an organisation?

- (a) Top level management
- (b) Middle level management
- (c) Lower level management
- (d) All of the above

**Q4.** Jivesh has joined as a creative head in a home decor company. He always ensures that the work has been divided into small and manageable activities and also the activities of similar nature are grouped together. Identify the related step in organising process being mentioned in the above lines.

- (a) Identification and division of work
- (b) Departmentalisation
- (c) Assignment of duties
- (d) Establishing reporting relationships

**Q5.** Which of the following is not an objective of financial planning?

- (a) Ensuring enough funds are available at right time
- (b) Ensuring excess availability of funds
- (c) Ensuring smooth business operations
- (d) All of the above

**Q6.** Human resources are an organisation's greatest asset. Despite all developments in technology "getting work done through people" is still a major task for the manager." Identify the dimension of management being described above.

- (a) Management of work
- (b) Management of people
- (c) Management of operations
- (d) All of the above

**Q7.** Why did Taylor suggest the concept of functional foremanship?

- (a) As all qualities of a good worker are difficult to find in a single person.
- (b) To demark planning and execution functions.
- (c) To apply the principle of division of work and specialisation to the shop floor.
- (d) All of the above

**Q8.** Arrange the following steps involved in the process of financial planning in the correct sequence:

- (a) Estimation of expected profit, preparation of a sales forecast, Preparation of financial statements
- (b) Preparation of a sales forecast, Preparation of financial statements, Estimation of expected profit
- (c) Preparation of a sales forecast, Estimation of expected profit, Preparation of financial statements
- (d) Preparation of financial statements, Estimation of expected profit, preparation of a sales forecast

**Q9.** 'Navchetna' a popular consumer organisation in Chandigarh, has filed a case against a yogurt manufacturing company in the National Consumers Disputes Redressal Commission. The yogurts were marketed as being "clinically" and "scientifically" proven to boost immune system and helps to regulate digestion. However, on conducting laboratory tests the claims found to be wrong. Name any party who could have also filled a complaint in the above case.

- (a) Any consumer
- (b) The Government
- (c) Any State Government
- (d) All of the above

**Q10.** Wizard Ltd. is a highly reputed company. The employees of this organization are very happy and they discussed how they came in contact with this organization. Veer Singh shared that he was directly called from IIM Lucknow from where he was about to complete his MBA. Identify the source of recruitment being described in the above lines.

- (a) Campus recruitment
- (b) Recommendation of present employees
- (c) Casual callers
- (d) Advertisements

**Q11.** Laksh, an experienced stock broker advised his client Prem to invest in the shares of Angel Limited as the company has declared high dividends. Since an increase in dividend is perceived as a good news and stock prices react positively to it. Identify the related factor of dividend decision being described in the above lines.

- (a) Growth prospects
- (b) Access to capital markets
- (c) Tax rate
- (d) Stock market reactions

**OR**

Joyous Limited is a company dealing in ready to eat food products. Over the years the earning potential of the company has gone up and it enjoys a good reputation. The financial manager is confident of the fact that not just the earnings of the current year but our future years is likely to be high. Identify the related factor of dividend decision being described in the given lines.

- (a) Earnings
- (b) Stability of dividend
- (c) Stability of earnings
- (d) Growth prospects

**Q12.** Organising helps in creating a hierarchical order thereby enabling the fixation of responsibility and specification of the extent of authority to be exercised by an employee. Identify the relevant point of importance of organising.

- (a) It brings clarity in working relationships
- (b) Ensures optimum utilization of resources
- (c) Provides benefits of specialisation
- (d) Effective administration

**OR**

Besttech Limited is one of the India's largest information technology services company. It has organised itself in a manner that allows customer orientation to dominate over other goals and diversified on the basis of product lines. What type of organisational structure allows for the addition of the new product lines without interrupting the existing operations in order to facilitates expansion and growth of a business enterprise?

- (a) Functional structure
- (b) Divisional structure
- (c) Matrix structure
- (d) None of the above

**Read the following text and answer question No.13-16 on the basis of the same:**

Sarthak runs an Auto Repair Shop in Khan market in New Delhi. He has devised a way to measure the productivity and performance of his employees in terms of how many cars are being repaired by each mechanic on a weekly basis. He follows a repair quota system under which each mechanic must fix ten engines, patch five tires and replace 15 windshield wipers each week. Henceforth, he decides to measure the performance of each mechanic and compare it with the preset standards. Once he evaluates the information on the basis of its effect on the working of the business, he provides feedback to each employee as this will help them make improvements to their work. In context of the above case:

**Q13. Identify the function of management that is being followed by Sarthak.**

- (a) Planning
- (b) Organising
- (c) Staffing
- (d) Controlling

**Q14.** 'He has devised a way to measure the productivity and performance of his employees in terms of how many cars are being repaired by each mechanic on a weekly basis. He follows a repair quota system under which each mechanic must fix ten engines, patch five tires and replace 15 windshield wipers each week.' From this statement, Identify the step in the process of the function **identified in Q13**.

- (a) Setting standard performance
- (b) Developing premises
- (c) Follow-up action
- (d) Measuring actual performance

**Q15.** 'Once he evaluates the information on the basis of its effect on the working of the business, he provides feedback to each employee as this will help them make improvements to their work.' From this statement, Identify the step in the process of the function **identified in Q13**.

- (a) Evaluating alternative courses of action
- (b) Analysing deviations
- (c) Taking corrective action
- (d) Follow-up action

**Q16. How many steps are there in the process of the function identified in Q13.**

- (a) 8
- (b) 7
- (c) 4
- (d) 5

**Read the following text and answer question No.17-20 on the basis of the same:**

Visions Ltd. is a renowned multiplex operator in India. Presently, it owns 234 screens in 45 properties at 20 locations in the country. Considering the fact that there is a growing trend among the people to spend more of their disposable income on entertainment, two years back the company had decided to add more screens to its existing set up and increase facilities to enhance leisure, food chains etc. It had then floated an initial public offer of equity shares in order to raise the desired capital. The issue was fully subscribed and paid. Over the years, the sales and profits of the company have increased tremendously and it has been declaring higher dividend and the market price of its shares has increased manifolds.

**Q17. Identify the financial decision taken by the company by deciding to add more screens to its existing set up and increase facilities to enhance leisure, food chains etc.**

- (a) Financial
- (b) Dividend
- (c) Investment
- (d) Financing

**Q18. Identify the financial decision taken by the company by floating an initial public offer of equity shares in order to raise the desired capital. The issue was fully subscribed and paid.**

- (a) Capital structure
- (b) Dividend
- (c) Investment
- (d) Financing

**Q19. Identify the financial decision taken by the company by declaring higher dividend and the market price of its shares has increased manifolds.**

- (a) Financial
- (b) Dividend
- (c) Investment
- (d) Financing

**Q20. Which capital market has been tapped by Vision Ltd. to raise the desired capital.**

- (a) Money market
- (b) Secondary market
- (c) Primary market
- (d) Stock exchange

**Q21. Define the term coordination and explain its importance.**

**Q22.** Sahil, the director of a garments company, is planning to manufacture bags for the utilisation of waste materials from one of his garments units. He decided that his manufacturing unit will be set up in the rural area of Odisha where people have very less job opportunities and labour is available at a very low rate. He also thought of giving equal opportunities to men and women.

For this, he selected S. Chatterjee, Inderjeet Kaur, Aslam and Sarabjeet as heads of the Sales, Accounts, Purchase and Production Departments.

Identify and state the next three steps that Sahil has to follow in the staffing process after selecting the above heads.

**Q23.** State any three functions of a stock exchange.

**Q24.** ‘If anything goes wrong with the performance of key activities, then entire organization suffers.’ Identify and explain the principle of managerial control discussed in the statement.

**Q25.** In the year 2015, Under section 12(1D) of the Consumer Protection Act, the Consumer Affairs Ministry had filed a suit in National Consumer Disputes Redressal Commission (NCDRC) against Nestle India, the manufacturer of Maggi noodles, seeking about Rs.640 crore in damages for alleged unfair trade practices, false labelling and misleading advertisements.

**In context of the above case:**

- a) Name four other parties besides government who can file a case under Consumer Protection Act 1986.
- b) Why has the government filed a suit in National Consumer Disputes Redressal Commission (NCDRC) and at no other level of three tier redressal system?

## **ECONOMICS**

**Q.1.** Why is it necessary to have an understanding of neighbouring economies?

**Q.2.** What problems were faced by the ‘Great Leap Forward’ (GLF) campaign?

**Q.3.** What are Special Economic Zones (SEZs)? How do they attract investors?

**Q.4.** What are the common features of development plans of India, China and Pakistan?

**Q.5.** Give a brief account of demographic indicators of India, China and Pakistan.

**Q.6.** Compare the growth trends in China, India and Pakistan in the last two decades.

**Q.7.** Compare and contrast India, China and Pakistan’s sectoral contribution towards GDP in the year 2003. What does it indicate?

**Q.8.** Compare and contrast the development of India, China and Pakistan with respect to some salient human development indicators.

**Q.9.** Give the critical appraisal of the development strategies of China, India and Pakistan.

## **BIOLOGY**

### **AVERAGE**

1. Enlist the steps of controlled cross pollination. Would emasculation be needed in a cucurbit plant? Give reasons for your answer.
2. The pedigree chart given below shows a particular trait which is absent in parents but present in the next generation irrespective of sexes. Draw your conclusion on the basis of the pedigree.
3. In order to obtain the F1 generation Mendel pollinated a pure-breeding tall plant with a pure breeding dwarf plant. But for getting the F2 generation, he simply self-pollinated the tall F1 plants. Why?
4. With the help of an example differentiate between incomplete dominance and co-dominance.
5. In peas, tallness is dominant over dwarfness, and red colour of flowers is dominant over the white colour. When a tall plant bearing red flowers was pollinated with a dwarf plant bearing white flowers, the different phenotypic groups were obtained in the progeny in numbers mentioned

against them:

Tall, Red = 138

Tall, White = 132

Dwarf, Red = 136

Dwarf, White = 128

Mention the genotypes of the two parents and of the four offspring types.

### **DIFFICULT –**

1. A, B, D are three independently assorting genes with their recessive alleles a, b, d, respectively. A cross was made between individuals of Aa bb DD genotype with aa bb dd. Find out the type of genotypes of the offspring produced.
2. Discuss the genetic basis of wrinkled phenotype of pea seed.
3. It is said, that the harmful alleles get eliminated from population over a period of time, yet sickle cell anaemia is persisting in human population. Why?
4. If a father and son are both defective in red-green colour vision, is it likely that the son inherited the trait from his father? Comment.
5. Even if a character shows multiple allelism, an individual will only have two alleles for that character. Why?
6. How does a mutagen induce mutation? Explain with example.

### **EASY-**

1. What is Down's syndrome? Give its symptoms and cause. Why is it that the chances of having a child with Down's syndrome increases if the age of the mother exceeds forty years.

**CLASS - XII CHEMISTRY (coordination compounds)**

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**Topic:- Werner's theory, some definitions**

1. What are complex compounds? [1]
2. Give some examples of coordination compounds. [1]
3. What were the two valences given by Werner for coordination compounds? [1]
4. Enlist the common shapes of Werner's complexes. [1]
5. What is the difference between a double salt and a complex?  
Explain with an example. [2]
6. What are ligands? Explain different types of ligands. [3]
7. What do you understand by the term coordination number? [1]
8. What are the different shapes or coordination polyhedra in the complexes? [2]
9. Define oxidation state of a metal. [1]
10. Distinguish between homoleptic and hetroleptic ligands. [1]



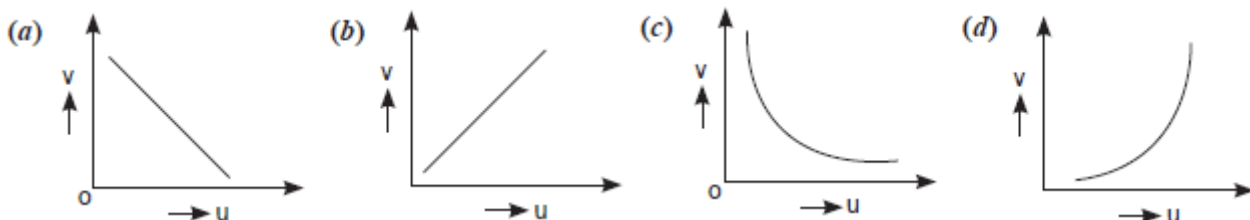
# PHYSICS

## CHAPTER 9 Ray Optics

### QUESTIONS

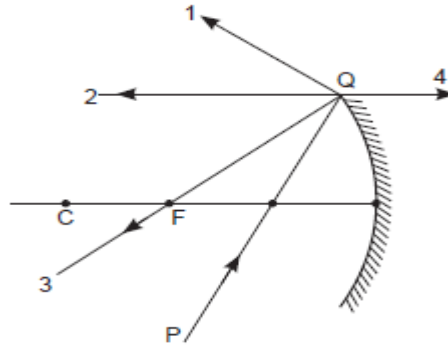
- 1 A converging lens is used to form an image on a screen. When the upper half of the lens is covered by an opaque screen.  
(a) half the image will disappear. 1  
(b) incomplete image will be formed.  
(c) intensity of image will decrease but complete image is formed.  
(d) intensity of image will increase but image is not distinct.
- 2 In optical fibres, the refractive index of the core is (a) greater than that of the cladding. (b) equal to that of the cladding. (c) Smaller than that of the cladding. (d) Independent of that of cladding. 1
- 3 An object is placed at a distance of 0.5 m in front of a plane mirror. The distance between object and image will be 1  
(a) 0.25 m (b) 0.5 m  
(c) 1.0 m (d) 2.0 m
- 4 Air bubble in water behaves as 1  
(a) sometimes concave, sometimes convex lens  
(b) concave lens  
(c) convex lens  
(d) always refracting surface
- 5 We combine two lenses, one is convex and other is concave having focal lengths  $f_1$  and  $f_2$  and their combined focal length is  $F$ . Combination of the lenses will behave like concave lens, if 1  
(a)  $f_1 > f_2$  (b)  $f_1 = f_2$   
(c)  $f_1 < f_2$  (d)  $f_1 \leq f_2$
- 6 The length of an astronomical telescope for normal vision (relaxed eye) will be (a)  $f_o - f_e$  1  
(b)  $\frac{f_o}{f_e}$   
(c)  $f_o \times f_e$  (d)  $f_o + f_e$
- 7 The focal length of a biconvex lens of radii of each surface 50 cm and refractive index 1.5, is 1  
(a) 40.4 cm (b) 75 cm  
(c) 50 cm (d) 80 cm
- 8 A metal coin is at bottom of a beaker filled with a liquid of refractive index =  $4/3$  to height of 6 cm. To an observer looking from above the surface of liquid, coin will appear at a depth 1  
(a) 1.5 cm (b) 6.75 cm  
(c) 4.5 cm (d) 7.5 cm

