

EAST POINT SCHOOL ASSIGNMENT

COMMERCE DEPARTMENT

- ECONOMICS <https://youtu.be/1mYDNPkvyAw>

SCIENCE DEPARTMENT

– CHEMISTRY <https://youtu.be/y7AJAwDpK8Q>

– PHYSICS https://www.youtube.com/watch?v=yKXjaQTHbyI&ab_channel=Doubtnut

HUMANITIES DEPARTMENT

- PSYCHOLOGY <https://youtu.be/3XLSaC4w6HA>

- GEOGRAPHY <https://youtu.be/t8q8J5pdiGY>

– HISTORY <https://youtu.be/aHdnHySgBo>

ENGLISH <https://www.youtube.com/watch?v=HwLujpVeUBU>

MATHEMATICS https://youtu.be/T7I_C_1L75I

OPTIONAL-II

– HINDI <https://youtu.be/c2uQkxxbbmQ>

ENGLISH

CHAPTER-1 THE LAST LESSON

LONG QUESTIONS AND HOTS:

Q-1 What different moral values of M. Hamel's character are highlighted in his last lesson?

Q-2 How did procrastination (act of putting something off till some future time) in learning French people dearly?

How can the vice procrastination be overcome?

Q-3 Our native language is part of our culture and we are proud of it. How does the presence of village elders in the classroom and M.Hamel's last lesson show their love for French? (All India 2016)

Q-4 How did the order from Berlin change the situation in the school?

SHORT QUESTIONS

Question 1.

How was the scene in the school, on the morning of the last lesson, different from that on other days?
OR

How was M. Hamel's class different the day Franz went late to school?

Question 2.

How does M. Hamel pay a tribute to the French language?

OR

What did M. Hamel tell them about the French language? What did he ask them to do and why?

Question 3.

One order from Berlin changed the scenario of the school. Comment.

Question 4.

“What a thunderclap these words were to me!” Which were the words that shocked and surprised little Franz?

Question 5.

Who did M. Hamel blame for the neglect of learning on the part of boys like Franz?

Question 6.

“This is your last French lesson.” How did Franz react to this declaration of M. Hamel?

OR

How did Franz react to the declaration that it was their last French lesson?

Question 7.

How did M. Hamel say farewell to his students and the people of the town?

MATHEMATICS

Topic:- Matrices

1. If a matrix has 8 elements, what are the possible orders it can have. [1]
 2. Identity matrix of orders n denoted by. [1]
 3. Define square matrix [1]
 4. The no. of all possible metrics of order 3×3 with each entry 0 or 1 is [1]
 5. $A = \begin{bmatrix} 1 & 4 & 7 \\ 2 & 5 & 8 \\ 3 & 6 & 9 \end{bmatrix}$ Write (i) a_{33} , a_{12} (ii) what is order [1]
 6. Find x and y if $x + y = \begin{bmatrix} 5 & 2 \\ 0 & 9 \end{bmatrix}$ and $x - y = \begin{bmatrix} 3 & 6 \\ 0 & -1 \end{bmatrix}$ [4]
 7. $f(x) = \begin{bmatrix} \cos x & -\sin x & 0 \\ \sin x & \cos x & 0 \\ 0 & 0 & 1 \end{bmatrix}$ Show that $f(x) \cdot f(y) = f(x+y)$ [4]
 8. If $A = \begin{bmatrix} 3 & -2 \\ 4 & -2 \end{bmatrix}$ $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ Find K. So that $A^2 = KA - 2I$ [4]
 9. $A = \begin{bmatrix} -2 \\ 4 \\ 5 \end{bmatrix}$ $B = [1 \ 3 \ -6]$ Prove $(AB)' = B' A'$ [4]
 10. $A = \begin{bmatrix} 0 & -\tan \frac{\alpha}{2} \\ \tan \frac{\alpha}{2} & 0 \end{bmatrix}$, Prove $I + A = (I - A) \begin{bmatrix} \cos \alpha & -\sin \alpha \\ \sin \alpha & \cos \alpha \end{bmatrix}$ [4]
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ACCOUNTANCY
CASH FLOW STATEMENT

(1) Following are the Balance Sheets of Wisben Ltd. as on 31st March 2012 and 2011:

| Particulars | Note No. | 2012 Rs | 2011 Rs |
|--|-------------|------------------|-----------------|
| I. Equity & Liabilities: | | | |
| (1) Shareholders Funds | | | |
| (a) Share capital | | 7,00,000 | 6,00,000 |
| (b) Reserves and Surplus (Profit & Loss Balance) | | 2,00,000 | 1,10,000 |
| (2) Non-Current Liabilities | | | |
| Long term borrowings | | 3,00,000 | 2,00,000 |
| (3) Current Liabilities | | | |
| Trade Payables | | 30,000 | 25,000 |
| Total | | 12,30,000 | 9,35,000 |
| II. Assets: | | | |
| (1) Non-Current Assets | | | |
| (a) Fixed assets | | | |
| Tangible Assets | | 11,00,000 | 8,00,000 |
| (2) Current Assets | | | |
| (a) Inventories | | 70,000 | 60,000 |
| (b) Trade Receivables | | 32,000 | 40,000 |
| (c) Cash and Cash Equivalents | | 28,000 | 35,000 |
| Total | | 12,30,000 | 9,35,000 |

Adjustments:

During the year a piece of machinery of the book value of Rs 80,000 was sold for Rs 65,000. Depreciation provided on tangible assets during the year amounted to Rs 2,00,000.

Prepare a Cash Flow Statement.

Answer:

Cash flow from Operating Activities Rs. 3,08,000

Cash used in Investing Activities (5,15,000)

Cash Flow from Financing Activities Rs. 2,00,000

(2) Following are the Balance Sheets of Krishtec Ltd. as on 31st March 2012 and 2011:

| Particulars | Note | 2012 | 2011 |
|--|------|------------------|------------------|
| | No. | Rs | Rs |
| I. Equity & Liabilities: | | | |
| (1) Shareholders Funds | | | |
| (a) Share capital | | 12,00,000 | 8,00,000 |
| (b) Reserves and Surplus (Profit & Loss Balance) | | 3,50,000 | 4,00,000 |
| (2) Non-Current Liabilities | | | |
| Long term borrowings | | 4,40,000 | 3,50,000 |
| (3) Current Liabilities | | | |
| Trade Payables | | 60,000 | 50,000 |
| Total | | 20,50,000 | 16,00,000 |
| II. Assets: | | | |
| (1) Non-Current Assets | | | |
| (a) Fixed assets | | | |
| Tangible Assets | | 12,00,000 | 9,00,000 |
| (2) Current Assets | | | |
| (a) Inventories | | 2,00,000 | 1,00,000 |
| (b) Trade Receivables | | 3,10,000 | 2,30,000 |
| (c) Cash and Cash Equivalents | | 3,40,000 | 3,70,000 |
| Total | | 20,50,000 | 16,00,000 |

Adjustments:

- (a) The company paid interest Rs. 36,000 on its long term borrowings.
- (b) Depreciation charged on tangible fixed assets was Rs. 1,20,000.

Prepare a Cash Flow Statement.

