



**SANMATI H.S. SCHOOL
CLASS XI COMMERCE**

SUBJECT - ENGLISH

Q.1 Design a poster on the topic —'How CNG can be the best alternative to diesel and petrol.' (50 words) **[On a A-4 size sheet]**

Q.2 Write an essay on the topic - ' India's emergence as global leader'. (150-200 words) in a **[In the Notebook]**

Q.3 Research on Khushwant Singh's life and works:-

Find out about the role of Khushwant Singh's father in building Delhi. Write your findings in your file with pictures.

Q.2 Human life is short-lived in contrast to nature. Comment on the statement in the light of the poem *A Photograph*.

Q.3 Discuss the values highlighted in the chapter *The Portrait of a Lady*.

Q.4 Make a collage of various types of classified advertisement, cut from newspaper. **[On suitable size of sheet]**

Q. 5 Make a scrapebook of around 6- 8 pages **having at least 3 pictures and their description(Date/place/ name and relation of people with you/any memorable incident)** of your beautiful memories in the past.

Q. 6 Find at least 5 poems from anywhere in which poet has expressed loss/demise of any of their loved ones. Write them on A-4 size papers (with its Title and Poet) in beautiful manner with pictures if available. And compile them in a file .

हिंदी

1. हिंदी समाचार पत्र के इतिहास पर प्रकाश डालते हुए ले किन्ही दो समाचार पत्रों की समीक्षा लिखें।

1. अमर उजाला

2. पंजाब केसरी

3. देशबंधु

4. उदंत मार्तंड

2. "नमक का दरोगा" कहानी के आधार पर "एक न्याय प्रिय अधीक्षक" की भूमिका को अपने शब्दों में लिखें।

3. "मसि कागद छूयो नहि, कलम गही नहि हाथ" कबीरदास जी के विषय में क्यों कहा गया है?

कबीर के जीवन पर शोध कर वर्णित करें।

4. "पोस्ट कार्ड" का उपयोग कर अपने मित्र को परीक्षा में प्रथम श्रेणी में आने पर उसकी उज्ज्वल भविष्य की कामना करते हुए एक अनौपचारिक पत्र लिखें।

5. कोई एक व्यक्ति विशेष का साक्षात्कार लेकर अपनी पुस्तिका में चित्र के साथ वर्णित करें।

1. प्रिय शिक्षक

2. मेरे आदर्श भाई

3. मेरे बचपन का मित्र

4. मेरे पिता की सफलता की यात्रा।

ACCOUNTANCY

TOPIC-Basic Fundamental of Accounting

- Q.1. Book-keeping means:**
- (A) Keeping books
 - (B) Recording in books
 - (C) Recording of business transactions in the books
 - (D) All of the above
- Q.2. Book-keeping means:**
- (A) Recording financial transactions in the books of accounts.
 - (B) Taking all steps from recording of transactions in the books of original entries to preparation of final accounts.
 - (C) Preparing Final Accounts
 - (D) Taking all steps after preparing final accounts.
- Q.3. Accounting Starts:**
- (A) Where book-keeping begins
 - (B) Where book-keeping ends
 - (C) Where books are not maintained at all
 - (D) After preparing final accounts
- Q.4. In accounts recording is made of:**
- (A) Only Financial Transactions
 - (B) Only Non-financial transactions
 - (C) Financial and non-financial transactions
 - (D) Personal transactions of the Proprietor
- Q.5. The characteristics of Accounting are:**
- (A) Recording
 - (B) Classifying
 - (C) Summarising
 - (D) All of the above
- Q.6. Which of the following is not a business transaction?**
- (A) Purchased furniture for Rs. 50,000 for business.
 - (B) Paid Rs. 25,000 as salaries to employees.
 - (C) Proprietor paid Rs. 10,000 for the school fees of his son from his own bank account.
 - (D) Proprietor paid Rs. 10,000 for the school fees of his son from business.
- Q.7. Ghanshyam is a furniture dealer. Which one of the following will not be recorded in**

his books?