- 9 Four lenses of focal lengths  $\pm 15$  cm and  $\pm 150$  cm are available for making a telescope. To produce the largest magnification, the focal length of the eyepiece should be  
 (a) + 15 cm (b) + 150 cm  
 (c) - 150 cm (d) - 15 cm 1
- 10 If a convex lens of focal length 80 cm and a concave lens of focal length 50 cm are combined together, what will be their resulting power?  
 (a) + 6.5 D (b) - 6.5 D  
 (c) + 7.5 D (d) - 0.75 D 1
- 11 A convex lens and a concave lens, each having the same focal length of 25 cm, are put in contact to form a combination of lenses. The power of the combination (in dioptres) is  
 (a) zero (b) 25  
 (c) 50 (d) infinity 1
- 12 The refractive index of the material of an equilateral prism is  $\sqrt{3}$ . What is the angle of minimum deviation?  
 (a)  $45^\circ$  (b)  $60^\circ$   
 (c)  $37^\circ$  (d)  $30^\circ$  1
- 13 An object is immersed in a fluid. In order that the object becomes invisible, it should  
 (a) behave as a perfect reflector.  
 (b) absorb all light falling on it.  
 (c) have refractive index one.  
 (d) have refractive index exactly matching with that of the surrounding fluid. 1
- 14 In the formation of a rainbow, the light from the sun on water droplets undergoes  
 (a) dispersion only.  
 (b) only TIR.  
 (c) dispersion and TIR.  
 (d) scattering. 1
- 15 In an experiment to find focal length of a concave mirror, a graph is drawn between the magnitude of  $u$  and  $v$ . The graph looks like



- A convex lens of refractive index  $\frac{3}{2}$  has a power of 2.5 D in air. If it is placed in a liquid of refractive index 2 then the new power of the lens is 1
- (a) – 1.25 D (b) – 1.5 D  
(c) 1.25 D (d) 1.5 D
- 17 A ray of light incident at an angle  $\theta$  on a refracting face of a prism emerges from the other face normally. If the angle of the prism is  $5^\circ$  and the prism is made of a material of refractive index 1.5, the angle of incidence is [NCERT Exemplar] 1
- (a)  $7.5^\circ$  (b)  $5^\circ$  (c)  $15^\circ$  (d)  $2.5^\circ$
- 18 A short pulse of white light is incident from air to a glass slab at normal incidence. After travelling through the slab, the first colour to emerge is 1
- (a) blue (b) green  
(c) violet (d) red
- 19 An object approaches a convergent lens from the left of the lens with a uniform speed 5 m/s and stops at the focus. The image [NCERT Exemplar] 1
- (a) moves away from the lens with a uniform speed 5 m/s.  
(b) moves away from the lens with a uniform acceleration.  
(c) moves away from the lens with a non-uniform acceleration.  
(d) moves towards the lens with a non-uniform acceleration.
- 20 You are given four sources of light each one providing a light of a single colour – red, blue, green and yellow. Suppose the angle of refraction for a beam of yellow light corresponding to a particular angle of incidence at the interface of two media is  $90^\circ$ . Which of the following statements is correct if the source of yellow light is replaced with that of other lights without changing the angle of incidence? [NCERT Exemplar] 1
- (a) The beam of red light would undergo total internal reflection.  
(b) The beam of red light would bend towards normal while it gets refracted through the second medium.  
(c) The beam of blue light would undergo total internal reflection.  
(d) The beam of green light would bend away from the normal as it gets refracted through the second medium.
- 21 The radius of curvature of the curved surface of a plano-convex lens is 20 cm. If the refractive index of the material of the lens be 1.5, it will [NCERT Exemplar] 1
- (a) act as a convex lens only for the objects that lie on its curved side.  
(b) act as a concave lens for the objects that lie on its curved side.  
(c) act as a convex lens irrespective of the side on which the object lies.  
(d) act as a concave lens irrespective of side on which the object lies.

22 The direction of ray of light incident on a concave mirror is shown by PQ while directions in which the ray would travel after reflection is shown by four rays marked 1, 2, 3 and 4. Which of the four rays correctly

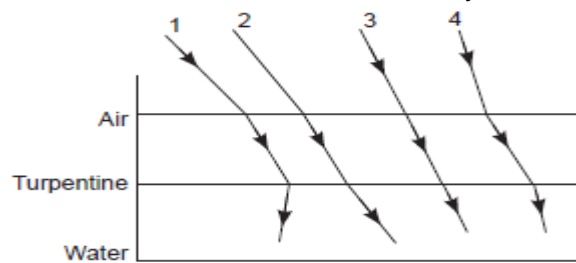


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shows the direction of reflected ray?  
(c) 3 (d) 4

(a) 1 (b) 2

23 The optical density of turpentine is higher than that of water while its mass density is lower. Figure shows a layer of turpentine floating over water in a container. For which one of the four rays incident on



1

turpentine in figure the path shown is correct?  
(c) 3 (d) 4

(a) 1 (b) 2

24 A car is moving with at a constant speed of  $60 \text{ km h}^{-1}$  on a straight road. Looking at the rear view mirror, the driver finds that the car following him is at a distance of 100 m and is approaching with a speed of  $5 \text{ km h}^{-1}$ . In order to keep track of the car in the rear, the driver begins to glance alternatively at the rear and side mirror of his car after every 2 s till the other car overtakes. If the two cars were maintaining their speeds, which of the following statement (s) is/are correct?

- (a) The speed of the car in the rear is  $65 \text{ km h}^{-1}$ .
- (b) In the side mirror the car in the rear would appear to approach with a speed of  $5 \text{ km h}^{-1}$  to the driver of the leading car.
- (c) In the rear view mirror the speed of the approaching car would appear to decrease as the distance between the cars decreases.
- (d) In the side mirror, the speed of the approaching car would appear to increase as the distance between the cars decreases.

1

25 Consider an extended object immersed in water contained in a plane trough. When seen from close to the edge of the trough the object looks distorted. Which of the following is not correct.

- (a) the apparent depth of the points close to the edge are nearer the surface of the water compared to the points away from the edge.
- (b) the angle subtended by the image of the object at the eye is smaller than the actual angle subtended by the object in air.
- (c) some of the points of the object far away from the edge may not be visible because of total internal reflection.
- (d) water in a trough acts as a lens and magnifies the object.

1

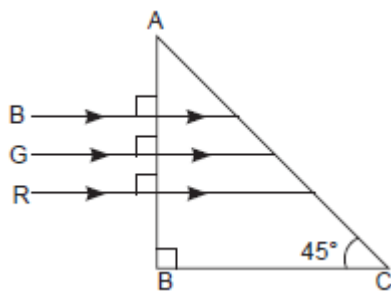
- 26 A magnifying glass is used, as the object to be viewed can be brought closer to the eye than the normal near point. This results in
- a larger angle to be subtended by the object at the eye and hence viewed in greater detail. 1
  - the formation of a real inverted image.
  - increase in the field of view.
  - infinite magnification at the near point.
- 27 An astronomical refractive telescope has an objective of focal length 20 m and an eyepiece of focal length 2 cm. Which one of the following is not correct?
- The length of the telescope tube is 20.02 m.
  - The magnification is 1000. 1
  - The image formed is inverted.
  - An objective of a larger aperture will increase the brightness and reduce chromatic aberration of the image.
- 28 Virtual image formed by convex mirror has magnification \_\_\_\_\_ . 1
- 29 Optical denseness of a medium is measured in terms of \_\_\_\_\_ . 1
- 30 Minimum angle of incidence in the denser medium for which angle of refraction becomes  $90^\circ$  is called \_\_\_\_\_ . 1
- 31 Relation between critical angle and refractive index is \_\_\_\_\_ . 1
- 32 Optical fibre works on the principle of \_\_\_\_\_ . 1
- 33 The splitting of white light into its constituent colours when it passes through a glass prism is called \_\_\_\_\_ . 1
- 34 Blue colour of sky is due to phenomenon of \_\_\_\_\_ of sunlight. 1
- 35 A double convex lens of refractive index  $\mu_1$  is immersed in a liquid of refractive index  $\mu_2$ . The lens will act as transparent plane sheet when
- $\mu_1 = \mu_2$
  - $\mu_1 > \mu_2$
  - $\mu_1 < \mu_2$
  - $\mu_1 = \frac{1}{\mu_2}$
- 1
- 36 When a ray of light enters from one medium to another, then which of the following does not change?
- Frequency
  - Wavelength
  - Speed
  - Amplitude
- 1
- 37 A diver at a depth 12 m inside water ( $\mu = 4/3$ ) sees the sky in a cone of semi-vertical angle
- $\sin^{-1} \frac{4}{3}$
  - $\tan^{-1} \frac{4}{3}$
  - $\sin^{-1} \frac{3}{4}$
  - $90^\circ$
- 1

- 38 The astronomical telescope consists of objective and eyepiece. The focal length of the objective is
- (a) equal to that of the eyepiece.
  - (b) shorter than that of eyepiece. 1
  - (c) greater than that of eyepiece.
  - (d) five times shorter than that of eyepiece.

- 39 If focal length of objective lens is increased then magnifying power of
- (a) microscope will increase but that of telescope decrease.
  - (b) microscope and telescope both will increase. 1
  - (c) microscope and telescope both will decrease.
  - (d) microscope will decrease but that of telescope will increase

- 40 A microscope is focussed on a mark on a piece of paper and then a slab of glass of thickness 3 cm and refractive index 1.5 is placed over the mark. How should the microscope be moved to get the mark in focus again?
- (a) 2 cm upward 1
  - (b) 1 cm upward
  - (c) 4.5 cm downward
  - (d) 1 cm downward

- 41 A beam of light consisting of red, green and blue colours is incident on a right angled prism. The refractive index of the material of the prism for red, green and blue wavelengths are 1.39, 1.44 and 1.47 respectively. The prism will



- (a) separate the red colour part from the green and blue colours.
- (b) separate the blue colour part from the red and green colours.
- (c) separate all the three colours from one another. 1
- (d) not separate the three colours at all.

- 42 Dispersion of light is caused due to
- (a) wavelength (b) intensity of light 1
  - (c) density of medium (d) none of these

- 43 Sparkling of diamond is due to
- (a) reflection.
  - (b) dispersion.
  - (c) total internal reflection. 1
  - (d) high refractive index of diamond.

44 A passenger in an aeroplane shall

- (a) never see a rainbow.
- (b) may see a primary and a secondary rainbow as concentric circles.
- (c) may see a primary and a secondary rainbow as concentric arcs.
- (d) shall never see a secondary rainbow.

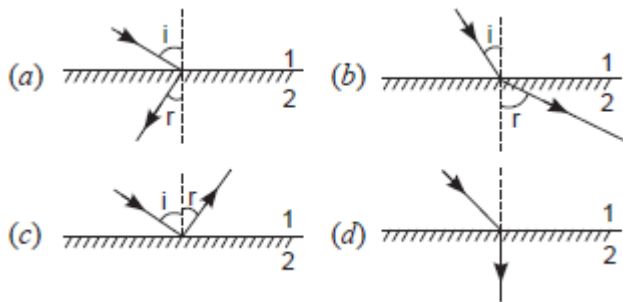
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45 The phenomena involved in the reflection of radiowaves by ionosphere is similar to

- (a) reflection of light by a plane mirror.
- (b) total internal reflection of light in air during a mirage.
- (c) dispersion of light by water molecules during the formation of a rainbow.
- (d) scattering of light by the particles of air.

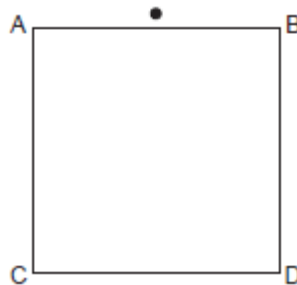
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46 There are certain material developed in laboratories which have a negative refractive index. A ray incident from air (medium 1) into such a medium (medium 2) shall follow a path given by



1

47 A rectangular block of glass ABCD has a refractive index 1.6. A pin is placed midway on the face AB



When observed from the face AD, the pin shall

- (a) appear to be near A.
- (b) appear to be near D.
- (c) appear to be at the centre of AD.
- (d) not be seen at all.

1

48 Branch of physics that deals with the study of nature, production and propagation of light is known as

\_\_\_\_\_.

1

49 Angle subtended by the boundary of the spherical mirror at its centre of curvature C is known as

\_\_\_\_\_.

1

50 The vertical plane passing through the principal focus and perpendicular to the principal axis is called


\_\_\_\_\_.

1

Sample paper on geographical perspective on selected issues and problems.