Answer:

Cash used in Operating Activities Rs. (64,000)

Cash used in Investing Activities (4,20,000)

Cash Flow from Financing Activities Rs. 4,54,000

(3) Prepare a Cash Flow Statement on the basis of the information given in the Balance Sheet of Vinod Ltd as on 31.3.2012 and 31.3.2011:

| Particulars | Note | 2012 | 2011 |
|--|-------------|-----------------|-----------------|
| | No. | Rs | Rs |
| I. Equity & Liabilities: | | | |
| (1) Shareholders Funds | | | |
| (a) Share capital | | 70,000 | 60,000 |
| (b) Reserves and Surplus (Profit & Loss Balance) | 1 | 44,000 | 8,000 |
| (2) Non-Current Liabilities | | | |
| Long term borrowings | 2 | 50,000 | 42,000 |
| (3) Current Liabilities | | | |
| Trade Payables | | 25,000 | 17,000 |
| Total | | 1,89,000 | 1,27,000 |
| II. Assets: | | | |
| (1) Non-Current Assets | | | |
| (a) Fixed assets | | | |
| (i) Tangible Assets | | 82,000 | 64,000 |
| (ii) Intangible Assets | 3 | 16,000 | 20,000 |
| (b) Non-current investments | | 16,000 | 6,000 |
| (2) Current Assets | | | |
| (a) Current Investments (Marketable) | | 18,000 | 20,000 |
| (b) Inventories | | 49,000 | 12,000 |
| (c) Cash and Cash Equivalents | | 8,000 | 5,000 |
| Total | | 1,89,000 | 1,27,000 |

Notes to Accounts:

| | 2012 | 2011 |
|---------------------------------------|-------------|-------------|
| 1 Reserves and Surplus | | |
| General Reserve | 30,000 | 20,000 |
| Surplus (Balance in Statement of P/L) | 14,000 | (12,000) |
| 2. Long Term Borrowings | | |
| 10% Debentures | 50,000 | 42,000 |
| 3. Intangible Assets | | |
| Goodwill | 16,000 | 20,000 |

Additional information:

(i) Depreciation provided on Tangible Assets (Machinery) during the year Rs.8,000.

(ii) Interest paid on Debentures Rs.4,200

(iii) Interest received on Non-current Investment Rs.600

Answer:

Cash flow from Operating Activities Rs.22,600

Cash used in Investing Activities (35,400)

Cash Flow from Financing Activities Rs. 13,800

(4) Prepare a Cash Flow Statement on the basis of the information given in the Balance Sheet of Vinod Limited as at 31.3.2012 and 2011:

| Particulars | Note | 2012 | 2011 |
|-------------------------------------|------|------------------|------------------|
| | No. | Rs | Rs |
| I. Equity & Liabilities: | | | |
| (1) Shareholders Funds | | | |
| (a) Share capital | | 14,00,000 | 10,00,000 |
| (b) Reserves and Surplus | | 5,00,000 | 4,00,000 |
| (2) Non-Current Liabilities | | | |
| Long term borrowings (9% deposits) | | 6,00,000 | 2,00,000 |
| (3) Current Liabilities | | | |
| Short Term Provisions | | | |
| | 1 | 80,000 | 60,000 |
| Total | | 25,80,000 | 16,60,000 |

| | | | |
|-------------------------------|---|------------------|------------------|
| II. Assets: | | | |
| (1) Non-Current Assets | | | |
| (a) Fixed assets | | | |
| (i) Tangible Assets | 2 | 16,00,000 | 9,00,000 |
| (ii) Intangible Assets | 3 | 1,40,000 | 2,00,000 |
| (2) Current Assets | | | |
| (a) Inventories | | 2,50,000 | 2,00,000 |
| (b) Trade Receivable | | 5,00,000 | 3,00,000 |
| (c) Cash and Cash Equivalents | | 90,000 | 60,000 |
| Total | | 25,80,000 | 16,60,000 |
| | | | |

Notes to Accounts

| | 2012 | 2011 |
|---------------------------------|-----------|----------|
| 1 Short Term Provisions | | |
| Provision for Taxes | 80,000 | 60,000 |
| 2. Tangible Fixed Assets | | |
| Machinery | 16,00,000 | 9,00,000 |
| 3. Intangible Assets | | |
| Goodwill | 1,40,000 | 2,00,000 |

Additional information:

(i) Depreciation provided on Tangible Assets (Machinery) during the year Rs. 2,00,000.

(ii) Interest paid on Deposits (Long term borrowings) Rs.45,000

(iii) The net profit earned during the year before tax Rs.1,00,000

Answer:

Cash flow from Operating Activities Rs.1,75,000

Cash used in Investing Activities (9,00,000)

Cash Flow from Financing Activities Rs. 7,55,000

(5). From the following Balance sheets of Vijaya Ltd. as on 31.3.2012 and 31.3.2011. Prepare Cash Flow Statement:

| Particulars | Note | 2012 | 2011 |
|-------------------------------------|------|-----------------|---------------|
| | No. | Rs | Rs |
| I. Equity & Liabilities: | | | |
| (1) Shareholders Funds | | | |
| (a) Share capital | | 65,000 | 45,000 |
| (b) Reserves and Surplus | 1 | 42,500 | 25,000 |
| (2) Current Liabilities | | | |
| Trade Payables | | | |
| | | 11,000 | 8,700 |
| Total | | 1,18,500 | 78,700 |
| II. Assets: | | | |
| (1) Non-Current Assets | | | |
| (a) Fixed assets | | 83,000 | 46,700 |
| (2) Current Assets | | | |
| (a) Inventories | | 13,000 | 11,000 |
| (b) Trade Receivable | | 20,000 | 19,000 |
| (c) Cash and Cash Equivalents | | 2,500 | 2,000 |
| Total | | 1,18,500 | 78,700 |

Notes:

| | 2012 | 2011 |
|------------------------------|--------|--------|
| Reserves and Surplus: | | |
| General Reserve | 27,500 | 15,000 |
| Profit and Loss Balance | 15,000 | 10,000 |

Additional Information:

- (a) Depreciation of Fixed Assets for the year 2011-2012 was Rs. 14,700.
- (b) An interim dividend Rs. 7,000 has been paid to the shareholders during the year.

BUSINESS STUDIES

Q1. Which of the following is not an element of directing?

- (a) Supervision
- (b) Communication
- (c) Leadership
- (d) Inspection

Q2. Yuvi Limited is a company dealing in metal products. The work is mainly divided into functions including production, purchase, marketing, accounts and personnel. Identify the type of organisational structure followed by the organisation.

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

Q3. On the introduction of Goods and Services Tax Act Madhur, an established businessman, attended browsed through various websites to understand the concept. He wanted to use these forecasts to reduce the uncertainty in making decisions for the future in his business. Name the step in the planning process.

- (a) Developing premises
- (b) Setting objectives
- (c) Implementation of plan
- (d) Follow up action

Q4. A consumer durable company presently employing 8,000 people, desires to diversify its business in furniture segment. To achieve its objectives it has started shifting from a centralized to a decentralized management system. Identify the management function being performed by the company to become a decentralized company.

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

Q5. Neena, a student of management, during a visit to an automobile factory observed that for designing a car, the assembly line production would entail deciding sequence of operations, place for men, machines and raw materials etc. Name the technique of Scientific management that is being adhered to by the company.

- (a) Method study
- (b) Differential piece wage system
- (c) Standardisation, simplification of work
- (d) Functional foremanship

Q6. Providing good working conditions is a kind of _____ objective of Management.