- (A) Purchase of Timber for Rs. 50,000
- (B) Sofa set worth Rs. 40,000 taken to his home
- (C) Sale of household furniture for Rs. 5,000
- (D) Dining table of Rs. Rs. 30,000 given to his friend as gift

Q.8. The functions of Accounting are:

- (A) To ascertain Profit or Loss
- (B) To ascertain the financial position of the Business
- (C) To provide informations to various parties
- (D) All of the above

Q.9. The function of Accounting is not to:

- (A) Record the transactions of business
- (B) Record the personal transactions of the Proprietor
- (C) Ascertain the Profit or Loss of business
- (D) Ascertain the Financial Position of the business

Q.10. Which of the following transactions is not of financial character?

- (A) Purchase of asset on credit
- (B) Purchase of asset for cash
- (C) Withdrawing of money by proprietor from business
- (D) Strike by Employees

Q.11. Last step of accounting process is:

- (A) Provide information to various parties who are interested in business enterprise
- (B) Record transactions in the books
- (C) To make summary in the form of financial statements
- (D) To classify the transactions under separate heads in the ledger

Q.12. Internal users of accounting information are:

- (A) Potential Investors
- (B) Creditors
- (C) Management
- (D) Employees

Q.13. External users of accounting information are

- (A) Researchers
- (C) Government
- (C) Potential Investors
- (D) All of the above

Q.14. External users of accounting information are not

- (A) Lenders
- (B) Officers
- (C) Employees
- (D) Public

- Q.15. Accounting Cycle starts with:**
- (A) Recording of Transactions in Ledger**
 - (B) Recording of Transactions in Journal**
 - (C) Preparing Trial Balance**
 - (D) Preparing Trading Account**
- Q.16. Creditors of the business want to know:**
- (A) Profitability of the Business**
 - (B) Capability of the business to pay higher salaries**
 - (C) Creditworthiness of the business**
 - (D) Employment Opportunities**
- Q.17. The advantages of accounting are**
- (A) Information regarding Profit or Loss**
 - (B) Information regarding Financial Position**
 - (C) Helpful in Prevention of Errors**
 - (D) All of these**
- Q.18. Which of the following is not the advantage of accounting?**
- (A) Systematic records**
 - (B) Comparative Study**
 - (C) Based on accounting concepts**
 - (D) Helpful in decision making**
- Q.19. Which of the following is an advantage of accounting?**
- (A) Based on Historical Costs**
 - (B) Omission of Qualitative Information**
 - (C) Incomplete information**
 - (D) Detection of Errors**
- Q.20. The limitations of accounting are:**
- (A) Influenced by Personal Judgements**
 - (B) Based on Historical Costs**
 - (C) Affected by window-dressing**
 - (D) All of these**
- Q.21. Fill in the Blanks**
- 1. Accounting records only the transactions of nature.**
 - 2. Accounting is both art as well as**
 - 3. Scope of Accounting is than that of Book-keeping.**
 - 4. Accounting where book-keeping**
 - 5. Process of accounting starts with transactions.**
 - 6. Accounting records can be produced as in a court of law.**

7. Accounting measures the business transactions in terms of units.

II) Read the following case study and answer questions

Sam and Jay started with Cash 10,000 and Machinery 1,00,000. They decided to set up a production line for PPE kits for the protection from Covid 19 virus. As their demand rose, they decided to buy one more piece of machinery. For the same, they took bank overdraft and purchased the machinery. The quality of the company's product was extremely high and therefore, it could develop a reputation for itself in the market and business was flourishing. After 1.5 years, their old machinery turned obsolete so they decided to sell the same. They sold it and got some cash proceeds. To further increase the brand presence among the concerned stakeholders, they decided to run advertisements from the cash proceeds of machinery sold. As more and more customers demanded their product, they decided to launch a discount for bulk purchases. The discount was not to be recorded in the books of accounts. This campaign was successful and they earned a lot of profits from the same.

QUESTIONS-

Q1. Which type of discount is being discussed in the last part of the passage?

- (a) Trade discount**
- (b) Cash discount**
- (c) Both (a) and (b)**
- (d) Can't be determine**

Q2. Which asset is discussed in the line, "The quality of the company's product was very high and therefore, it could develop a reputation for itself in the market and business was flourishing"?