1. Why is air pollution a serious problem in India?(2019)
2. How does air pollution affect human health?(2019)
3. How does noise pollution affect human health?(2019)
4. Mention the root cause of acid rain. (2014)
5. 'The urban waste should be properly treated as a resource for various needs of mankind'.a)Explain the values that can help in changing the urban waste into resources. b) how can we overcome this problem?(2016)
- 6.a) Give the meaning of the term 'slum.'(2014).b) Explain the causes for the coming up of slums in developing countries like India with suitable examples. (2018)
7. Explain the causes of migration of unskilled migrants from rural to urban areas in India. (2015)



S.NO.	IDENTIFY THE FOLLOWING IMAGE AND WRITE ITS NAME
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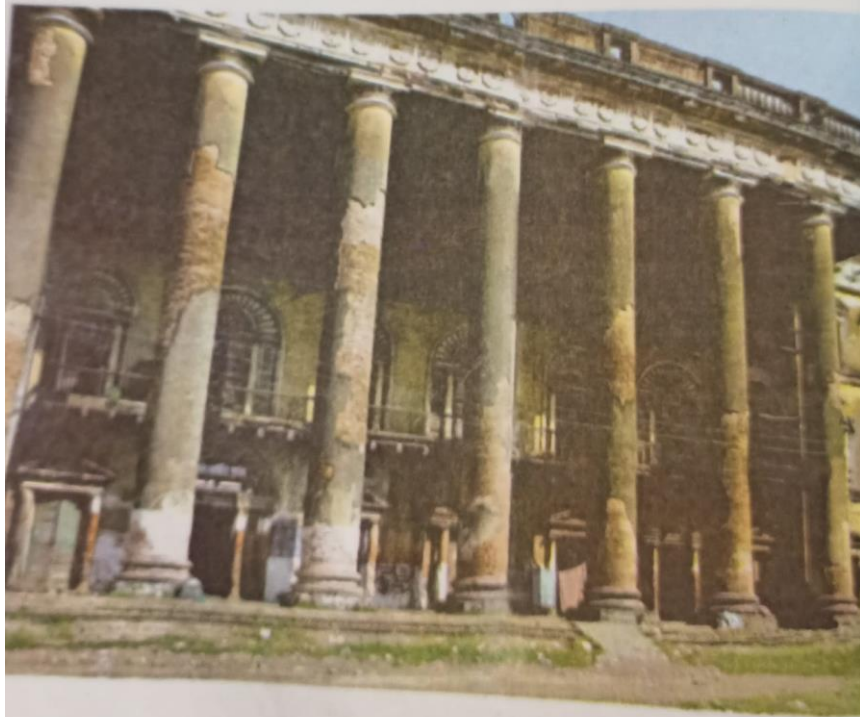
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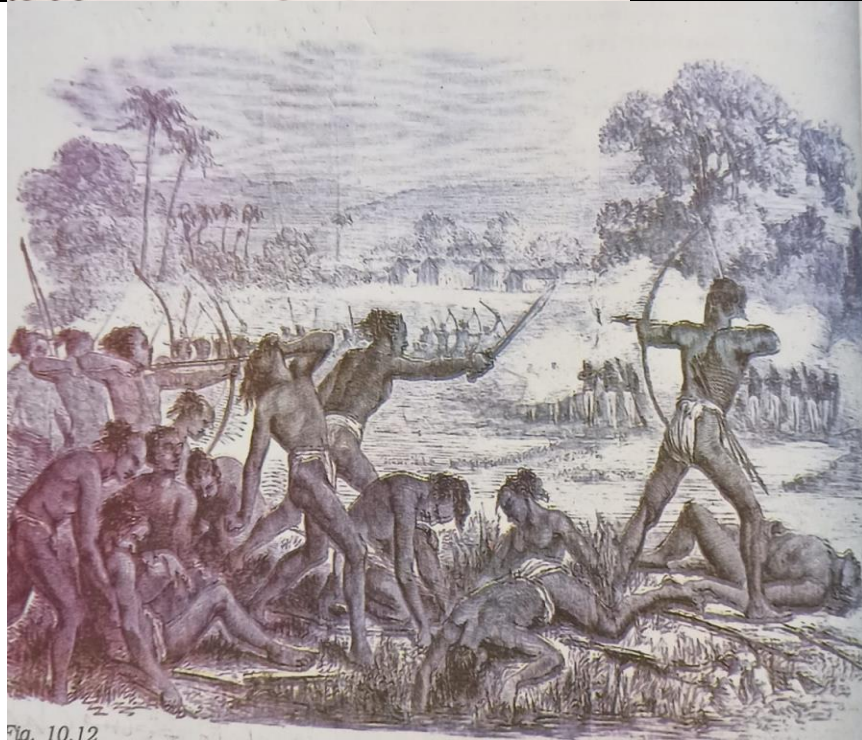




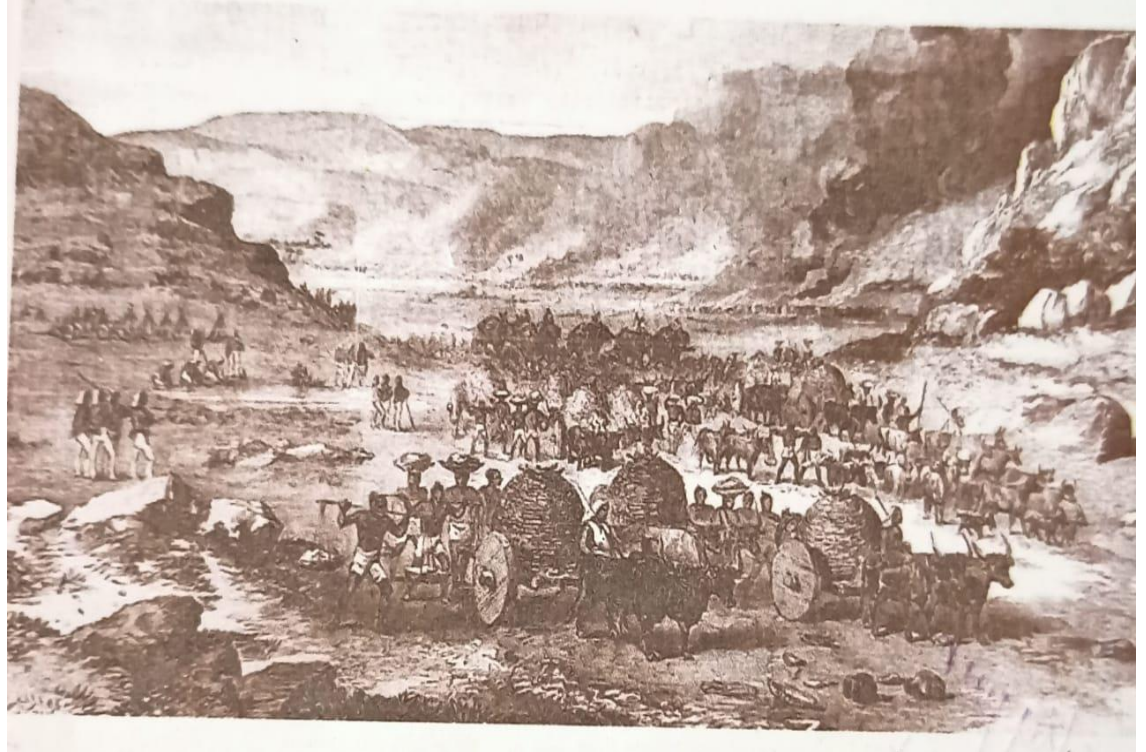
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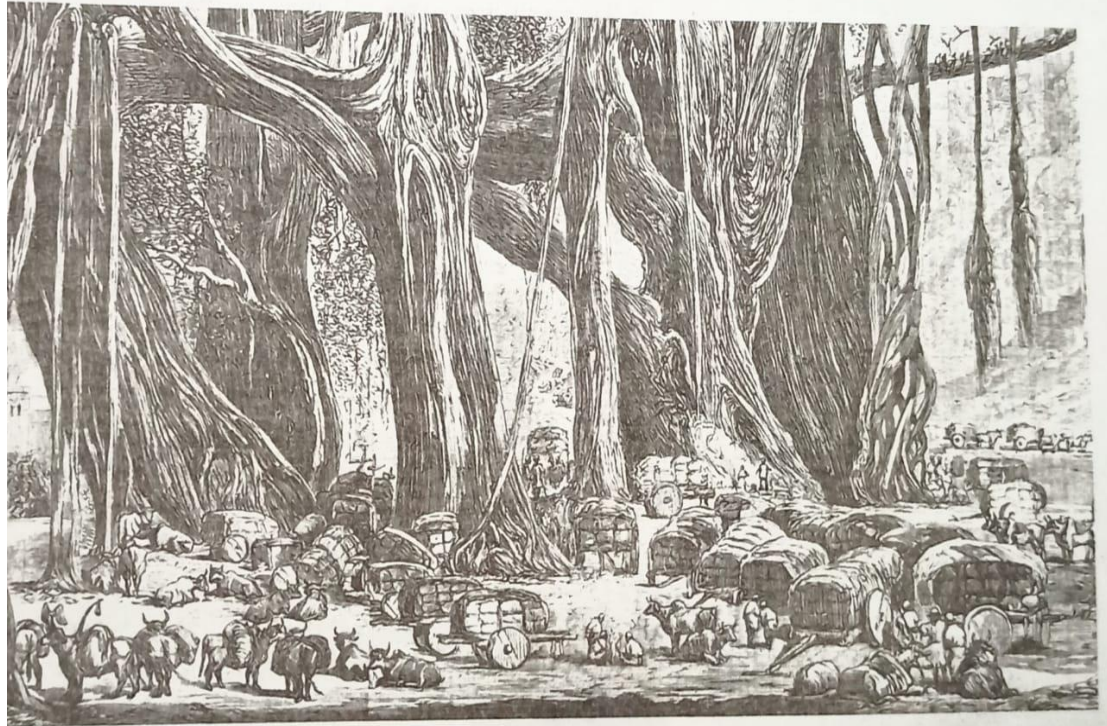
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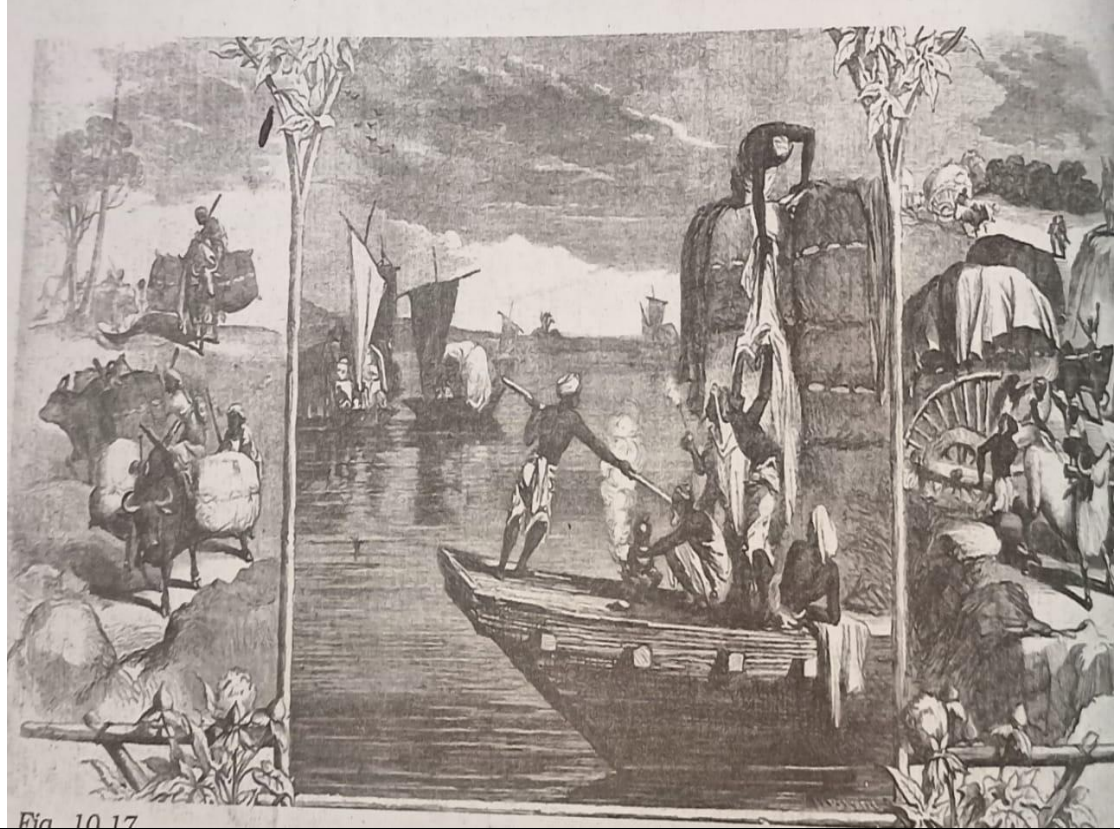
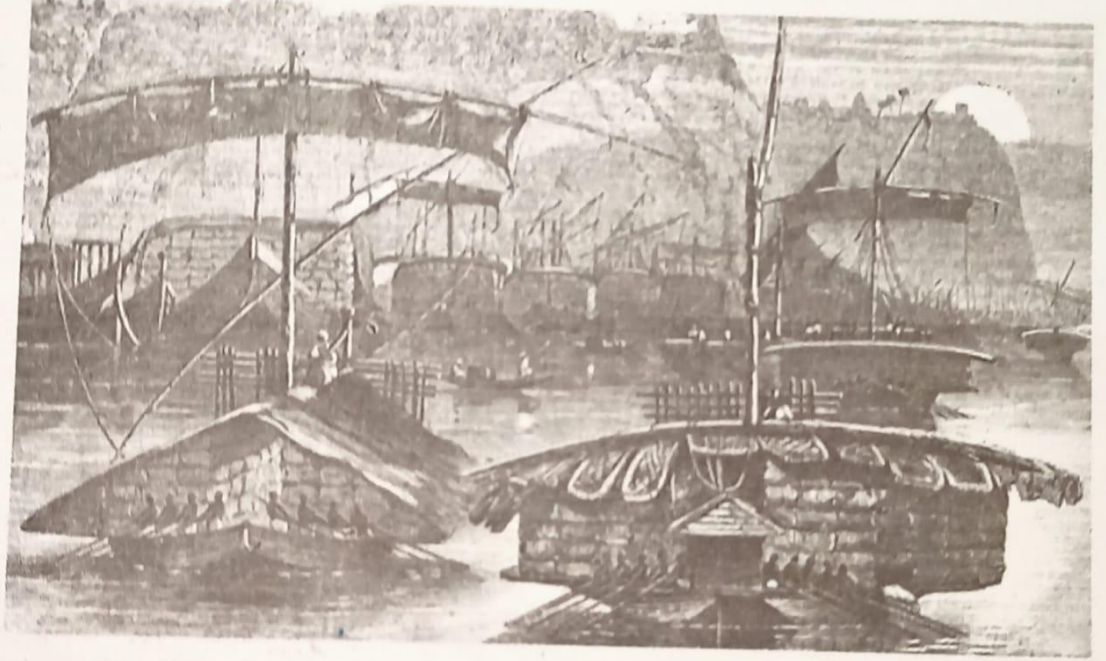