- (a) Organisational
- (b) Social
- (c) Economic
- (d) Personal

Q7. This decision determines the overall cost of capital and the financial risk of the enterprise.

- (a) Dividend decision
- (b) Capital budgeting decision
- (c) Financing decision
- (d) Investment decision

Q8. A complaint can to be made to the appropriate _____ when the value of the goods or services in question, along with the compensation claimed, exceeds 20 lakhs but does not exceed 1 crore.

- (a) District forum
- (b) State commission
- (c) National commission
- (d) Supreme court of India

Q9. Mohit recently got a raise in his salary due to annual increment. Which of his human need is being satisfied through this?

- (a) Security Needs
- (b) Belonging Needs
- (c) Self Actualisation Needs
- (d) Basic Physiological Needs

Q10. The application of this principle of management leads to higher production and better work for the same effort. Identify the related principle of general management.

- (a) Discipline
- (b) Division of work
- (c) Equity
- (d) Order

Q11. As the financial leverage of a company increases it leads to:

- (a) An increase in the cost of funds but a decline in the financial risk
- (b) A decline in the cost of funds but an increase in the financial risk
- (c) Both an increase in the cost of funds and financial risk
- (d) Both a decline in the cost of funds and financial risk

OR

The total capital of Agile Limited is 50 lacs. The amount of debt is rupees 20 lacs. The company has earned a profit of rupees 20 lakh during the current financial year. Its return on investment (ROI) for the present year is:

- (a) 20%
- (b) 40%
- (c) 10%
- (d) 80%

Q12. Feather Ltd. is a large multinational company and operates in many countries of the world. The company is in the business of Business process outsourcing, knowledge process outsourcing etc. What is being marketed by the company?

- (a) Ideas
- (b) Place
- (c) Events
- (d) Services

OR

Which of the following statement does not reflect a condition to be satisfied for an exchange to take place?

- (a) Involvement of at least two parties the buyer and the seller
- (b) Each party should be capable of offering something of value to the other
- (c) Exchange can take place if the buyers and sellers are not able to communicate with each other
- (d) Each party should have freedom to accept or reject other party's offer

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

Maslow's theory is based on the following assumptions:

- (i) People's behaviour is based on their needs. Satisfaction of such needs influences their behaviour.
- (ii) People's needs are in hierarchical order, starting from basic needs to other higher level needs.
- (iii) A satisfied need can no longer motivate a person; only next higher level need can motivate him.
- (iv) A person moves to the next higher level of the hierarchy only when the lower need is satisfied.

Q13. Identify the lowest level need in the Maslow' hierarchy:

- (a) Esteem needs
- (b) Self-Actualization needs
- (c) Basic Physiological needs
- (d) Safety/Security needs

Q14. Abraham Maslow was a well-known:

- (a) Philosopher
- (b) Psychiatrist
- (c) Psychologist
- (d) None of the above

Q15. Identify the highest level need in the Maslow' hierarchy:

- (a) Esteem needs
- (b) Self-Actualization needs
- (c) Basic Physiological needs
- (d) Safety/Security needs

Q16. 'Satisfaction of such needs influences their behaviour'. From this statement, which step of motivation process is achieved?

- (a) Reduction in drives
- (b) Reduction in needs
- (c) Reduction in search behaviour
- (d) Reduction in tension/restlessness

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

Mr. Suri, the owner of Junnon Ltd. with glorious 5 years of its grand success having a capital base of Rs.80 crores. Within a short span of time, the company could generate cash flow which not only covered fixed cash payment obligations but also create sufficient buffer. The company is on the growth path and to meet the increasing demand, Mr. Suri decided to expand his business by setting up a new factory. This required an investment of Rs.200 crores. On the recommendations of his financial advisor Mr.Dev he decided about the judicious mix of equity (45%) and Debt (55%). Mr. Suri decided to raise funds from a financial institution. As the cost of raising funds from financial institutions is low. Though this will increase the financial risk but will also raise the return to equity shareholders, He also apprised him that issue of debt will not dilute the control of equity shareholders. At the same time, the interest on loan is a tax deductible expense for computation of tax liability.

Q17. Identify the concept of Financial Management as advised by Mr.Dev in the above situation.

- (a) Financial leverage
- (b) Trading on equity
- (c) Financial planning
- (d) Capital structure

Q18. Identify the factor affecting the concept as identified in question 17 above which has been discussed between Mr. Suri and Mr. Dev in the line 'the interest on loan is a tax deductible expense for computation of tax liability.'

- (a) Control
- (b) Cost of debt
- (c) Tax rate
- (d) Cost of equity

Q19. Which method of floatation has been adopted by Mr. Suri to raise funds?

- (a) Rights issue
- (b) Private placement
- (c) e-IPOs
- (d) Offer through prospectus

Q20. What will be the level of fixed capital requirement by Mr. Suri to start a new factory?

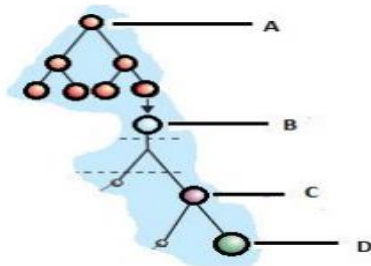
- (a) High
- (b) Low
- (c) Moderate
- (d) No requirement

ECONOMICS

1. The relation between average propensity to consume and average propensity to save can be expressed as.....
2. If the ratio between MPC and MPS is given 5: 3 then the value of multiplier would be.....
3. Given MPC is 0.9. The value of investment..... needed to increase national income by rupees 5000 crore.
4. The value of gross national product will be greater than Gross Domestic Product, when value of..... would be positive.
5. The value of plan consumption is known as..... consumption.
6. The value of consumption in an economy would be..... if national income of economy is rupees 16000 crore and the ratio between APC and APS is 5:3.
7. The total demand for final goods and services in an economy in a given period is known as_____
8. _____ shows functional relationship between consumption and income.
9. MPC and _____ have the value of equal to 1.
10. There is a _____ relationship between MPC and investment multiplier.
11. The excess of aggregate demand over aggregate supply at full employment level is called _____
12. The Value of consumption at a particular level of income is called
13. The value of investment multiplier iswhen marginal propensity to save is zero.
14. Equality between aggregate demand and aggregate supply automatically implies equality between and
15. The central bank checks depression in the economy by in the open market.

BIOLOGY

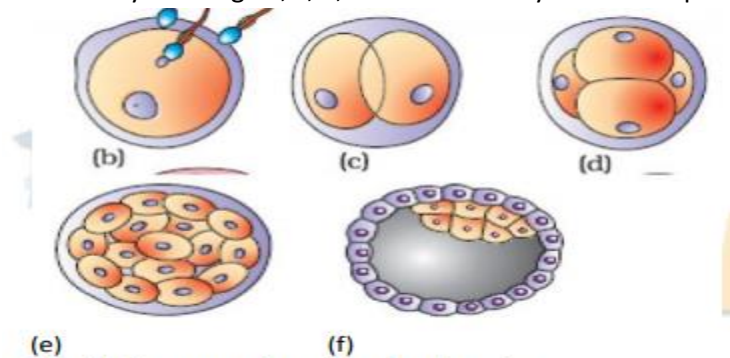
Q1. Label A,B,C and D in the following schematic representation of oogenesis.