- (a) Tangible**
- (b) Intangible**
- (c) Current.**
- (d) Both (a) and (c)**

Q3. Which type of liability is discussed in the passage?

- (a) Non-current**
- (b) Current**
- (c) Both (a) and (b)**
- (d) Can't be determined**

Q4. What was the capital initially invested?

- (a) 10,000
- (b) 1,00,000
- (c) 1,10,000
- (d) Can't be determined

Q5. The passage involves capital receipts (apart from initial capital invested).

- (a) True
- (b) False

II) Ram and Shyam are two friends who both have just attended their first class of accountancy. The friends were intrigued by the different branches of accounting and their widespread application. Ram personally liked the branch of accounting in which fund flow statement and budgetary control is used and that branch helps in planning and controlling of operations. As the concept of accounting was further explored, they began discussing the different users of accounting. Ram said that he finds it interesting that even the employees demand information relating to business. Shyam said he finds more interesting the fact that even competitors want information on the relative strengths and weaknesses of the enterprise and for making comparisons, Shyam further said that even accounting helps owners to compare one year's costs, expenses, and sales with those of other years. However, they were quite shocked by the fact that the management-worker relations were not taken into consideration in the accounting. Meanwhile, Ram and Shyam had an argument at the end of the discussion. Ram was saying that accounting is an art whereas Shyam was saying that accounting is a science. Their teacher came in and said something to them which made them stop the argument.

Q1. What might their teacher have said to solve their argument?

- (a) Ram, please understand, Shetty is correct in this situation
- (b) Shyam, please understand, Ram is correct In this situation.
- (c) Both are correct
- (d) None is correct

Q2. Shyam talked about which type of users of accounting?

- (a) Internal users

- (b) External users**
- (c) Both (a) and (b)**
- (d) None of these.**

Q3. Which limitation of accounting is being talked about by them?

- (a) Influenced by personal judgment**
- (b) Omission of qualitative information.**
- (c) Incomplete information**
- (d) Based on historical costs**

Q4. Which advantage of accounting is being talked about by Shyam in the last part of the first para?

- (a) Provides information regarding profit and loss**
- (b) Provides complete and systematic record**
- (c) Enables comparative study**
- (d) Evidence in legal matters**

Q5. Which branch of accounting is liked by Ram?

- (a) Financial accounting**
- (b) Cost accounting**
- (c) Management accounting**
- (d) Tax accounting**

BUSINESS STUDIES

TOPIC- Nature and Purpose of Business

- Q1. Which of the following is a characteristic related to employment?**
- (a) Production of goods and services**
 - (b) Presence of risk**
 - (c) Sale or exchange of goods and services**
 - (d) Salary or wages.**
- Q2. Which of the following cannot be classified as an objective of business?**
- (a) Investment**
 - (b) Productivity**
 - (c) Innovation**
 - (d) Profit earning.**
- Q3. The owner is rewarded for conducting business and bearing the risk. What is the form of reward the owner receives?**
- (a) Remuneration**
 - (b) Commission**
 - (c) Bonus**
 - (d) Profit.**
- Q4. Business risk is not likely to arise due to**
- (a) Changes in government policy**
 - (b) Good management**
 - (c) Employee dishonesty**
 - (d) Power failure.**
- Q5. The occupation in which people work for others and get remunerated in return is**
- (a) Business**
 - (b) Employment**
 - (c) Profession**
 - (d) None of these.**
- Q6. The economic activity in which specialized knowledge is required**
- (a) Business**
 - (b) Employment**
 - (c) Profession**
 - (d) None of these.**
- Q7. Which of the following does not characterize business activity ?**
- (a) Production of goods and services**
 - (b) Presence of risk**
 - (c) Sale or exchange of goods and services**
 - (d) Salary or wages.**
- Q8. Business earns profit for**
- (a) Income**
 - (b) Growth**
 - (c) Risk taking**
 - (d) All of them.**
- Q9. The industries which support services to other industries are known as**
- (a) Primary industries**
 - (b) Secondary industries**