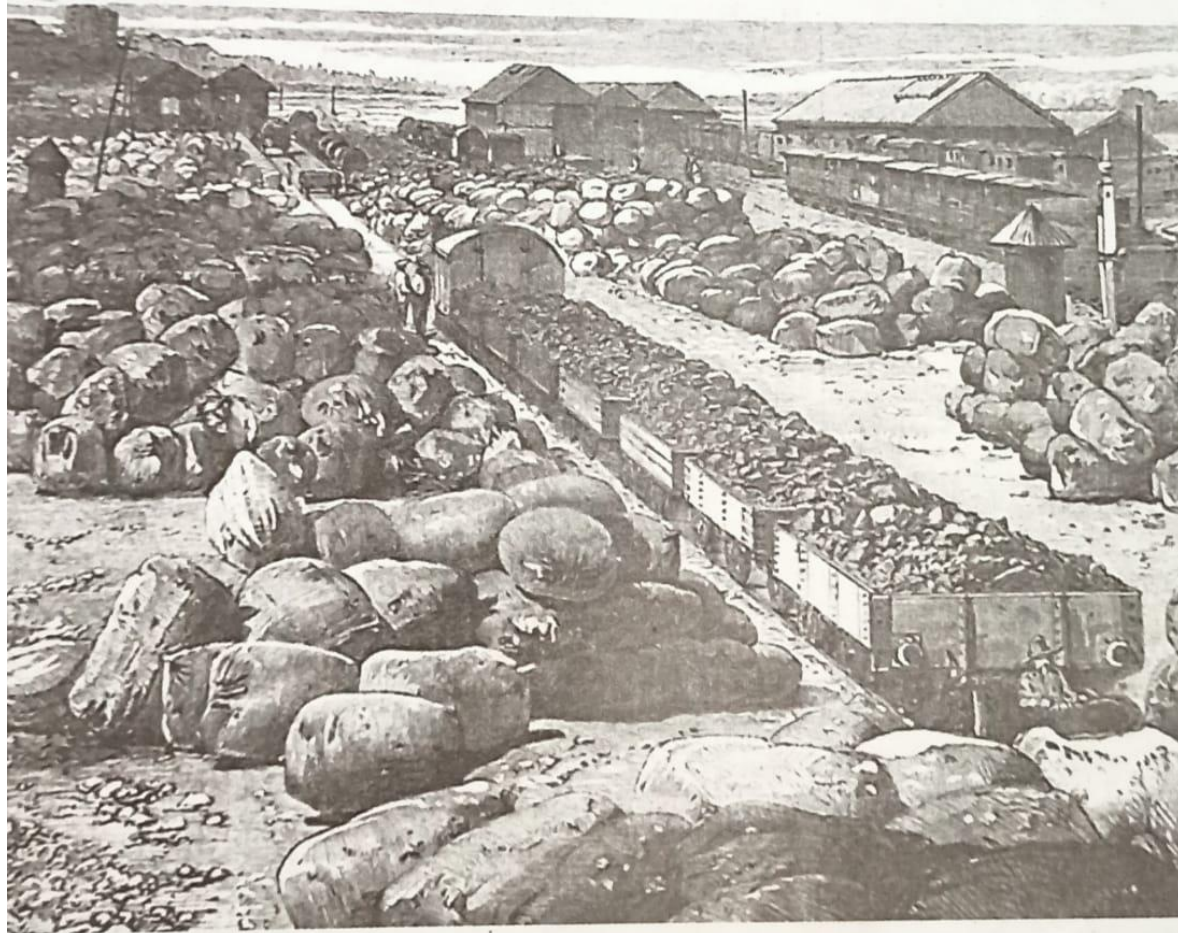
Fig. 10.17



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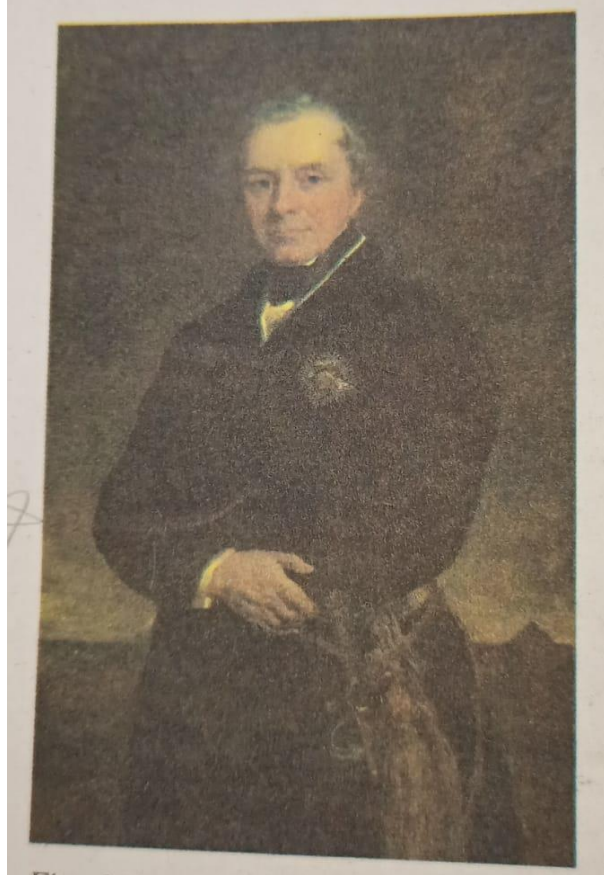
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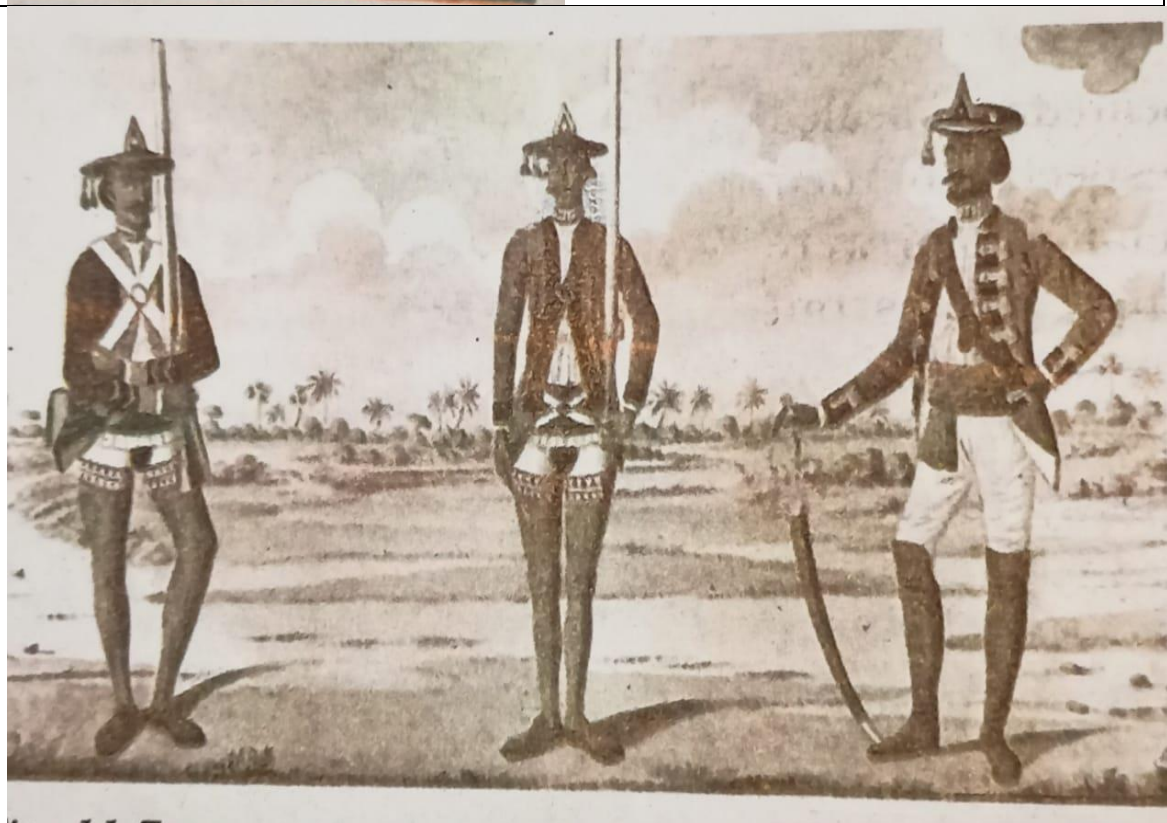
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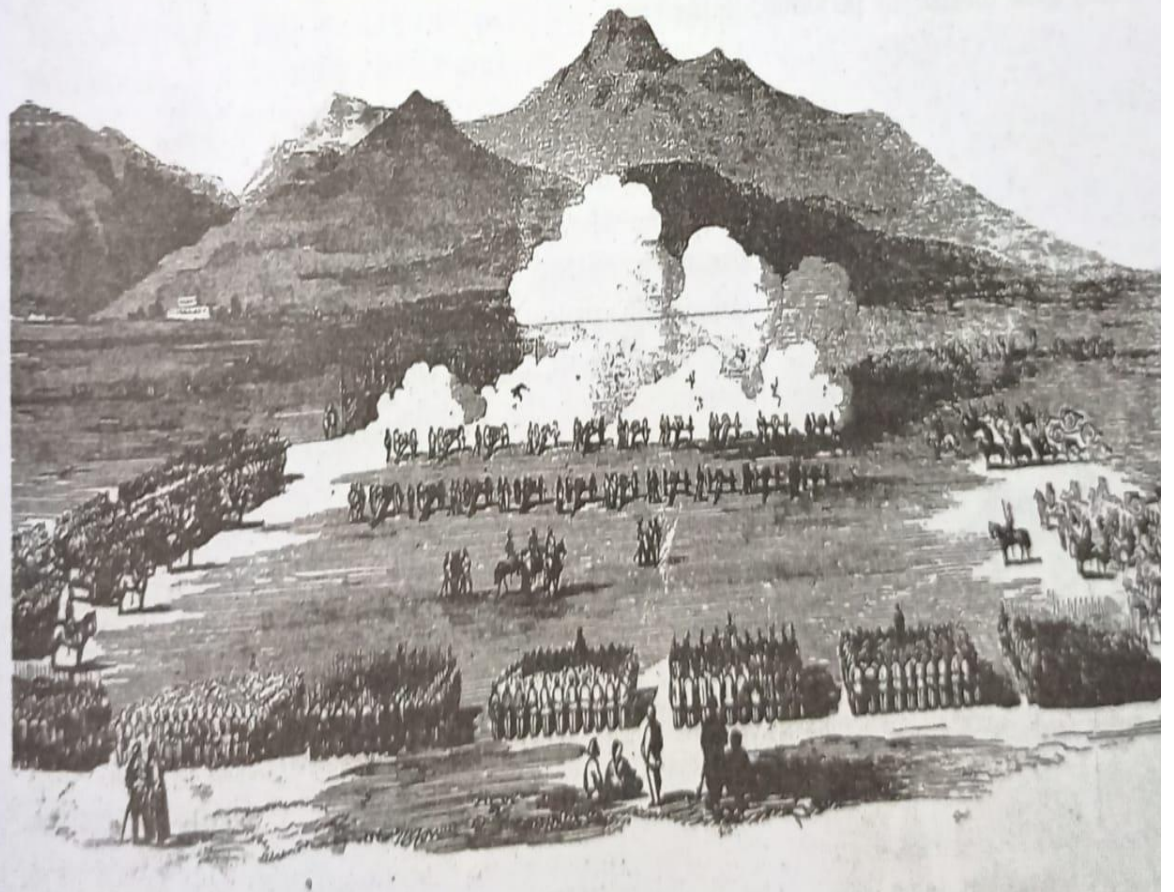


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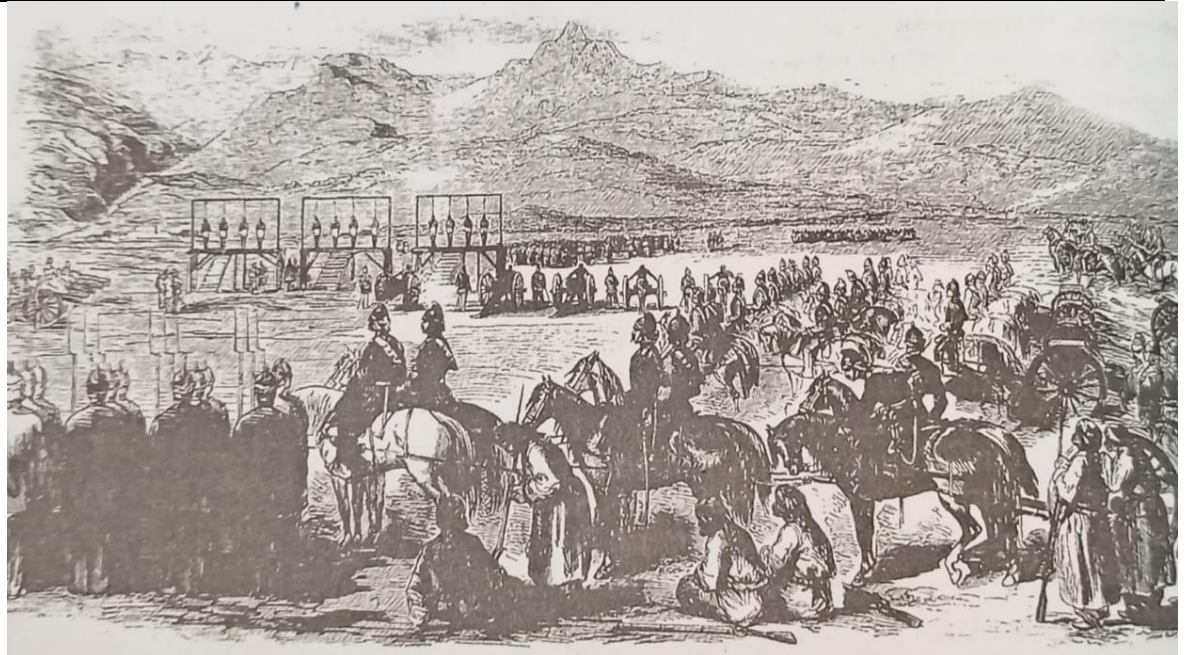
THE BRITISH LION'S VENGEANCE ON THE BENGAL TIGER