Q2, Write the function of each one of the following:

1. Seminal vesicle
2. Luteinising hormone in males

Q3. Identify the stage b, c, d, e and f of embryonic development by looking at the diagrams given below:



What is the name of a cell in stage b and c

Q4. Which cells of embryo have potency to give rise to all tissues and organs?

Q5. Identify major differences between spermatogenesis and oogenesis?

Q6. Which hormone is involved in induction of parturition?

Q7. What is colostrum?

Crotalaria is a member of Papilionaceae, in which 10 stamens are present in flower. Each stamen has 4 microsporangia (i.e., $10 \times 4 = 40$), in which microspore mother cells are found. Each microspore mother cell gives rise to a pollen tetrad (i.e., $40 \times 4 = 160$). So, for 1 flower having 30 microsporangia it would be $160 \times 30 = 4800$ pollen grains. Thus, if we have to calculate for 10 flowers then it would be $4800 \times 10 = 48000$ pollen grains. So, the correct answer is '48,000'

Suppose in a flower of pea, each microsporangium possess 20 pollen mother cells, then the total number of pollen produced in a flower will be?

A. 800

B. 2400

C. 3200

D. 40

ANSWER

Small-scale spore mother cell is the parental (first) cell that frame Microsporangia upon meiosis cell division.

Every Anther contains 4 locules.

Every locale has 4 dust mother cells.

So 20 anthers \times 4 dust mother cells = 80 dust mother cells.

Every Pollen mother cell produces 4 Microsporangia because of meiosis cell-division. So, $80 \times 4 = 320$ microsporangia.

So, the correct option is '3200'.

if there are 1280 microspores in a tetralocular anther, how many microspore mother cells will be there in its each pollen chamber?

A. 80

B. 160

C. 240

D. 1280

ANSWER

Microspore Mother cells upon One "Meiosis" cell division forms 4-Microspores.

So 1 Mother Cell forms – 4 Microspores.

In reverse

4 Microspores are formed from \rightarrow 1-mother cell

The total number of microspores: 1280.

Therefore, microspore mother cells will be $1280/4 = 320$.

As it is tetralocular, therefore there will be 4 chambers of the tetrad.

Thus, the number of MMC in each chamber: $320/4 = 80$. So the correct option is "80".

Suppose in a flower of mustard, each microsporangium possess 20 pollen mother cells then, the total number of male gametes formed by this flower will be?

- A. 3840
- B. 480
- C. 240
- D. 120

ANSWER

One pollen mother cell produces 4 haploid pollens. Hence, 20 pollen mother cells will produce 4×20 pollen grains that are equal to 80 pollen grains. Each pollen grain produces 2 male gametes. $80 \times 2 = 160$ male gametes. Now, mustard is Dithecous, hence each stamen has 4 microsporangia. Therefore $160 \times 4 = 640$ male gametes per stamen. In a mustard flower, there are 6 stamens which means, $640 \times 6 = 3840$ male gametes in total.

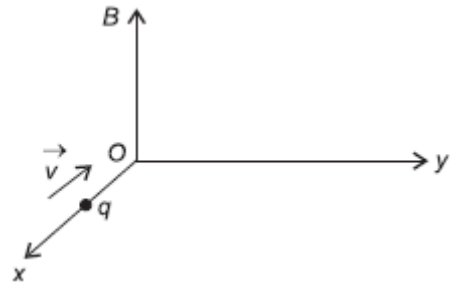
PHYSICS

- 1 A straight wire of length L , carrying a current I , stays suspended horizontally in mid air in a region where there is a uniform magnetic field \vec{B} . The linear mass density of the wire is λ . Obtain the magnitude and direction of this magnetic field. 2

- 2 A particle of charge q and mass m is moving with velocity \vec{v} . It is subjected to a uniform magnetic field \vec{B} directed perpendicular to its velocity. Show that it describe a circular path. Write the expression for its radius. 2

- 3 Write the expression for Lorentz magnetic force on a particle of charge q moving with velocity \vec{v} in a magnetic field \vec{B} . Show that no work is done by this force on the charged particle. 2

- 4 A charge q moving along the x-axis with a velocity \vec{v} is subjected to a uniform magnetic field B acting along the z-axis as it crosses the origin O . 2
 - (i) Trace its trajectory.
 - (ii) Does the charge gain kinetic energy as it enters the magnetic field? Justify your answer.



- 5 (i) Name the machine which uses crossed electric and magnetic fields to accelerate the ions to high energies. With the help of a diagram, explain the resonance condition. 2

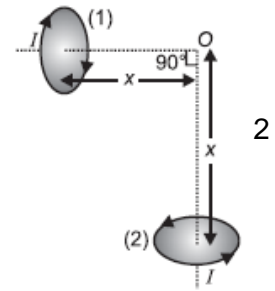
 (ii) What will happen to the motion of charged particle if the frequency of the alternating voltage is doubled?

- 6 What is velocity selector? Write its uses. 2

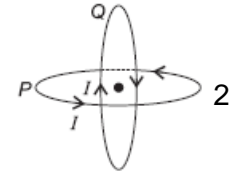
- 7 Both, the electric and magnetic fields can deflect a moving electron. What is the difference between these deflections? 2

- 8 State the underlying principle of a cyclotron. Write briefly how this machine is used to accelerate charged particles to high energies. 2

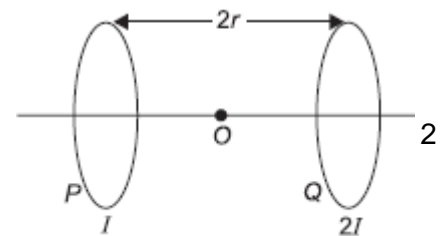
- 9 Two very small identical circular loops, (1) and (2), carrying equal currents I are placed vertically (with respect to the plane of the paper) with their geometrical axes perpendicular to each other as shown in the figure. Find the magnitude and direction of the net magnetic field produced at the point O.



- 10 Two identical circular wires P and Q each of radius R and carrying current I are kept in perpendicular planes such that they have a common centre as shown in the figure. Find the magnitude and direction of the net magnetic field at the common centre of the two coils.



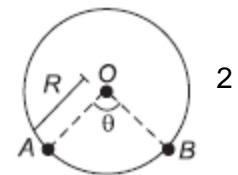
- 11 Two identical circular loops, P and Q, each of radius r and carrying currents I and $2I$ respectively are lying in parallel planes such that they have a common axis.



The direction of current in both the loops is clockwise as seen from O which is equidistant from both loops. Find the magnitude of the net magnetic field at point O.

- 12 A circular coil of N turns and radius R carries a current I . It is unwound and rewound to make another coil of radius $R/2$, current I remaining the same. Calculate the ratio of the magnetic moments of the new coil and the original coil.

- 13 A wire of uniform cross-section is bent into a circular loop of radius R . Consider two points A and B on the loop, such that $\angle AOB = \theta$ as shown. If now a battery is connected between A and B, show that the magnetic field at the centre of the loop will be zero irrespective of angle θ .



- 14 How is a moving coil galvanometer converted into a voltmeter? Explain, giving the necessary circuit diagram and the required mathematical relation used.

- 15 Define the current sensitivity of a moving coil galvanometer. "Increasing the current sensitivity may not necessarily increase the voltage sensitivity." Justify this statement.

- 16 Deduce the expression for the magnetic dipole moment of an electron orbiting around the central nucleus.