- (c) Commercial industries (d) Tertiary Industries.
- Q10. Which of the broad categories of industries covers oil refinery and sugar mills?
 (a) Primary (b) Secondary
 (c) Tertiary (d) None of them.
- Q11. Which of the following cannot be classified as an auxiliary to trade?
 (a) Mining (b) Insurance
 (c) Warehousing (d) Transport.
- Q12. Fishing is what type of industry
 (a) Primary industries (b) Secondary industries
 (c) Commercial industries (d) Tertiary Industries.
- Q13. This business risk cannot be insured
 (a) Fire in a factory (b) Foreign exchange fluctuations
 (c) Accidental damage of assets (d) Shipment of goods through sea.
- Q14. This is an example of business risks due to economic cause
 (a) Earthquake (b) Lock out in a factory
 (c) Change in government policy (d) Mechanical defects in machinery.
- Q15. This removes the hindrance of persons
 (a) Trade (b) Transportation
 (c) Communication (d) Advertising.
- Q16. The business objective related to market share of a company
 (a) Earning of profits (b) Market standing
 (c) Survival (d) Productivity.

Short Answer Type Questions:-

Answer the following questions briefly.

- Q1. State the main factor which distinguishes an economic activity from a non-economic activity.
- Q2. Give an example of an activity, which is non-economic but can be economic at times.
- Q3. Mention three categories of economic activities.
- Q4. Why is business considered as an economic activity ?
- Q5. Mention the two most important characteristics of business.
- Q6. What is the modern concept of business ?
- Q7. Why is it important for every business to earn a reasonable profit ?
- Q8. Give two examples of employment.
- Q9. Enumerate any two social business objectives.
- Q10. Mention two types of primary industries.

SUBJECT: Economics

Topic: Introduction-Introductory Microeconomics

(A) Competency based questions

- 1. A growth of resources in an economy is shown in PPF by.**
 - (a) Leftward Shift (b) Unchanged PPC**
 - (c) Rightward Shift (d) None of the above**
- 2. The primary assumption about resources while drawing a PPC is**
 - (a) Resources are limited**
 - (b) Resources depend on the kind of products produced**
 - (c) Resources can be put to a particular use**
 - (d) Resources are constant and given**
- 3. Which of the following is a statement of normative nature in economics**
 - (a) Economics is a study of choices /alternatives**
 - (b)The government should be concerned with how to reduce unemployment**
 - (c) According to the estimate, in spite of severe shortage, more than 10% of houses in Indian cities are vacant**
 - (d) Accommodation of refugees is posing a big problem for Europe**
- 4. Radha is interested in knowing the level of unemployment in India. Is it a microeconomic study or a macroeconomic study?**
- 5. Although water is useful yet it is cheap. On the contrary, diamond is not much of use, still it is very expensive. Give an economic reason for this paradox.**
- 6. Classify the following statements into positive economics or normative economics, with suitable reasons:**
 - (a) Consumer price index presents a more realistic picture of the inflation rate in a country, than the wholesale price index.**
 - (b) Subsidies should be offered very carefully.**
- 7. An economy produces two goods: T-shirts and cell phones. The following table summarises its production possibilities. Calculate the marginal**

opportunity costs of T-shirts at various combinations.

T-shirts (in millions) Cell phones (in thousands)

T-shirts (in millions)	Cell phones (in thousands)
0	90000
1	80000
2	68000
3	52000
4	34000
5	10000

8. Calculate the mean from the following data:

Mid value	10	20	30	40	50
Frequency	8	12	15	9	6

Read the following hypothetical text and answer the given questions

Each economy has scarce resources and will have possibility of being exhausted gradually after a continuous use. Growth of resources, therefore, becomes a basic problem of the economy. It can achieve this objective through technological advancement. Under-developed countries like India, Pakistan, Thailand etc. have remained poor because of poor growth of their resources. Besides fuller utilization of resources, these countries should try to raise their productive capacities, by exploring further availability of natural resources and discovering better techniques for their use.

Moreover, full use of productive capacity is also indispensable for the growth of the economy.

Since economic theory is classified into Micro and Macro Theory.