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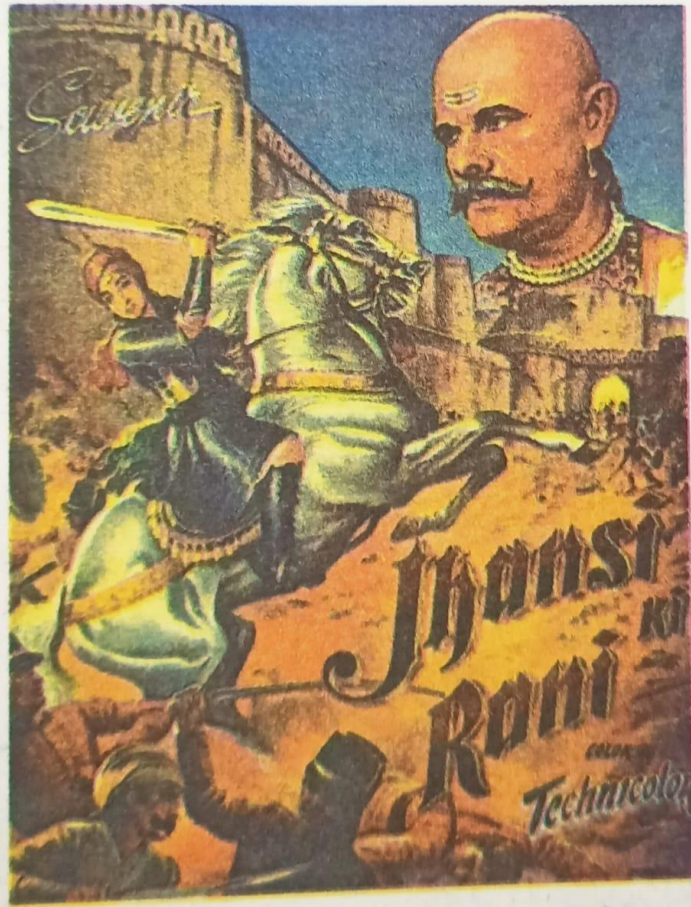


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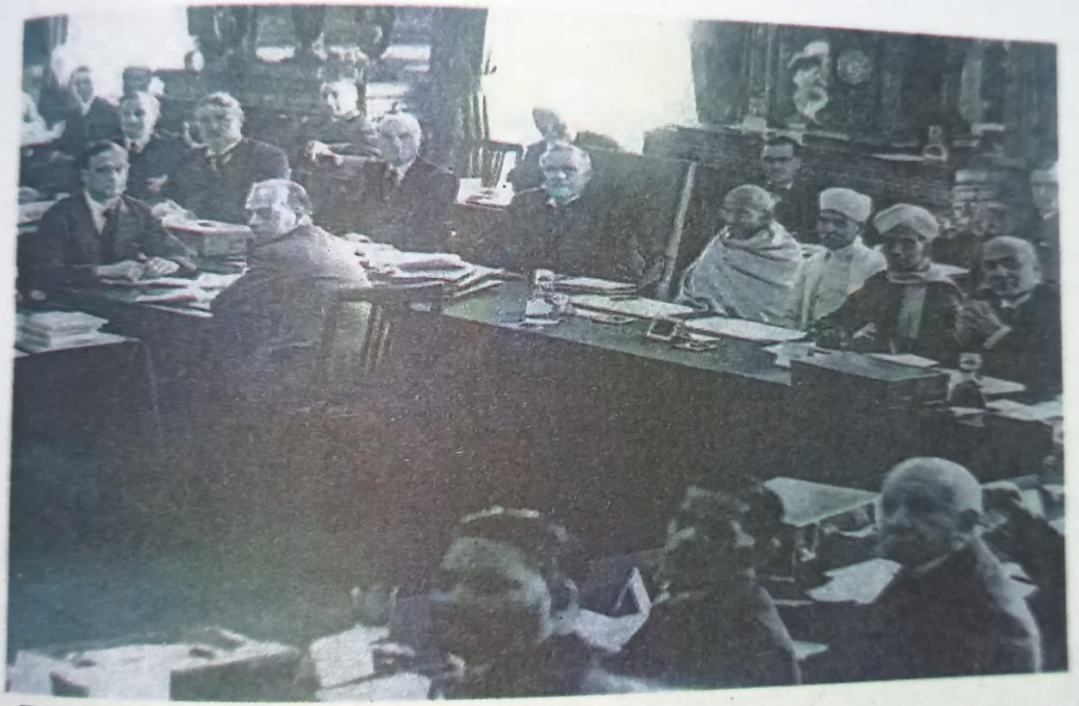


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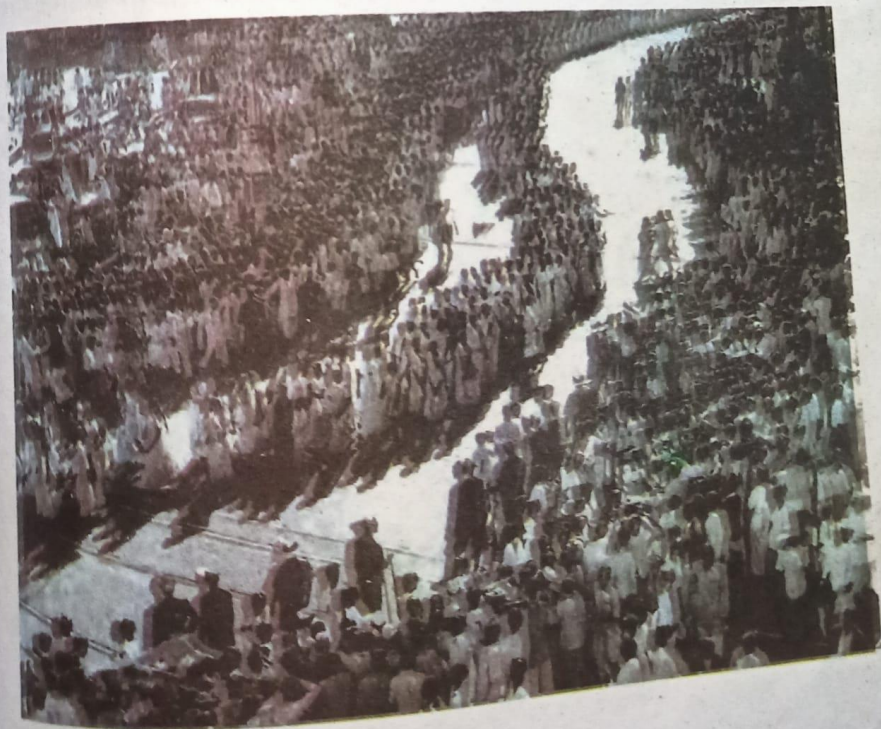
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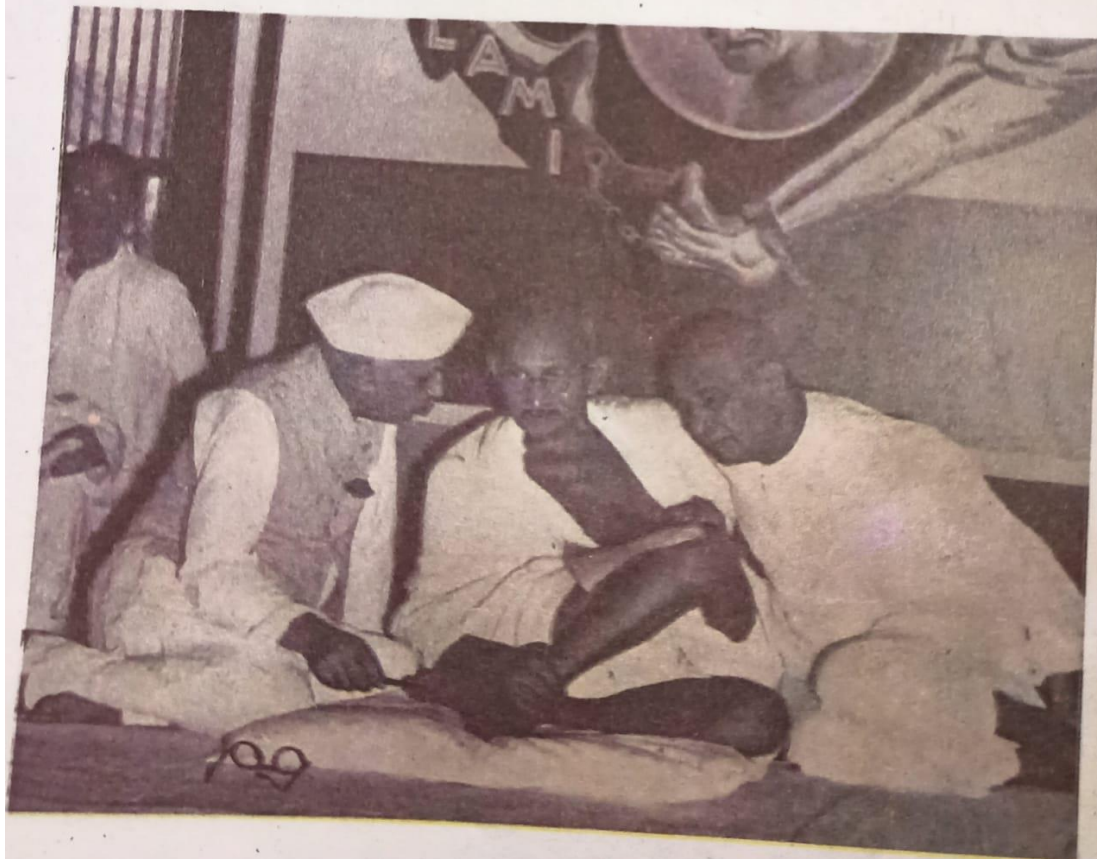
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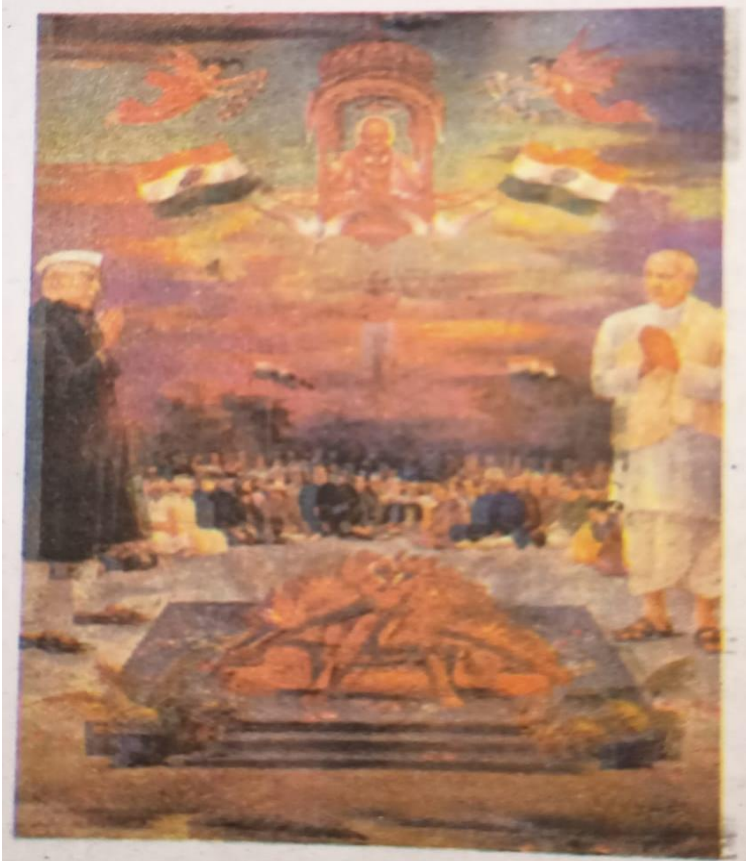




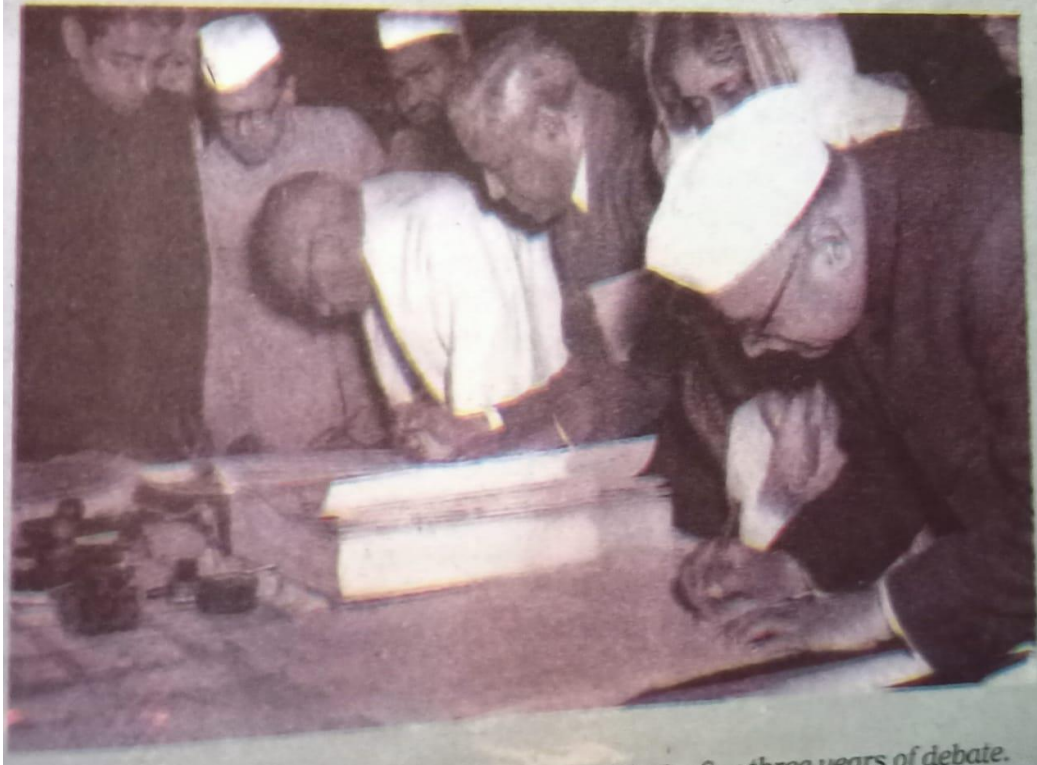
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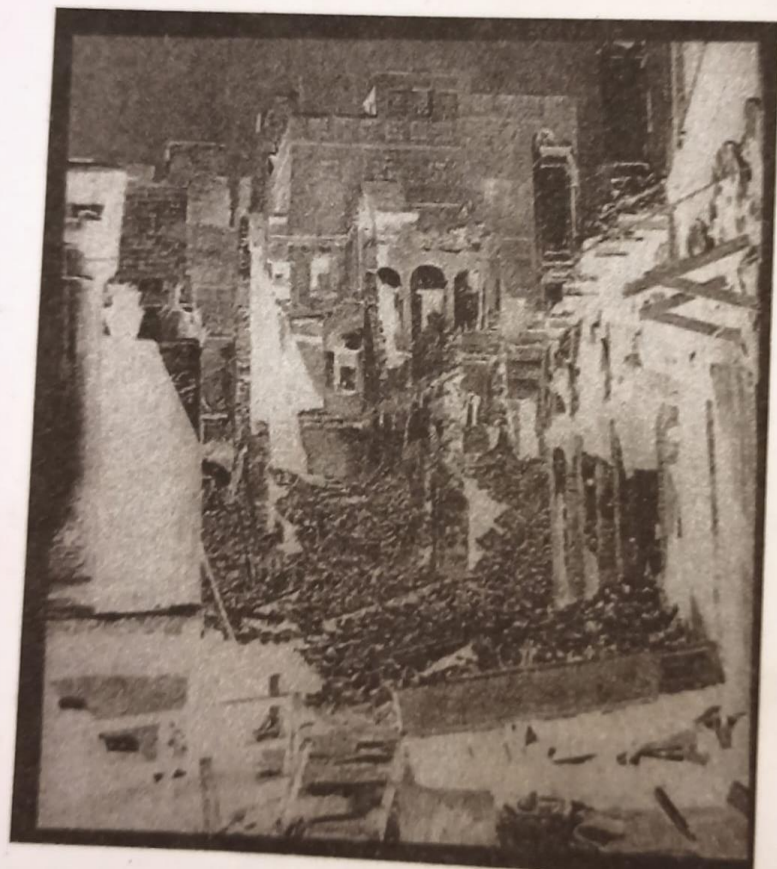