- 17 A charged particle of mass m and charge q moving at uniform velocity v , enters a uniform magnetic field B acting normal to the plane of the paper. Deduce expression for the (i) radius of the circular path in which it travels and (ii) kinetic energy of the particle.

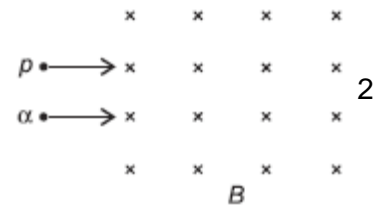
- 18 A charge q moving in a straight line is accelerated by a potential difference V . It enters into a uniform magnetic field B perpendicular to its path. Deduce, in terms of V , an expression for the radius of the circular path in which it travels.

19 (a) Write the expression for the magnetic force acting on a charged particle moving with velocity v in the presence of magnetic field B .

(b) A neutron, an electron and an alpha particle moving with equal velocities, enter a uniform magnetic field going into the plane of the paper as shown. Trace their paths in the field and justify your answer.

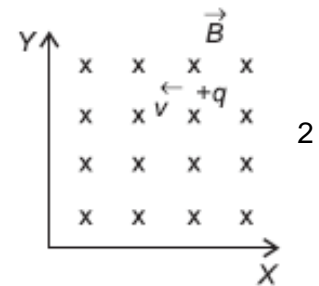


20 An α -particle and a proton moving with the same speed enter the same magnetic field region at right angles to the direction of the field. Show the trajectories followed by the two particles in the region of the magnetic field. Find the ratio of the radii of the circular paths which the two particles may describe.



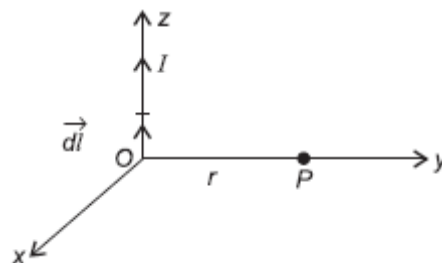
21 Show that the period of a revolution of an ion is independent of its speed and radius of the orbit. Write two important uses of a cyclotron.

22 A point charge is moving with a constant velocity perpendicular to a uniform magnetic field as shown in the figure. What should be the magnitude and direction of the electric field so that the particle moves undeviated along the same path?



23 A straight wire of length L is bent into a semicircular loop. Use Biot-Savart law to deduce an expression for the magnetic field at its centre due to the current I passing through it.

24 State Biot-Savart law. A current I flows in a conductor placed perpendicular to the plane of the paper. Indicate the direction of the magnetic field due to a small element $d\vec{l}$ at point P situated at a distance r from the element as shown in the figure.



CHEMISTRY

CLASS - XII CHEMISTRY (coordination compounds)

Topic:- Valence bond theory and crystal field theory

1. State the postulates of valence bond theory. [2]
2. Explain that the complex $[\text{Co}(\text{NH}_3)_6]^{3+}$ is diamagnetic on the basis of valence bond theory. [2]
3. $[\text{Ni}(\text{CO})_4]^{2+}$ is square planar whereas $[\text{NiBr}_4]^{2-}$ is tetrahedral . Explain. [2]
4. Enlist the limitations of valence bond theory. [2]
5. State crystal field theory. [2]
6. What is crystal field splitting? [1]
7. How does the magnitude of Δ_o and P decide the actual configuration of d^4 in the presence of octahedral field? [2]
8. Show with diagram, the crystal field splitting of d- orbital in an octahedral field. [2]
9. Why are complexes coloured? [1]
10. When is a coordination compound colourless? [1]

HISTORY

Chapter: 15 FRAMING OF CONSTITUTION

1. The crucial objectives Resolution moved by-----.
2. Choose the correct option:
Swami Vivekananda campaigned for a reform of Hinduism:
 - a) He wanted religions to become more just
 - b) He demanded economic and social justice
 - c) He struggle for democracy and justice
 - d) None of these

Important Questions for Class 12 History Chapter 15 – 3 Marks Questions

Question 3.

Describe the different arguments made in favour of protection on of depressed class in the Constituent Assembly. (All India 2017)

Question 4.

“The discussions within the Constituent Assembly were also influenced by the opinions expressed by the public”.

Examine the statement. (HOTS; Delhi 2012)

Question 5.

“A communist member Somnath Lahiri saw the dark hand of British imperialism hanging over the deliberations of the Constituent Assembly”. Examine the statement and give your own views in support of your answer. (All India 2012)

Important Questions for Class 12 History Chapter 15 – 8 Marks Questions

Question 6.

“Within the Constituent Assembly of India the language issue was intensely debated”. Examine the views put forward by members of the assembly on the issue. (All India 2016)

Question 7.

How did Constituent Assembly of India protected the powers of the Central government? Explain. (All India 2016)

Important Questions for Class 12 History Chapter 15 Source Based Question

Question 8.

“There cannot be any divided loyalty”

Govind Ballabh Pant argued that in order to become loyal citizens people had to stop focusing only on the community and the self.

For the success of democracy one must train himself in the art of self discipline.

In Democracies one should care less for himself and more for others. There cannot be any divided loyalty. All loyalties must exclusively be centred round the state. If in a democracy, you create rival loyalties, or you create a system in which any individual or group, instead of suppressing his extravagance, cares nought for larger or other interests, then democracy is doomed.

1. Why did Govind Ballabh Pant lay more stress on the art of self-discipline?
2. What was considered important for the success of democracy?
3. ‘In Democracies one should care less for himself and more for other.’ Give your views on this philosophy. (Delhi 2015)

Question 9.

‘We are not just going to copy’

We say that it is our firm and solemn resolve to have an independent sovereign republic. India is bound to be sovereign, it is bound to be independent and it is bound to be a republic....Now, some friends have raised the question “Why have you not put in the word ‘democratic’ here.?” Well, I told them that it is conceivable of course, that a republic may not be democratic but the whole of our past is witness to this fact that we stand for democratic institutions.

Obviously, we are aiming at democracy and nothing less than a democracy. What form of democracy, what shape it might take is another matter. The democracies of the present day, many of them in Europe and elsewhere, have played a great part in the world’s progress. Yet it may be doubtful if those democracies may not have to change their shape somewhat before long if they have to remain completely democratic. We are not going just to copy, I hope, a certain democratic procedure or an institution of a so-called democratic country.

We may improve upon it. In any event whatever system of government we may establish here must fit in with the temper of our people and be acceptable to them. We stand for democracy. It will be for this House to determine what shape to be given to that democracy, the fullest democracy, I hope the House will notice that in this resolution, although we have not used the word “democratic” because we thought it is obvious that the word “republic” contains that word and we have done something much more than using the word.

We have given the content of democracy in this resolution and not only the content of democracy but the context, also, if I may say so of economic democracy in this resolution. Others might take objection to this Resolution on the grounds that we have not said that it should be a Socialist State.

Well, I stand for Socialism and, I hope, India will stand for Socialism and that India will go towards the Constitution of a Socialist State and I do believe that the whole world will have to go that way.

1. Explain why Nehru did not mention the word democratic in the resolution.
 2. Mention the three basic features of the constitution given in the above passage.
 3. On what kind of socialism did Nehru give stress to? (Delhi 2014)
2. Three basic features of the constitution given in above passage are independent, sovereign, republic.
3. Nehru was supporter of Socialism and he said that India would stand for socialism, where every citizen would be provided equal opportunities for growth and development. There would be economic democracy and economic justice.