Microeconomic theory deals with the allocation of resources in the market economy. In this theory, decisions regarding 'what', 'how' and 'for whom' to produce are decided on the basis of price mechanism. Goods are freely bought and sold in the market economy on an agreed price. Macroeconomic theory

deals with the fuller and efficient use of resources. It also deals with the growth of resources and problems relating saving, investment, inflation, unemployment etc. Development economics deals with the problem of growth of resources

Which is a central problem of an economy?

- (a) Allocation of resources**
- (b) optimum utilization of resources**
- (c) Economic development**
- (d) all of these**

To which factor, economic problem is basically related to:

- (a) Choice**
- (b) Consumer selection**
- (c) firm selection**
- (d) none of these**

Macro Economics deals with the

- (a) Allocation of resources**
- (b) Aggregate use of resources**
- (c) both (a) & (b)**
- (d) none of these**

(B) Project

As a part of your assessment , a research work (project) has to be submitted by the students.

You may choose to do the research work on any of the topic suggested in the list. The research work must have a title page, main content and references. It should be of 20-25 pages excluding tables, diagrams and references.

Suggested topics for project:

GST

Demonetization

Consumer Equilibrium

Demand (any product can be taken)

Supply (any product can be taken)

Market Economy

Monopoly market

Any other

APPLIED MATHEMATICS

Topic: Sets

- The number of subsets of a set containing n elements is
(a) 2^n (b) $2^n - 1$ (c) $2^n + 1$ (d) n^n
- Let $A = \{2, 5\}$, then subsets of set A are ϕ , $\{2\}$, $\{5\}$, $\{2, 5\}$, i.e. 4 subsets then the number of elements its power set contains are
(a) 4 (b) 42 (c) 10 (d) 2
- The set $(A \cap B)' \cup (B \cap C)$ is equal to
(a) $A' \cup B \cup C$ (b) $A' \cup B$ (c) $A' \cup C'$ (d) $A' \cap B$
- Let S = set of all points inside the square, T = the set of points inside the triangle and C = the set of points inside the circle. If the triangle and circle intersect each other and are contained in a square. Then
(a) $S \cap T \cap C = \phi$ (b) $S \cup T \cup C = C$ (c) $S \cup T \cup C = S$ (d) $S \cup T = S \cap C$
- If set A : numbers multiple of 4 and set B : numbers multiple of 6, then set $A \cap B$ is
(a) numbers multiple of 2 (b) numbers multiple of 4
(c) numbers multiple of 12 (d) numbers multiple of 24
- For disjoint sets A and B , $n(A) = 3$, $n(B) = 5$, then $n(A \cap B)$ is
(a) 0 (b) 3 (c) 5 (d) 8
- Representation of set $A = \{x \mid x \in \mathbb{Z}, x^2 < 20\}$ in the roster form is
(a) $\{1, 2, 3, \dots, 20\}$ (b) $\{1, 2, 3, 4\}$
(c) $\{0, 1, 2, 3, 4\}$ (d) $\{-4, -3, -2, -1, 0, 1, 2, 3, 4\}$
- The set $\{-1, 1\}$ in the set builder form can be written as
(a) $\{-1, 1\}$ (b) $\{x \in \mathbb{W} : x \leq 1\}$
(c) $\{x \in \mathbb{Z} : x \leq 1\}$ (d) $\{x : x \text{ is a solution of } x^2 = 1\}$

For Q9 and Q10, a statement of assertion (A) is followed by a statement of reason (R). Choose the correct answer out of the following choices.

- (a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.
- Assertion (A):** The set $A = \{x : x \text{ is an even prime number greater than } 2\}$ is the empty set.
Reason (R): The set $B = \{x : x^2 = 4, x \text{ is odd}\}$ is not an empty set.
- Assertion (A):** If $n(A) = 3$, $n(B) = 6$ and $A \subset B$, then the number of elements in $A \cup B$ is 9.
Reason (R): If A and B are disjoint, then $n(A \cup B)$ is $n(A) + n(B)$.
- A and B are two sets such that $n(A - B) = 14 + x$, $n(B - A) = 3x$ and $n(A \cap B) = x$, draw a Venn diagram to illustrate information and if $n(A) = n(B)$ then find the value of x .
- Two finite sets have m and n elements. The total number of subsets of the first set is 56 more than the total number of subsets of the second set. Find the values of m and n .
- A and B are two sets such that $n(A) = 3$ and $n(B) = 6$. Find (i) minimum value of $n(A \cap B)$ (ii) maximum value of $n(A \cap B)$.