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1910 after three years of debate.

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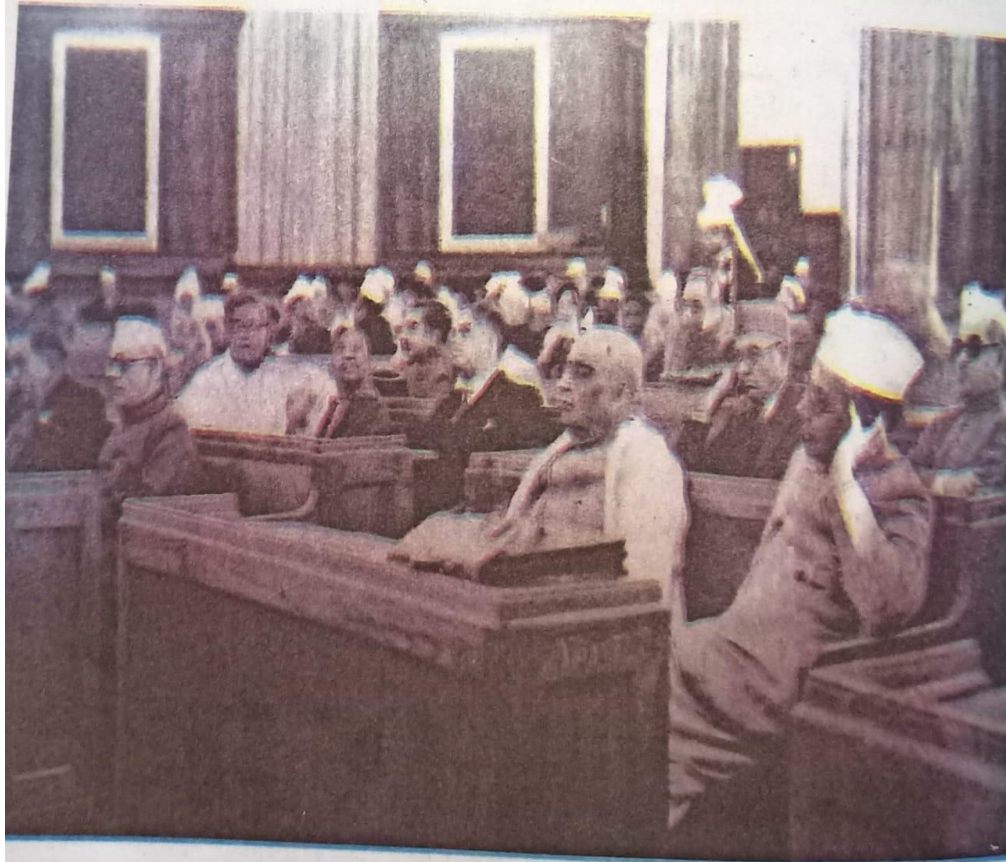


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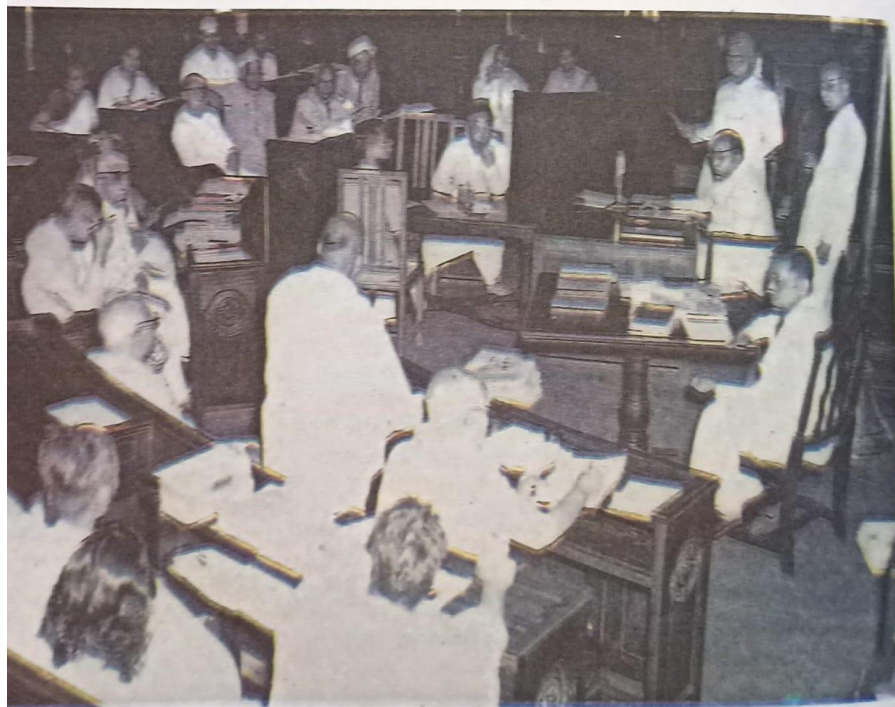


...meeting of opportunities on ... decisions an

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50.



51.



6



52.



53.



## LEGAL STUDIES

### UNIT 1- JUDICIARY

1. Mr. Arjun's services were terminated without giving any actual reason. Even the report of the inquiry committee was not shown to him. Is it justified? discuss 2
2. Art. 246 of the constitution provide that \_\_\_\_\_ has exclusive power to make laws with respect to the matters given in the union list. 1
  - a) State legislature
  - b) President
  - c) Parliament
  - d) Governor
3. Which among the following proposed to increase the retirement age of Supreme Court judges from 65 to 68? 1
  - a) 114<sup>th</sup> amendment bill
  - b) Venkatachalliah committee
  - c) 2013 bill on judicial appointment commission
  - d) 21<sup>st</sup> law commission report
4. Mr. Akhil had been working as a judicial officer since 2000. He resigned in 2008 and since then have been working as an advocate in the Delhi high court .In 2016 ,he is eligible to be appointed as : 1
  - a) District court judge
  - b) High court judge
  - c) both high court and supreme court judge
  - d) Supreme court judge
5. Match the following: 1
  - a) Art 124
  - b) Art 217
  - c) Art 233
  - d) Art 124(4)
  - 1) Appointment of district court judge
  - 2) Appointment of supreme court judges
  - 3) Appointment of high court judges
  - 4) Impeachment procedure
6. ' independence of judiciary is vital for respect of due process of law' Discuss 2
7. Identify the officer from the following hints : 1
  - a) He gives advice to the central government on legal matters
  - b) In enjoys right to audience
  - c) He may also take part in the proceedings of the parliament without right to vote
    - I. Advocate general
    - II. Attorney general
    - III. Solicitor general
    - IV. Additional advocate general
8. Identify and explain the following jurisdictions: (2x3)
  - a) Dispute regarding boundaries between two states
  - b) An appeal to high court's judgment
  - c) A matter being referred by the president for supreme court advice

# PSYCHOLOGY

**DURATION: 3HRS**

**(SHORT QUESTION TYPE I: 3 MARKS)**

**1) Check your understanding of psychological disorders by reading the information on the following cases, and stating the most appropriate diagnosis for each person. Explain the rationale for each of your diagnoses. Some of these cases may not have disorders. In that case, indicate that the person does not have a mood disorder, and indicate why this would be the case.**

- I.** You see Jill (age 24) in the emergency room of a hospital where her parents have brought her for evaluation. They are worried because she is giving away all of her possessions and says she is planning to move to Seattle so she can "save the world." Her parents say that she has hardly been sleeping at all, but she seems very energetic. They say she has appeared to be "in a frenzy" lately. When you interview Jill you notice that she speaks very rapidly. It is hard to get her to be quiet long enough for you to ask questions. She seems agitated, and has difficulty sitting still.
- II.** Morris has been referred to you for psychotherapy following a suicide attempt. When you interview him he is very teary. He speaks slowly and looks down at the ground as he speaks. He reports difficulty in falling asleep and staying asleep for the past month. Morris states that he hasn't had much of an appetite and has lost 15 pounds. He reports that things he used to like just don't seem enjoyable anymore, and he thinks that life is not worth living. Morris doesn't expect things to improve in the future, which is why he tried to kill himself.
- III.** Lenore has been feeling very sad since her husband died 12 days ago. She has eaten very little, and has difficulty sleeping. She is weepy most of the time. Lenore is preoccupied with thoughts of her dead husband and does not want to do much other than thinking about him. She has declined all invitations by friends and spends most of her time alone.
- IV.** Elise is a 35 year old architect. She comes to you in great distress, feeling that she is unable to work, and generally unable to function. She says that she feels tired all the time, to the point of feeling completely exhausted. She says that she cries easily, and almost every day. She is having difficulty sleeping, and has lost 20 pounds in the last 2 months without trying. She says that things have been "real bad" for the last 2 months; she doesn't enjoy doing anything and thinks frequently of suicide. However, she also says that she has never been a very happy person. She says that things rarely go right for her, and she has given up on expecting good things to happen for her.
- V.** Amy, age 38, is a worrier. She is restless, irritable and has difficulty concentrating. She worries that she worries so much and isn't always sure what it is that she is worried about. She can't let her husband or children leave the house without making them call her regularly to reassure her that they are ok. Her husband is growing weary of her fretting. Her children can't understand what all the fuss is about. Their impatience with her only makes her worry more.

- VI.** Hannah, age 55, was in a major car accident 20 years ago during a cross country trip. Ever since, she has been unable to drive on major highways. Although she does drive, she goes to great lengths to travel only on back roads and scenic routes. She is able to go where she wants but it often takes her much longer to get there than it should.
- VII.** Bert is 40 years old and works on an assembly line in a brush factory. He is terribly afraid of being contaminated by germs. He avoids shaking hands with others. He won't eat in the cafeteria. He has trouble leaving the bathroom because he isn't sure he has washed his hands well enough.
- VIII.** Joanne, age 32, is involved with the first man that really counts in her life. As the couple has become more intimate, Joanne has started to have flashbacks about an uncle who touched her sexually when she was only eight years old. She is distressed to find out that she is shutting down feelings about her boyfriend and distancing herself from him. Although she has been sexual with other men, she says she can't stand to let herself be sexual with someone she loves and trusts. She startles easily and reports a general increase in anxiety. She is very angry that she has to deal with the feelings about the incidents with her uncle that happened so long ago. She says that she thought she had gotten beyond all that.
- IX.** A 28-year-old woman is a rising junior executive in her investment company. Her increasing duties require her to make periodic formal presentations to the senior management of the company. However, she becomes intensely anxious at the thought of speaking in public. When she is forced to give a presentation she begins to feel anxious days in advance of the talk and the anxiety increases as the time for the talk approaches. She is concerned that her anxiety will become noticeable during the talk or that she will do something to embarrass herself.
- X.** A 28-year-old woman was walking through her local shopping mall when she began to feel intensely anxious. The anxiety was accompanied by sensations of choking, smothering, and a sudden sense that the people and stores around her were unreal. She began to fear that she was going crazy and the more she worried about this the more anxious she became. A guard, seeing that she was in distress, brought her to the mall office where she was able to lie down. A few minutes later the symptoms began to subside. She went home after leaving the mall but she did not tell her husband what happened. A week later she had a similar attack while she was walking down the street. She was able to reach her house where she lay down until the attack ended. In the following three weeks she had two or more attacks. Between attacks she was constantly worried about having another attack. The patient was finally forced to tell her husband about the problem because she was so fearful of not being able to get help if an attack occurred that she would not leave her house alone or travel on public transportation.
- XI.** A 35-year-old clothing salesman was showing a particularly fussy customer a suit 2 months ago and suddenly began to sweat profusely. His heart started to pound, he felt dizzy, and became fearful that he was about to die. The customer didn't notice his condition and continued to question him about the suit in minute detail. The patient, feeling faint, abruptly left the customer and went to lie down in the back of

the store. The customer became insulted, complained to the manager, and left. When the manager found the patient he was slumped in a chair in the back room trembling. Approximately 10 minutes later the patient's symptoms began to subside. He saw his physician the next day who found no evidence of any medical problems. Two weeks later, he had another similar unexpected attack. Since that time he has worried continuously about having another attack. His friends and colleagues have noticed that he is no longer as spontaneous and outgoing as he had been in the past.