Question 10.

“British element is gone but they have left the mischief behind”

Sardar Vallabh Bhai Patel said

It is no use saying that we ask for separate electorates, because it is good for us. We have heard it long enough. We have heard it for years, and as a result of this agitation we are now a separate nation... Can you show me one free country where there are separate electorates? If so, I shall be prepared to accept it. But in this unfortunate country if this separate electorate is going to be persisted in, even after the division of the country, woe betide the country; it is not worth living in. Therefore, I say, it is not for my good alone, it is for your own good that I say it, forget the past.

One day, we may be united... The British element is gone, but they have left the mischief behind. We do not want to perpetuate that mischief. (Hear, hear).

When the British introduced this element they had not expected that they have to go so soon. They wanted it for their easy administration. That is all right. But they have left the legacy behind. Are we to get out of it or not?

1. Why are separate electorates considered as a mischief?
2. State the arguments given by Sardar Vallabh Bhai Patel for building political unity and forging a nation.
3. How did the philosophy of separate electorates result in a separate nation? (All India 2015)

or

1. Explain Sardar Vallabh Bhai Patel’s views on the issue of separate electorate system.
2. In what ways did Sardar Patel explain that “The British element is gone, but they have left the mischief behind”?
3. Mention the reasons behind Sardar Patel urging the assembly members to get rid of separate electorate. (All India 2014)

Question 11.

“That is Very Good, Sir-Bold Words, Noble Words”

Somnath Lahiri said: Well, Sir, I must congratulate Pandit Nehru for the fine expression he gave to the spirit of the Indian people when he said that no imposition from the British will be accepted by the Indian people.

Imposition would be resented and objected to he said and he added that if need be we will walk to the valley of struggle. That is very good, Sir-bold words, noble words.

But the point is to see when and how are you going to apply that challenge. Well Sir the point is that the imposition is here right now.

Not only has the British plan made any future Constitution dependent on a treaty satisfactory to the Britisher but it suggests that for every little difference you will have to run to the Federal Court or dance attendance there in England or to call on the British Prime Minister Clement Attlee or someone else.

Not only is it a fact that this Constituent Assembly, whatever plans we may be hatching, we are under the shadow of British guns. British Army, their economic and financial stranglehold-which means that the final power is still in the British hands and the question of power has not yet been finally decided which means the future is not yet completely in our hands. Not only that, but the

statements made by Attlee and others recently have made it clear that if need be, they will even threaten you with division entirely.

This means Sir there is no freedom in this country. As Sardar Vallabh Bhai Patel put in some days ago, we have freedom only to fight among ourselves. That is the only freedom we have got...therefore, our humble suggestion is that it is not a question of getting something by working out this plan but to declare independence here and now and call upon the Interim government and call upon the people of India to stop fratricidal warfare and look out against its enemy, which still had the whip in hand of the British imperialism and go together to fight it and then resolve our claim afterward when we will be free.

1. Why did Somnath Lahiri congratulate Pandit Nehru?
2. Explain why Somnath feels that the absence of constitution will mean dependence on the British.
3. How did he feel that final power was still in hands of the British?
4. Explain the views of Sardar Vallabh Bhai Patel.
5. Explain the intentions of the British in not framing the Constitution beforehand. What did they want?
(Delhi 2012, 2010)

Question 12.

We are not Just Going to Copy'

This is what Jawaharlal Nehru said in his famous speech of 13th December, 1946.

My mind goes back to the various Constituent Assemblies that have gone before and of what took place at the making of the great American nation when the father of that nation met and fashioned out a Constitution which has stood the test of so many years, more than a century and a half and of the great nation which has resulted, which has been built up on the basis of that construction.

My mind goes back to that mighty revolution, which took place also over 150 years ago and to that Constituent Assembly that met in that gracious and lovely city or Paris which has fought so many battles for freedom, to the difficulties than that Constituent Assembly had and to now the king and other authorities came in its way and still it continued.

The house will remember that when these difficulties came and even the room for a meeting was denied to the Constituent Assembly, they took themselves to an open tennis court and met there and took the oath, which is called the Oath of the Tennis Court that they continued meeting inspite of kings, inspite of the others and did not disperse till they had finished the task they had undertaken.

Well I trust that it is in that solemn spirit that we too are meeting here and that we too whether we meet in this chamber or other chambers or in the fields or in the market place will go on meeting and continue our work till we have finished it.

1. How was the American Constitution finalised and explain its results?
2. What does Nehru's determination to pass the Constitution show? Explain any two such difficulties that were faced by the Constituent Assembly. (Delhi 2010)

Question 13.

"The Real Minorities are the Masses Of this country"

Welcoming the Objectives Resolution introduced by Jawaharlal Nehru, NG Ranga said. Sir, there is a lot of talk about minorities. Who are the real minorities? Not the Hindus in the so-called Pakistan provinces, not the Sikhs, not even the Muslims. No, the real minorities are the masses of this country.

These people are so depressed and oppressed and suppressed till now that they are not able to take advantage of the ordinary civil rights. What is the position? You go to the tribal areas. According to law, their own traditional . law, their tribal law, their lands, cannot be alienated. Yet our merchants go there and in the so-called free market they are able to snatch their lands. Thus, even though the law goes against this snatching away of their lands, still the merchants are able to turn the tribal people into veritable slaves by various kinds of bonds and make them hereditary bond-slaves.

Let us go to the ordinary villagers. There goes the money lender with his money and he is able to get the villagers in his pocket. There is the landlord himself, the zamindar and the malguzar and there are the various other people who are able to exploit these poor villagers. There is no elementary education even among these people. These are the real minorities that need protection and assurances of protection. In order to give them the necessary protection, we will need much more than this Resolution...

1. How is the notion of minority defined by NG Ranga?
or
Who are the real minorities according to Shri NG Ranga and why?
2. Do you agree with Ranga? If not, mention who are real minorities according to you and why?
3. Explain the conditions of ordinary villagers.
4. Describe the living condition of the tribals. (All India 2010)

Question 14.

“I Believe Separate Electorates will be Suicidal to the Minorities”

During the debate on 27th August, 1947, Govind Ballabh Pant said. I believe separate electorates will be suicidal to the minorities and will do them tremendous harm. If they are isolated forever, they can never convert themselves into a majority and the feeling of frustrations will cripple them even from the very beginning. What is that you desire and what is our ultimate objective? Do the minorities always want to remain as minorities or do they ever expect to form an integral part of a great nation and as such to guide and control its destinies?

If they do can they ever achieve that aspiration and that ideal if they are isolated from the rest of the community? I think it would be extremely dangerous for them if they were segregated from the rest of the community and kept aloof in an air-tight compartment where they would have to rely on others even for the air they breathe. The minorities if they are returned by separate electorates can never have any effective voice.

1. Why were some Muslims, like Begum Aizaz Rasul against it?
2. What are separate electorates?
3. Why did GB Pant feel separate electorate would be suicidal for the minorities? (Delhi 2008)
4. Do you think that seats should be reserved for Muslims and other minorities in educational institutions? Give one argument for or against it.

Read the following passage and answer the question that follows. (Delhi 2016)

5. Every citizen in a free state should be treated in a manner that satisfied not only his material wants but also his spiritual sense of the self respect and the majority community has an obligation to try and understand the problems of the minorities and empathise with their aspirations.
 1. How could a citizen of a free nation express his imbibed value of equality and social justice while dealing with the members of the minority community? Explain.