14. If $U = \{x : x \leq 10, x \in \mathbb{N}\}$, $A = \{x : x \in \mathbb{N}, x \text{ is prime}\}$, $B = \{x : x \in \mathbb{N}, x \text{ is even}\}$, write $A \cap B'$ in roster form.
15. In an examination, 80% students passed in Mathematics, 72% passed in Science and 13% failed in both the subjects, if 312 students passed in both the subjects. Find the total number of students who appeared in the examination.
16. Let A , B and C be three sets such that $A \cup B = A \cup C$ and $A \cap B = A \cap C$. Show that $B = C$.
17. Let $U = \{1, 2, 3, 4, 5, 6, 8\}$, $A = \{2, 3, 4\}$, $B = \{3, 4, 5\}$. Show that $(A \cup B)' = A' \cap B'$ and $(A \cap B)' = A' \cup B'$
18. In a group of 50 students, the number of students studying French, English, Sanskrit were found to be as follows :
 French = 17, English = 13, Sanskrit = 15
 French and English = 9, English and Sanskrit = 4
 French and Sanskrit = 5, English, French and Sanskrit = 3. Find the number of students who study
 (i) French only
 (ii) English only
 (iii) Sanskrit only
 (iv) English and Sanskrit but not French
 (v) French and Sanskrit but not English
19. In a city of 56,000 people, following is the number of fans of players Rohit (R), Virat (V) and Dhoni (D):

Players	Number of Fans
Rohit	23,000
Virat	25,000
Dhoni	18,000
Rohit and Virat	12,000
Rohit and Dhoni	10,000
Virat and Dhoni	8,000
Rohit, Virat and Dhoni	3,000

Based on the above information, answer the following:

- (i) How many people are fans of at least 2 players?
 (ii) How many people are fans of exactly 1 player?
 (iii) How many people are fans of exactly 2 players?
 (iv) How many people follow R or V but not D?
20. In class XI of one International school in Hyderabad, there are 200 students out of which 80 have taken Mathematics, 120 have taken Economics and 90 have taken Physical Education. If 50 have taken Mathematics and Economics, 60 have taken Economics and Physical Education, 40 have taken Mathematics and Economics.
- If 20 students have taken all three subjects then on the basis of above information answer the following:
- (i) Find the number of students who have taken at least one of the subjects.
 (ii) Find the number of students who have taken at most one of the subjects.
 (iii) Find the number of students who has taken none of the subject.
 (iv) Find the number of students who have taken exactly one subject.

Topic : Relation

- If $A \times B = \{(a, 1), (b, 3), (a, 3), (b, 1), (a, 2), (b, 2)\}$, find A and B, then set B is
(a) {a} (b) {a, b} (c) {1, 2} (d) {1, 2, 3}
- If $n(A) = 3, n(B) = 2$, then number of non empty relations from set A to set B are
(a) 8 (b) 4 (c) 64 (d) 63
- Given set $A = \{1, 2, 3, \dots, 10\}$. Relation R is defined in set A as $R = \{(a, b) \in A \times A : a = 2b\}$. Then range of relation R is
(a) {2, 4, 6, 8, 10} (b) {1, 3, 5, 7, 9} (c) {(2, 1), (4, 2), (6, 3), (8, 4), (10, 5)} (d) {1, 2, 3, 4, 5}

For Q4 and Q5, a statement of assertion

(A) is followed by a statement of reason (R).

Choose the correct answer out of the following choices.