- XII.** A 26 year old man is very concerned about cleanliness and hygiene. He spends a significant amount of time each day washing his hands or showering, especially after touch a toilet seat, doorknob, or any other item he thinks may be dirty or contaminated. The patient explains that he is concerned about becoming infected or sick from touching these objects. He periodically acknowledges that the washing is excessive but explains that he becomes very anxious when he tries to avoid washing and eventually feels compelled to wash even more to make up for the omission.
- XIII.** A 27-year-old, athletic young man has an intense fear of needles. He tries to rationalize his fear by explaining that he is just being cautious and protecting himself from acquired immunodeficiency disease syndrome (AIDS). He realizes that his fear is irrational but is unable to control it. The patient has fainted twice in the past when his blood was drawn during a physical examination. He becomes extremely anxious at the sight of a needle and worries for days before an appointment with his physician or dentist.
- XIV.** A 36-year-old man and his young son were driving through an intersection when another car ran through a red traffic light and struck them. The two were trapped in the car until a fire department rescue team freed them. The patient was bruised but not seriously hurt. His son had a broken leg. The first few days after the accident the patient was preoccupied with arranging care for his son and getting the car repaired. A few days later he began having recurrent distressing thoughts and images of the accident. The memory of his son's screams after the car was struck seemed particularly vivid. The patient became irritable, had difficulty concentrating, and avoided talking about the accident. He went out of his way to avoid driving down the street where the accident occurred. These symptoms lasted for several weeks
- XV.** Jack graduated from high school and got a job working in a video store. After working for about 6 months Jack began to hear voices that told him he was no good. He also began to believe that his boss was planting small video cameras in the returned tapes to catch him making mistakes. Jack became increasingly agitated at work, particularly during busy times, and began "talking strangely" to customers. For example one customer asked for a tape to be reserved and Jack indicated that that tape may not be available because it had "surveillance photos of him that were being reviewed by the CIA". After about a year Jack quit his job one night, yelling at his boss that he couldn't take the constant abuse of being watched by all the TV screens in the store and even in his own home.

- 2) Sushant has not been able to get peaceful sleep, has impaired concentration and emotional numbing. Which disorder is he suffering from? Explain in detail.
- 3) “Personality is described as an adaptation of individual or groups to the demands of culture” Discuss.

**(SHORT QUESTION TYPE II: 4 MARKS)**

- 4) Due to the tragedies in her life Anjali finds herself quite often asking questions like what is my aim in life. What is the purpose of my life? etc.  
She consults a therapist as she finds her present life meaningless and inauthentic. How will the Humanistic-Existential Therapist alleviate her distress and help her to achieve a sense of wholeness?
- 5) Describe a therapeutic system that encourages the client to seek personal growth and actualise their potential
- 6) Differentiate between the various approaches given to describe abnormality..
- 7) Differentiate between Beck’s cognitive therapy and Ellis’s cognitive therapy.
- 8) A soldier is not able to walk after miraculous escape in terrorist attack in Mumbai. Physicians fail to find any medical cause for this inability to walk. Identify the disorder and give the other symptoms.
- 9) “Rupa is a 16 yr old girl who has a persistent belief that she has a serious illness, despite medical reassurance and failure to develop the disease. But she continuously worries about her disease.’
  - I. which type of disorder is she suffering from?
  - II. Explain the other disorders of the same category?
- 10) “Rahul is a 27 yr old young adult working in an M.N.C. he did not reach back home after office. After 4 yrs he suddenly came back home, but did not remember the past 4 yrs of his life. It seemed as if he suddenly woke up”
  - I. Which type of disorder is Rahul suffering from?
  - II. What are the other disorders of the same category?

**Video link:- <https://youtu.be/3KBnVyyiuDI>**



# CH 11

## INDIA'S FOREIGN POLICY

### INTERNATIONAL CONTEXT

1. What were the main features of the international situation at the time of India's independence in 1947?
2. How did India decide to conduct its foreign relations and with what aim?
3. Indian foreign policy is affected by:
  - a. international factors
  - b. domestic factors
  - c. domestic and international factors
  - d. cultural factors
4. "Both domestic and international environment influence the foreign policy of a nation" Do you agree?
5. What led to a limited interaction between India and other countries after
6. independence?
7. Which aim of Indian foreign policy find its place in the directive principles of state policy?
8. What were the twin challenges most new nations were trying to come to terms with?
9. In which context India started participating in the world affairs as an independent nation state?
10. Mention the Article of Indian constitution to promote international peace and security.
11. State the directive principles of state policy relating to foreign affairs.

OR

Mention the Directive Principles of State Policy for the promotion of international peace and security.

12. Read the following extract and answer the following questions:

What does independence consist of? It consists fundamentally and basically of foreign relations. That is the test of independence. All else is local autonomy.

Once foreign relations go out of your hands into the charge of somebody else, to that extent and in that measure you are not independent."

- a) Who is the speaker of these lines?
  - b) What is the speaker trying to say?
13. Do you agree with the statement that "the foreign policy of independent India has pursued the dream of a peaceful world?" Support your answer with any three suitable arguments.
14. "The conduct of foreign affairs is an outcome of a two-way interaction between domestic compulsions and prevailing international climate".
15. Do you agree with the statement that "Indian foreign policy of independent India has pursued the dream of a peaceful world"
16. How far has India been successful in conducting foreign policy peacefully and avoiding international conflicts? Explain with help of example.

## THE POLICY OF NON- ALIGNMENT

1. Why did India not join any of the camps?
2. "The Indian national movement was not an isolated process". Explain.
3. Who formed the Indian National Army?
4. Take one example from India's external relations in the 1960s.
5. What is NAM?
6. India's independence coincided with the beginning of the ----- era.
7. What were the various changes taking place when India was attaining
8. independence?
9. Suppose there had been no cold war, how would that situation have affected
10. Indian foreign policy?

**TOPIC: MYSQL REVISION TOUR AND MORE ON SQL**

**Q1. Define the terms:**

- (i) Database Abstraction
- (ii) Data inconsistency
- (iii) Conceptual level of database implementation/abstraction
- (iv) Primary Key
- (v) Candidate Key
- (vi) Relational Algebra
- (vii) Domain

**Q2. Answer the following questions:**

1. Differentiate between DDL and DML?
2. What is a constraint?
3. What are single row functions?
4. Compare CHAR and VARCHAR data types.
5. What are the differences between DELETE and DROP commands of SQL?
6. What do you understand by MySQL Client?
7. Differentiate between WHERE and HAVING clause.
8. The Pincode column of table 'Post' is given below-

100001
1200012
1300013
1600017
1800018

**9. Find the output**

SELECT Pincode from Post where Pincode LIKE " %1" ;

SELECT Pincode from Post where Pincode LIKE " 0%" ;

10. A table "Animals" in a database has 3 columns and 10 records. What is the degree and cardinality of this table?
11. What is the difference between commit and rollback command.
12. Which keyword is used to remove redundant data from a relation.
13. What is difference between curdate() and date() functions?
14. Write SQL query to create a table 'Inventory' with the following structure:

Field	Type	Constraint
MaterialId	Integer	Primary key
Material	Varchar(50)	NOT NULL
Category	Char	DEFAULT E
DatePurchase	Date	

**Q15. Observe the following table and answer the parts (i) and(ii) accordingly**

**Table:Product**

Pno	Name	Qty	PurchaseDate
101	Pen	102	12-12-2011
102	Pencil	201	21-02-2013
103	Eraser	90	09-08-2010
109	Sharpener	90	31-08-2012
113	Clips	900	12-12-2011

- (i) Write the names of most appropriate columns, which can be considered as candidate keys.
- (ii) **What is the degree and cardinality of the above table?**



**CS**  
**TOPIC: SQL**

**Q1. Consider the following tables GAMES and PLAYER. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii).**

**Table:GAMES**

GCode	GameName	Number	PrizeMoney	ScheduleDate
101	Carom Board	2	5000	23-Jan-2004
102	Badminton	2	12000	12-Dec-2003
103	Table Tennis	4	8000	14-Feb-2004
105	Chess	2	9000	01-Jan-2004
108	Lawn Tennis	4	25000	19-Mar-2004

**Table: PLAYER**

PCode	Name	Gcode
1	Nabi Ahmad	101
2	Ravi Sahai	108
3	Jatin	101
4	Nazneen	103

- (i) To display the name of all Games with their Gcodes.
- (ii) To display details of those games which are having PrizeMoney more than 7000.
- (iii) To display the content of the GAMES table in ascending order of ScheduleDate.
- (iv) To display sum of PrizeMoney for each of the Number of participation groupings (as shown in column Number 2 or 4)
- (v) SELECT COUNT(DISTINCT Number) FROM GAMES;
- (vi) SELECT MAX(ScheduleDate),MIN(ScheduleDate) FROM GAMES;
- (vii) SELECT SUM(PrizeMoney) FROM GAMES;
- (viii) SELECT DISTINCT Gcode FROM PLAYER;

**2. Write SQL Command for (a) to (e) and output of (f)**

S.NO	NAME	STIPEND	SUBJECT	AVERAGE	DIV
1	KARAN	400	PHYSICS	68	I
2	DIWAKAR	450	COMP Sc	68	I
3	DIVYA	300	CHEMISTRY	62	I
4	REKHA	350	PHYSICS	63	I
5	ARJUN	500	MATHS	70	I
6	SABINA	400	CHEMISTRY	55	II
7	JOHN	250	PHYSICS	64	I
8	ROBERT	450	MATHS	68	I
9	RUBINA	500	COMP Sc	62	I
10	VIKAS	400	MATHS	57	II

List the names of those students who have obtained DIV I sorted by NAME.

- a. Display a report, listing NAME, STIPEND, SUBJECT and amount of stipend received in a year assuming that the STIPEND is paid every month.
- b. To count the number of students who are either PHYSICS or COMPUTER SC graduates.
- c. To insert a new row in the GRADUATE table: 11,"KAJOL", 300, "computer sc", 75, 1
- d. Add a new column GRADE of character type.



3. Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii), which are based on the tables.

**TRAINER**

TID	TNAME	CITY	HIREDATE	SALARY
101	SUNAINA	MUMBAI	1998-10-15	90000
102	ANAMIKA	DELHI	1994-12-24	80000
103	DEEPTI	CHANDIGARG	2001-12-21	82000
104	MEENAKSHI	DELHI	2002-12-25	78000
105	RICHA	MUMBAI	1996-01-12	95000
106	MANIPRABHA	CHENNAI	2001-12-12	69000

**COURSE**

CID	CNAME	FEES	STARTDATE	TID
C201	AGDCA	12000	2018-07-02	101
C202	ADCA	15000	2018-07-15	103
C203	DCA	10000	2018-10-01	102
C204	DDTP	9000	2018-09-15	104
C205	DHN	20000	2018-08-01	101
C206	O LEVEL	18000	2018-07-25	105

Display the Trainer Name, City & Salary in descending order of their Hiredate.

- (i) To display the TNAME and CITY of Trainer who joined the Institute in the month of December 2001.
- (ii) To display TNAME, HIREDATE, CNAME, STARTDATE from tables TRAINER and COURSE of all those courses whose FEES is less than or equal to 10000.
- (iii) To display number of Trainers from each city.
- (iv) SELECT TID, TNAME, FROM TRAINER WHERE CITY NOT IN('DELHI', 'MUMBAI');
- (v) SELECT DISTINCT TID FROM COURSE;
- (vi) SELECT TID, COUNT(\*), MIN(FEES) FROM COURSE GROUP BY TID HAVING COUNT(\*)>1;
- (vii) SELECT COUNT(\*), SUM(FEES) FROM COURSE WHERE STARTDATE<'2018-09-15';

**Answer the following questions :**

Differentiate between DDL and DML?

What is a constraint?

What are single row functions ?

Compare CHAR and VARCHAR data types.

What are the differences between DELETE and DROP commands of SQL?

What do you understand by MySQL Client?

Differentiate between WHERE and HAVING clause.

The Pincode column of table 'Post' is given below-

100001
1200012
1300013
1600017
1800018

- (i) To display the name of all Games with their Gcodes.
- (ii) To display details of those games which are having PrizeMoney more than 7000.
- (iii) To display the content of the GAMES table in ascending order of ScheduleDate.
- (iv) To display sum of PrizeMoney for each of the Number of participation groupings (as shown in column Number 2 or 4)
- (v) SELECT COUNT(DISTINCT Number) FROM GAMES;
- (vi) SELECT MAX(ScheduleDate), MIN(ScheduleDate) FROM GAMES;
- (vii) SELECT SUM(PrizeMoney) FROM GAMES;
- (viii) SELECT DISTINCT Gcode FROM PLAYER;

**Q2. Consider the following tables FACULTY and COURSES. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (vi).**

**FACULTY**

F_ID	Fname	Lname	Hire_date	Salary
102	Amit	Mishra	12-10-1998	12000
103	Nitin	Vyas	24-12-1994	8000
104	Rakshit	Soni	18-5-2001	14000
105	Rashmi	Malhotra	11-9-2004	11000
106	Sulekha	Srivastava	5-6-2006	10000

**COURSES**

C_ID	F_ID	Cname	Fees
C21	102	Grid Computing	40000
C22	106	System Design	16000
C23	104	Computer Security	8000
C24	106	Human Biology	15000
C25	102	Computer Network	20000
C26	105	Visual Basic	6000

- i) To display details of those Faculties whose salary is greater than 12000.
- ii) To display the details of courses whose fees is in the range of 15000 to 50000 (both values included).
- iii) To increase the fees of all courses by 500 of "System Design" Course.
- iv) To display details of those courses which are taught by 'Sulekha' in descending order of courses ?
- v) Select COUNT(DISTINCT F\_ID) from COURSES;
- vi) Select Fname,Cname from FACULTY,COURSE where COURSE.F\_ID=FACULTY.F.ID;

**Q-3 Write SQL Command for (a) to (e) and output of (f)**

**TABLE : GRADUATE**

S.NO	NAME	STIPEND	SUBJECT	AVERAGE	DIV
1	KARAN	400	PHYSICS	68	I
2	DIWAKAR	450	COMP Sc	68	I
3	DIVYA	300	CHEMISTRY	62	I
4	REKHA	350	PHYSICS	63	I
5	ARJUN	500	MATHS	70	I
6	SABINA	400	CHEMISTRY	55	II
7	JOHN	250	PHYSICS	64	I
8	ROBERT	450	MATHS	68	I
9	RUBINA	500	COMP Sc	62	I
10	VIKAS	400	MATHS	57	II

- a. List the names of those students who have obtained DIV I sorted by NAME.
- b. Display a report, listing NAME, STIPEND, SUBJECT and amount of stipend received in a year assuming that the STIPEND is paid every month.
- c. To count the number of students who are either PHYSICS or COMPUTER SC graduates.
- d. To insert a new row in the GRADUATE table: 11,"KAJOL", 300, "computer sc", 75, 1
- e. Add a new column GRADE of character type.