Question 16.

1. Why did Mahatma Gandhi think Hindustani should be the national language?
2. How did the Constituent Assembly seek to resolve the language controversy? (All India 2010)

Question 17.

1. How was the concept of separate electorates erratic? Explain by giving examples from the Constituent Assembly.
2. “I believed separate electorates will be suicidal to the minorities” How far these views of GB Pant are relevant in contemporary India? (Delhi 2008)

GEOGRAPHY

Ch- Human Development.

1 mark

1. Which state of India has the highest ranking HDI value? 2014
2. Name the states of India that has the highest poverty incidence ratio. KVS

3 marks

3. 'Development has direct bearing on the deteriorating human conditions'. How poor people are more affected in this process? 2020
4. Differentiate between growth and development. 2012

5 marks

5. "Development in general and human development in particular is a complex concept used in social sciences" justify this statement with suitable examples. 2015
6. "Development is a mixed bag Of opportunities as well as deprivation for India ". Support the statement with suitable examples. 2011

PSYCHOLOGY

Chapter 6

- Q1. Distinguish between beliefs and values. (3)
- Q2. State any three sources of prejudice. (3)
- Q3. Cluster of idea regarding the characteristics of a specific group is known as..... (1)
- Q4. Describe the characteristics of prejudice. (4)
- Q5. Discuss the cognitive dissonance component in attitude change process. (3)
- Q6. Discuss the concept of Balance. (3)
- Q7. Explain the experiment given by Carlsmith and Festinger. (3)
- Q8. Explain the factors that influence pro-social behavior. (3)
- Q9. Explain the characteristics by which impression formation may be influenced. (4)
- Q10. Differentiate between cognitive consistency and cognitive dissociation. Give examples (6)
- Q11. What is social cognition, explain its various components briefly. (6)

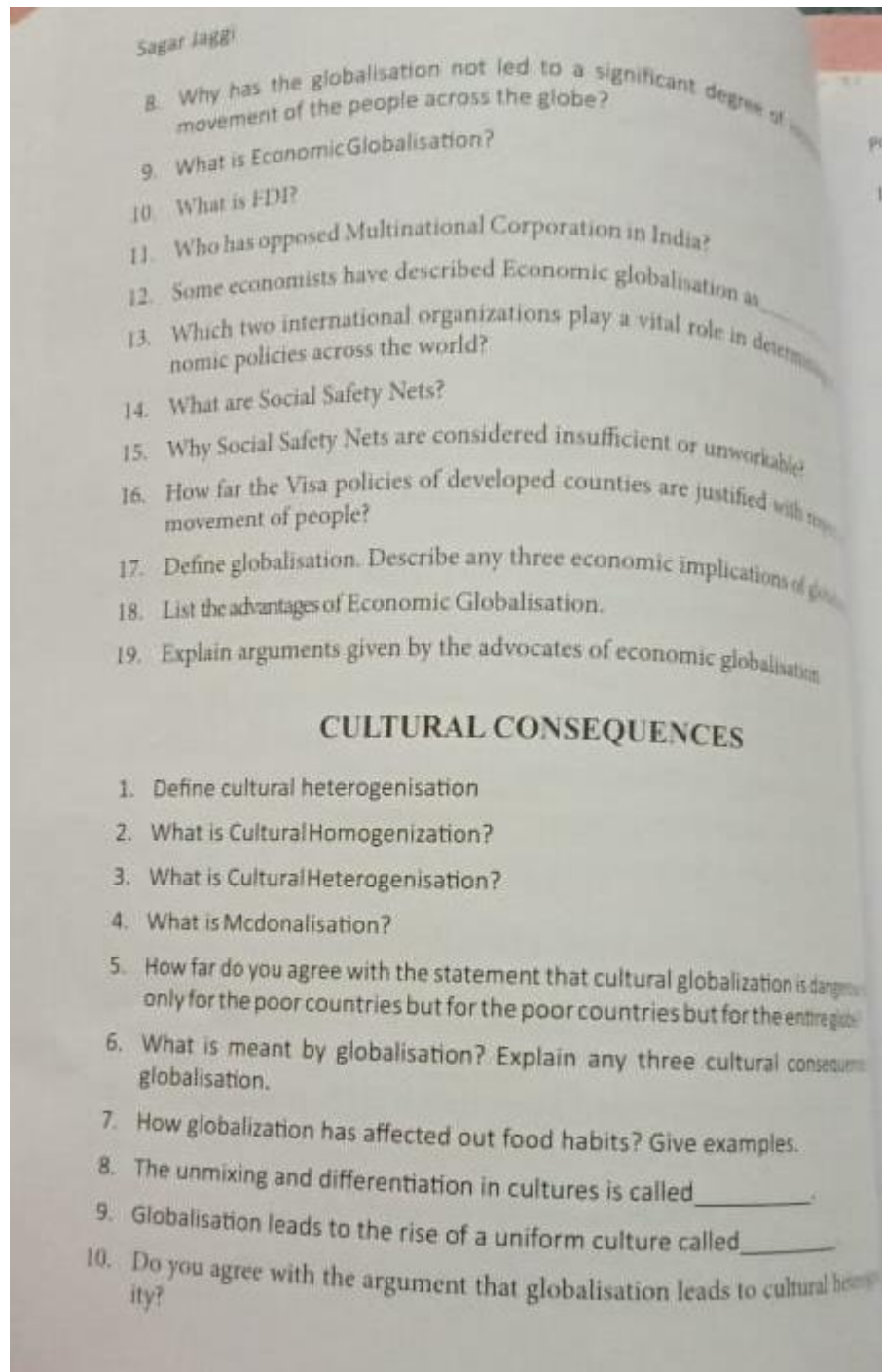
2. How do technologies contribute in the direction of globalisation? Explain.
3. What are the causes of Globalization?
4. What is the uniqueness of globalisation in the contemporary era?
5. Is globalization a new phenomenon?
6. How does globalisation have a strong historical basis?

POLITICAL CONSEQUENCES

1. "Welfare State is getting replaced by market." Analyze the reason for this change?
2. Mention any two political consequences of globalisation.
3. How far is it correct to say that powers of states have actually increased due to globalisation?
4. Critically evaluate the impact of the changing role of state in the developing countries in the light of globalisation?
5. Globalisation has shifted power from nation-states to global consumers. Justify the statement.
6. What are the political consequences of globalisation?
7. Has globalization resulted in "Erosion of state capacity"?
8. Explain any four political consequences of globalisation.
9. What are the core functions of the state?

ECONOMIC CONSEQUENCES

1. Name the organization which came into being by replacing GATT.
2. What is the problem of increasing interdependence of countries?
3. How has globalisation involved greater trade in commodities across the globe?
4. What are the prime determinants of economic and social priorities?
5. What does GATT stand for?
6. Give one benefit of international migration.
7. Mention any one problem created by protectionism.



Sagar Jaggi

8. Why has the globalisation not led to a significant degree of movement of the people across the globe?
9. What is Economic Globalisation?
10. What is FDI?
11. Who has opposed Multinational Corporation in India?
12. Some economists have described Economic globalisation as _____
13. Which two international organizations play a vital role in determining economic policies across the world?
14. What are Social Safety Nets?
15. Why Social Safety Nets are considered insufficient or unworkable?
16. How far the Visa policies of developed countries are justified with respect to movement of people?
17. Define globalisation. Describe any three economic implications of globalisation.
18. List the advantages of Economic Globalisation.
19. Explain arguments given by the advocates of economic globalisation.