- Both A and R are true and R is the correct explanation of A.
 - Both A and R are true but R is not the correct explanation of A.
 - A is true but R is false.
 - A is false but R is true.
4. Assertion (A): Let $A = \{1, 2\}$ and $B = \{3, 4\}$. Then, number of relations from A to B is 16.
Reason (R): If $n(A) = p$ and $n(B) = q$, then number of relations is 2^{pq} .
5. Assertion (A): The domain of the relation $R = \{(x + 2, x + 4) : x \in \mathbb{N}, x < 8\}$ is $\{3, 4, 5, 6, 7, 8, 9\}$.
Reason (R): The range of the relation $R = \{(x + 2, x + 4) : x \in \mathbb{N}, x < 8\}$ is $\{1, 2, 3, 4, 5, 6, 7\}$.
6. Determine the domain and range of the relation R defined by $R = \{(x + 1, x + 5) : x \in (0, 1, 2, 3, 4, 5)\}$
7. If $A = \{x : x \in \mathbb{W}, x < 2\}$, $B = \{x : x \in \mathbb{N}, 1 < x < 5\}$, $C = \{3, 5\}$ find (i) $A \times (B \cap C)$ (ii) $A \times (B \cup C)$

8. Maths teacher started the lesson Relations and Functions in Class XI. He explained the following topics:

Ordered Pairs: The ordered pair of two elements a and b is denoted by (a, b) : a is first element (or first component) and b is second element (or second component).

Two ordered pairs are equal if their corresponding elements are equal. , $(a, b) = (c, d) \Rightarrow a = c$ and $b = d$

Cartesian Product of Two Sets: For two non-empty sets A and B, the cartesian product $A \times B$ is the set of all ordered pairs of elements from sets A and B. In symbolic form, it can be written as $A \times B = \{(a, b) : a \in A, b \in B\}$

Based on the above topics, answer the following questions.

- If $(a - 3, b + 7) = (3, 7)$, then find the value of a and b
- If $(x + 6, y - 2) = (0, 6)$, then find the value of x and y
- If $(x + 2, 4) = (5, 2x + y)$, then find the value of x and y
- Find x and y, if $(x + 3, 5) = (6, 2x + y)$.

9. Maths teacher explained the topics: Method to Find the Sets When Cartesian Product is Given For finding these two sets, we write first element of each ordered pair in first set say A and corresponding second element in second set B (say).

Number of Elements in Cartesian Product of Two Sets If there are p elements in set A and q elements in set B, then there will be pq $n(A) = p$ and $n(B) = q$, then $n(A \times B) = pq$

Based on the above two topic, answer the following questions.

- If $A \times B = \{(a, 1), (b, 3), (a, 3), (b, 1), (a, 2), (b, 2)\}$. Then, find A and B
- If the set A has 3 elements and set B has 4 elements, then find number of elements in $A \times B$
- A and B are two sets given in such a way that $A \times B$ contains 6 elements. If three elements of $A \times B$ are $(1, 3), (2, 5)$ and $(3, 3)$, then find A, B
- The cartesian product $P \times P$ has 16 elements among which are found $(a, 1)$ and $(b, 2)$. Then, find the



1. Who is the inventor of Artificial Intelligence?

- a) Geoffrey Hinton
- b) Andrew Ng
- c) John McCarthy
- d) Jürgen Schmidhuber

2. The different types of machine learning are?

- a) Supervised
- b) Unsupervised
- c) Reinforcement
- d) All of the above

3. How can we achieve Artificial Intelligence in real life?

- a) Machine Learning
- b) Deep Learning
- c) Both A and B
- d) None of the above

4. What is divided into multiple layers and each layer is further divided into several blocks called as node?

- (a) Neural Network
- (b) Hidden layers
- (c) Machine Learning
- (d) None of these

5. It is a type of data which we can interact and work with every day.

- (a) Unstructured Data
- (b) Structured Data
- (c) Processed data
- (d) None of these

6. In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as:

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but r is true.
- (e) Both A and R are false or not fully true.

1. **Assertion:** Deep Learning is a subset of machine learning.

Reason: Artificial Intelligence include both deep learning and machine learning.

2. **Assertion:** Supervised learning makes use of unlabelled data.

Reason: Any ML technique revolves around training the AI model with data.

3. **Assertion:** Input layer is the first layer of neural network.

Reason: Input layer displays the results as given by the AI model.