- f. Give the output of following sql statement based on table GRADUATE:
- Select MIN(AVERAGE) from GRADUATE where SUBJECT="PHYSICS";
  - Select SUM(STIPEND) from GRADUATE WHERE div=2;
  - Select AVG(STIPEND) from GRADUATE where AVERAGE>=65;
  - Select COUNT(distinct SUBJECT) from GRADUATE;

**Q-4 Consider the following tables Sender and Recipient. Write SQL commands for the statements (i) to (iv) and give the outputs for SQL queries (v) to (viii).**

**Sender**

SenderID	SenderName	SenderAddress	Sendercity
ND01	R Jain	2, ABC Appls	New Delhi
MU02	H Sinha	12 Newtown	Mumbai
MU15	S Jha	27/A, Park Street	Mumbai
ND50	T Prasad	122-K,SDA	New Delhi

**Recipients**

RecID	SenderID	RecName	RecAddress	recCity
KO05	ND01	R Bajpayee	5, Central Avenue	Kolkata
ND08	MU02	S Mahajan	116, A-Vihar	New Delhi
MU19	ND01	H Singh	2A, Andheri East	Mumbai
MU32	MU15	P K Swamy	B5, C S Terminals	Mumbai
ND48	ND50	S Tripathi	13, BI D Mayur Vihar	New delhi

- To display the names of all Senders from Mumbai
- To display the RecID, Sendername, SenderAddress, RecName, RecAddress for every Recipient
- To display Recipient details in ascending order of RecName
- To display number of Recipients from each city
- SELECT DISTINCT SenderCity from Sender;
- SELECT A.SenderName, B.RecName From Sender A, Recipient B  
Where A.SenderID = B.SenderID AND B.RecCity ='Mumbai';
- SELECT RecName, RecAddress From Recipient  
Where RecCity NOT IN ('Mumbai', 'Kolkata');
- SELECT RecID, RecName FROM Recipient  
Where SenderID='MU02' or SenderID='ND50';

**Q-5 Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii), which are based on the tables.**

**Table : VEHICLE**

CODE	VTYPE	PERKM
101	VOLVO BUS	160
102	AC DELUXE BUS	150
103	ORDINARY BUS	90
105	SUV	40
104	CAR	20

Note : PERKM is Freight Charges per kilometer , VTYPE is Vehicle Type

**Table : TRAVEL**

NO	NAME	TDATE	KM	CODE	NOP
101	Janish Kin	2015-11-13	200	101	32
103	Vedika Sahai	2016-04-21	100	103	45
105	Tarun Ram	2016-03-23	350	102	42
102	John Fen	2016-02-13	90	102	40
107	Ahmed Khan	2015-01-10	75	104	2
104	Raveena	2016-05-28	80	105	4

- NO is Traveller Number
- KM is Kilometer travelled

- NOP is number of travellers travelled in vehicle
  - TDATE is Travel Date
- (i) To display NO, NAME, TDATE from the table TRAVEL in descending order of NO.
  - (ii) To display the NAME of all the travellers from the table TRAVEL who are travelling by vehicle with code 101 or 102.
  - (iii) To display the NO and NAME of those travellers from the table TRAVEL who travelled between '2015-12-31' and '2015-04-01'.
  - (iv) To display all the details from table TRAVEL for the travellers, who have travelled distance more than 100 KM in ascending order of NOP.
  - (v) Modify the definition of column VTYPE. Increase its size to 20.
  - (vi) SELECT COUNT (\*), CODE FROM TRAVEL GROUP BY CODE HAVING COUNT(\*)>1;
  - (vii) SELECT DISTINCT CODE FROM TRAVEL;
  - (viii) SELECT A.CODE, NAME, VTYPE FROM TRAVEL A, VEHICLE B WHERE A.CODE=B.CODE AND KM<90;

**Q-6 Consider the following relations MobileMaster & MobileStock:-**

**MobileMaster**

M_Id	M_Company	M_Name	M_Price	M_Mf_Date
MB001	Samsung	Galaxy	4500	2013-02-12
MB003	Nokia	N1100	2250	2011-04-15
MB004	Micromax	Unite3	4500	2016-10-17
MB005	Sony	XperiaM	7500	2017-11-20
MB006	Oppo	SelfieEx	8500	2010-08-21

**MobileStock**

S_Id	M_Id	M_Qty	M_Supplier
S001	MB004	450	New Vision
S002	MB003	250	Praveen Gallery
S003	MB001	300	Classic Mobile Store
S004	MB006	150	A-one Mobiles
S005	MB003	150	The Mobile
S006	MB006	50	Mobile Centre

Write the SQL query for questions from (i) to (iv) & write the output of SQL command for questions from (v) to (viii) given below:-

- (ii) Display the Mobile company, Mobile name & price in descending order of their manufacturing date.
- (iii) List the details of mobile whose name starts with „S“.
- (iv) Display the Mobile supplier & quantity of all mobiles except „MB003“.
- (v) To display the name of mobile company having price between 3000 & 5000.
- (vi) SELECT M\_Id, SUM(M\_Qty) FROM MobileStock GROUP BY M\_Id;
- (vii) SELECT MAX(M\_Mf\_Date), MIN(M\_Mf\_Date) FROM MobileMaster;
- (viii) SELECT M1.M\_Id, M1.M\_Name, M2.M\_Qty, M2.M\_Supplier FROM MobileMaster M1, MobileStock M2 WHERE M1.M\_Id=M2.M\_Id AND M2.M\_Qty>=300;
- (ix) SELECT AVG(M\_Price) FROM MobileMaster;

**Q-10 Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to(viii), which are based on the tables.**

**TRAINER**

TID	TNAME	CITY	HIREDATE	SALARY
101	SUNAINA	MUMBAI	1998-10-15	90000
102	ANAMIKA	DELHI	1994-12-24	80000
103	DEEPTI	CHANDIGARG	2001-12-21	82000
104	MEENAKSHI	DELHI	2002-12-25	78000
105	RICHA	MUMBAI	1996-01-12	95000
106	MANIPRABHA	CHENNAI	2001-12-12	69000



### COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	AGDCA	12000	2018-07-02	101
C202	ADCA	15000	2018-07-15	103
C203	DCA	10000	2018-10-01	102
C204	DDTP	9000	2018-09-15	104
C205	DHN	20000	2018-08-01	101
C206	O LEVEL	18000	2018-07-25	105

- (i) Display the Trainer Name, City & Salary in descending order of their Hiredate.
- (ii) To display the TNAME and CITY of Trainer who joined the Institute in the month of December 2001.
- (iii) To display TNAME, HIREDATE, CNAME, STARTDATE from tables TRAINER and COURSE of all those courses whose FEES is less than or equal to 10000.
- (iv) To display number of Trainers from each city.
- (v) SELECT TID, TNAME, FROM TRAINER WHERE CITY NOT IN('DELHI', 'MUMBAI');
- (vi) SELECT DISTINCT TID FROM COURSE;
- (vii) SELECT TID, COUNT(\*), MIN(FEES) FROM COURSE GROUP BY TID HAVING COUNT(\*)>1;
- (viii) SELECT COUNT(\*), SUM(FEES) FROM COURSE WHERE STARTDATE< '2018-09-15';



## YOGA

Q-1 what is CPR?

Q-2 Define First aid?

Q-3 explain stress in explain?

## PHYSICAL EDUCATION

Q Name any five committees and explain any two out of them.

Q Draw a fixture of 15 teams in knock out basis where 2 teams will be seeded.

Q why planning is important in the field of physical education and sports? Explain

## HINDI

1 दूसरा देवदास पाठ में गंगा पुत्रों के जीवन तथा जीविका पर कैसे प्रकाश डाला गया है स्पष्ट कीजिए?

2. दूसरा देवदास का नायक संभव गंगा घाट पर किस हेतु गया था और वहां जाकर उसे क्या मिला ? अपने विचार प्रस्तुत कीजिए

3.संभोग की सूक्ष्म प्रेम विहार मने स्थिति ने उसकी प्रेमिका के हृदय को भी उद्वेलित कर मिलने का सहयोग उत्पन्न किया दूसरा देवदास कहानी के आधार पर इस कथन की सत्यता सिद्ध कीजिए।

4. प्रेम भाव का स्पष्टीकरण करते हुए बताइए कि लेखिका ने विभिन्न घटनाओं के माध्यम से पवित्र और स्थाई प्रेम के स्वरूप की व्यंजना की है।

5. पुजारी ने लड़की के हम को युगल अर्थ में लेकर क्या आशीर्वाद दिया और पुजारी द्वारा आशीर्वाद देने के बाद लड़के और लड़की के व्यवहार में अटपटा पन क्यों आया?

## FMM

### **Part A: Employability Skills**

**Answer any 4 questions out of the given 6 questions of 1 mark each**

**Q1.** \_\_\_\_\_ is a process of developing a business plan, launching and running a business using innovation to meet customer needs and to make a profit.

a) Entrepreneurship                      b) Profession                      c) Trade                      d) Occupation

**Q2.** Ms. Maya teaches history in XYZ Public School. She was an experienced teacher and has her notes and question bank made on the Microsoft word. Her school asked her to prepare two sets of question papers on urgent basis which she need to submit in a day. She thought of copying and pasting the questions from her question bank. Which shortcut key should she press to copy the text?

a) CTRL+X                      b) CTRL+Z                      c) CTRL+V                      d) CTRL+C

**Q3.** \_\_\_\_\_ is defined as the drive required to engage in goal oriented behavior.

a) Motivation                      b) Self-realization                      c) Communication                      d) None of the above

**Q4.** Natasha is not keeping well these days. She is feeling extremely nervous and worried because she believes that other people do not like her or are trying to harm her. She visited a psychiatrist. After having an interactive session with Natasha what was the diagnosis made by her psychiatrist?

a) Schizophrenia                      b) Bipolar disease  
c) Paranoid Personality                      d) Dependent personality disorder

**Q5.** The key to environmental protection is to prevent the degradation of the \_\_\_\_\_ which is important for all living creatures.

- a) Natural environment      b) Greenery      c) Green Tourism      d) None of the above

**Q6.** Hearing is \_\_\_\_\_.

- a) Active      b) Passive      c) Both (a) and (b)      d) None of the above

**Answer any 3 questions out of the given 5 questions of 2 marks each.**

**Q7.** Hearing is \_\_\_\_\_.

- a) Active      b) Passive      c) Both (a) and (b)      d) None of the above

**Q8.** Why Self-Motivation is important?

**Q9.** Provide list of any four green jobs in building and construction sector.

**Q10.** What are the key problems an Entrepreneur may face while running a business?

**Q11.** Write two advantages of active listening.

### **Part B: Subject Skills**

**Answer any 10 questions out of the given 12 questions of 1 mark each:**

**Q1.** MTM & VAR margins are calculated on \_\_\_\_\_ basis.

- a) Daily.  
b) Monthly.  
c) Weekly.  
d) Quarterly.

**Q2.** Order cancellation functionality can be performed only for orders which have not been \_\_\_\_\_ or \_\_\_\_\_.

- a) Traded, Auctioned.  
b) Fully, partially.  
c) Auctioned, negotiated.  
d) Placed, initiated.

**Q3.** Minimum net worth requirement for a member of NSE to trade in Cash Market & Future & Option segment is \_\_\_\_\_

- a) 100 Lakhs.  
b) 125 Lakhs.  
c) 50 Lakhs.  
d) 75 Lakhs.

**Q4.** The status of a security is indicated in the screen market by price. 'P' indicates that the security is in the \_\_\_\_\_ & 'S' indicates that the security is \_\_\_\_\_.

- a) Pre-open phase, suspended.  
b) Purchased, sold.  
c) Profit, special.  
d) Purchased, special term order.



**Q5.** Clearing is offered by NSCCL to its clearing members the facility of funds settlement through how many clearing banks.

- a) 15
- b) 8
- c) 16
- d) 13

**Q6.** At whose workstation are the reports downloaded once the market closes?

- a) Broker.
- b) Dealer.
- c) Corporate manager.
- d) Any of the above.

**Q7.** In case of 20% movement of the index, trading shall be halted for the reminder of the

- \_\_\_\_\_
- a) week
  - b) day
  - c) month
  - d) year

**Q8.** The first ticker window, by default, displays all the \_\_\_\_\_ traded in the future & option segment.

- a) Derivatives contract.
- b) Nifty securities.
- c) Mid cap Securities.
- d) Nifty junior stocks.

**Q9.** Which account is used by the clearing members to interface with his client?

- a) Pool Account
- b) Delivery Account
- c) Receipt Account
- d) All the above

**Q10.** Neat system supports an order driven market, wherein orders match on the basis of \_\_\_\_\_ & \_\_\_\_\_ priority.

- a) Size, bid.
- b) Time, price.
- c) Quality, quantity.
- d) Bid, lot size.

**Q11.** Stop loss orders are released into the market when the last traded price for that security in the normal market reaches or surpasses the .....

- a) market price
- b) trigger price
- c) limit price
- d) exchange price

**Q13.** The status of a security is indicated in the screen market by price. 'P' indicates that the security is in the \_\_\_\_\_ & 'S' indicates that the security is\_\_\_\_\_.

- a) Pre-open phase, suspended.
- b) Purchased, sold.
- c) Profit, special.
- d) Purchased, special term order.

**Q12.** Which act in 1996 was passed to provide free transferability of securities with speed and accuracy?

- a) Depositories Act
- b) SEBI Act
- c) SCRA
- d) Companies Act