CULTURAL CONSEQUENCES

1. Define cultural heterogenisation
2. What is Cultural Homogenization?
3. What is Cultural Heterogenisation?
4. What is Mcdonalisation?
5. How far do you agree with the statement that cultural globalization is dangerous only for the poor countries but for the poor countries but for the entire globe?
6. What is meant by globalisation? Explain any three cultural consequences of globalisation.
7. How globalization has affected our food habits? Give examples.
8. The unmixing and differentiation in cultures is called _____.
9. Globalisation leads to the rise of a uniform culture called _____.
10. Do you agree with the argument that globalisation leads to cultural homogeneity?

LEGAL STUDIES

Q1. Discuss in detail the procedure for impeachment. How many times has this process been successful in the history of Indian judiciary?

Q2. What are the different kinds of writs Supreme Court can issue under Article 32 of the Indian Constitution?

Q3. Explain the concept of separation of powers under the Indian Constitution? How does it relate with the concept of checks and balances? What are the advantages of having a system of separation of powers?

Q4. Discuss the retirement age of judges in India. In the light of global comparison, provide your views regarding extending the retirement age.

OPTIONAL II

HINDI

1. वसंत आगमन की सूचना कवि को कैसे मिली?
2. वसंत पंचमी के अमुक दिन होने का प्रमाण कवि ने क्या बताया और क्यों ?
3. वसंत आया - कविता में कवि की चिंता क्या है? उसका संदेश अपने शब्दों में लिखिए।
4. कविता में आए अलंकारों के नाम उदाहरण लिखिए।

FMM

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% 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.

PHYSICAL EDUCATION

Q1 Define sports psychology.

Q2 What do you mean by Aggression?

Q3 Explain any three techniques of motivation.

Q4 name the dimensions of personality and explain any one.

Q5 Classify the sheldon's body types.

YOGA

Q1 Explain all 12 poses of suryanamaskar in detail.

Q2 what is shatkama?

Q3 Explain about benefits, technique and contraindications of any two asanas.

COMPUTER SCIENCE

1. Write output

- Select ROUND (1023.431,1);
- Select LENGTH('RAM');
- Select MOD(ROUND(120.60),5);
- Select trim(' mount carmel school ');
- Select Month(sysdate());
- Select length(SUBSTR(Trim(' India is great '),3,9));
- select MONTH('2009-09-19');
- select YEAR(CURDATE())-YEAR('2008-01-01');

2. Consider an emp table (empno, ename, job, sal, hiredate, deptno) and write SQL queries to do the following:

- a) Display the names IN LOWERCASE of the employees along with their department names.
- b) Display the joining date of every emp along with the date when he will complete his 20 years of service.
- c) Display the name concatenated with the jobs for employee

Q3. Write a function to read the content from a file and transfer all the words which start with lower case letter to another file.

Q4. Write a function/method to read the lines from a text file MYNOTES.TXT, and display those lines which are starting with the alphabet 'K'

Q5. Write a function to read the content from the file and display those words which are having the length of exactly 4 characters.

Q6. Write a program using function to check whether a number is Armstrong or not. The function will accept a number as a parameter.

Q7. Write a menu driven program using functions to do the following:

- a) Reverse a number
- b) Check whether a number is palindrome or not
- c) Exit

Program should continue till the user says "NO"

INFORMATICS PRACTICES

TOPICS: DATAFRAME CREATION, SELECTION, ADD, DELETE

(with partial solutions)

Q1. Write output of following code:

```
import pandas as pd
data = [['Ram',10],['Shyam',12],['Rima',13]]
df = pd.DataFrame(data, columns=['Name','Age'],
dtype=float)
print( df)
```

Q2. Write python code to create a data frame for the following data.

| Roll | Name | Marks | Class |
|------|--------|-------|-------|
| 1 | Amishi | 40 | 6 |
| 2 | Rehan | 50 | 6 |
| 3 | Ishaan | 45 | 7 |

Q3. Explain dataframe. Can it be considered as 1D Array or 2D Array?

Ans: Dataframe is a 2-Dimensional Array with heterogeneous data usually represented in a tabular format.

It can be considered as 2D Array.

Q4. Give the output of the following code:

```
import pandas as pd
data = [11,12,13,14,15]
df = pd.DataFrame(data)
print(df)
```

Ans:

```
0
0    11
1    12
2    13
3    14
4    15
```

Q5. Give the output for the following code.

```
import pandas as pd
data = [{'a': 1, 'b': 2},{'a': 5, 'b': 10, 'c': 20}]
df1 = pd.DataFrame(data, index=['first', 'second'],columns=['a', 'b'])
df2 = pd.DataFrame(data, index=['first', 'second'], columns=['a', 'b1'])
print(df1)
print(df2)
```

| | | |
|--------|---|-----|
| Ans: | a | b |
| first | 1 | 2 |
| second | 5 | 10 |
| | a | b1 |
| first | 1 | NaN |
| second | 5 | NaN |

Q6. Suppose a data frame contains information about student having columns rollno, name, class and section. Write the code for the following:

- (i) Add one more column as fee
- (ii) Write syntax to transpose data frame.
- (iii) Write python code to delete column fee of data frame.
- (iv) Write the code to append df2 with df1
- (i) `Df1['fee']=[100,200,300]`
- (ii) `Df1=Df1.T`
- (iii) `del Df1['fee']`
- (iv) `Df2=Df2.append(Df1)`

Q7. Given a data frame namely Fruits is given below(fruit names are row labels)

| | Color | Count | Price |
|-------|-------|-------|-------|
| Apple | Red | 3 | 120 |
| Apple | Green | 9 | 110 |
| Pear | Red | 25 | 125 |
| Pear | Green | 26 | 150 |
| Lime | Green | 99 | 70 |

Write code statement to

- (a) Find all rows with label "Apple". Extract all columns
- (b) List only the columns Count and Price using loc
- (c) List only rows with labels 'Apple' and 'Pear' using loc
- (d) Display the price of pear and lime
- (e) Find all rows with label "Apple" using iloc. Extract all columns
- (f) display data of 1st to 3rd rows

Ans (a) `data.loc['Apple']`
 (b) `data.loc[:, ['Count', 'Price']]`

OR

`data[['Count', 'Price']]`

(c) `data.loc[['Apple', 'Pear']]`

(d) `data.loc[['Pear', 'Lime'], ['Price']]`

(e) `data.iloc[[0,1]]`

(f) `data.iloc[1:4]`

Q8.

Write python statements to create a data frame for the following data and attempt the questions below:

| Name | Age | Designation |
|------|-----|-------------|
|------|-----|-------------|

| | | |
|--------|----|----------------|
| YAMINI | 35 | PRINCIPAL |
| DINESH | 40 | SYSTEM MANAGER |
| SHYAM | 50 | TEACHER |

- (a) Add a column dept using series
- (b) Add the details of another employee
- (c) Add a column salary using assign
- (d) Delete column salary using pop()
- (e) Insert another employees information at 2nd position
- (f) Delete yamini's record
- (g) Delete designation using drop

<https://youtu.be/RiUWRjcSJ5Y>