Answer the following questions:

1. Write the name of some world famous AI machine.

2. Write the Difference between Conventional programming and Machine Learning.

3. Define the following terms.

(i) Artificial Intelligence

(ii) Chat bots

(iii) Computer vision

(iv) Natural language processing

4. Will Artificial Intelligence Applications Rules Future Information Technology.?

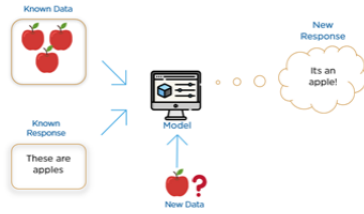
5. Identify the AI domain:

- Image capture
- Object detection
- Pattern Reorganization

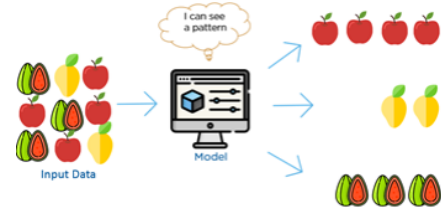
- Recognition and Analysis
- Price Comparing
- Speech Reorganization Pattern Reorganization
- Facelock system

5. Identify the following pictures and write about it.

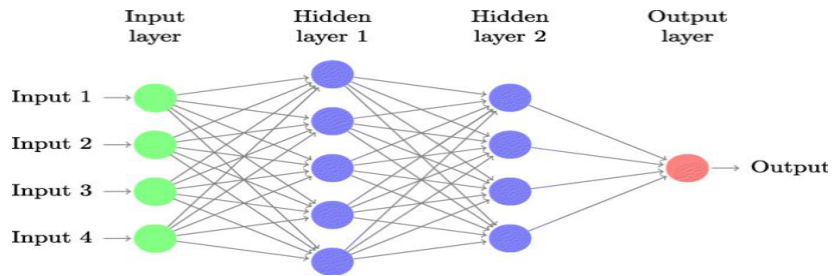
(i)



(ii)



(iii)





I Topic - Practice of SAI Khelo India Fitness Test during summer at home.

Aim- To understand and promote healthy and fit lifestyle.

Objectives-

- To build cardio vascular endurance,
- To improve muscular endurance,
- To develop strength,
- To improve flexibility,
- To increase Neuromuscular coordination,
- To maintain healthy body weight.

Dear Athletes/Players,

Summer is the best time to storm your brain as there is no pressure on you and this is the best leisure time for you.

So keeping this in mind, I am sharing with you an assignment on SAI Khelo India Fitness Test.

For this assignment first you need to read the PDF file of SAI Khelo India Fitness Test very carefully and after that make a score card of your performance, in which on day one you need to perform all the tests and feed the score whatever you scored of different tests. Then practice of all the tests on regular basis and update your score card every week(for 4 weeks).

So in the end to the summer you will reach at your final score in your score card.

Make a comparison of your progress and right a short note of your assignment journey and submit it in June month.

Regards.

Precautionary measures -

- Avoid running on danger areas like roof, traffic road etc.
- Avoid exercise if not well or injured.
- Avoid exercise after meal, make 2.5 to 3 hours of gape after heavy meal(lunch).
- Practice with proper technique as suggested in PDF file.
- Exercise progression should be gradual.
- Avoid over exertion during practice.
- Have a healthy meal in your diet.



This assignment aims to introduce you to the exciting world of entrepreneurship, spark your creativity, and lay the foundation for your entrepreneurial journey. Throughout the summer break, you will have the opportunity to explore fundamental concepts, conduct basic market research, and develop an initial business idea.

Assignment Overview:

1. Understanding Entrepreneurship:

- Research and define the concept of entrepreneurship. Explore the characteristics of successful entrepreneurs and the importance of entrepreneurship in today's economy.

- Write a brief essay discussing why entrepreneurship is essential for economic growth and innovation.

2. Identifying Opportunities:

- Choose an industry or sector that interests you and conduct basic market research. Gather information on market trends, consumer preferences, and potential opportunities.
- Create a simple SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) based on your findings.

3. Business Idea Generation:

- Brainstorm potential business ideas based on your interests, skills, and the identified opportunities from your market research.
- Select one promising business idea and outline its key features, target market, and value proposition.

4. Product or Service Prototype:

- Develop a basic prototype or mock-up of your chosen product or service idea. This could be a sketch, a model, or a digital representation.
- Include a brief description of your prototype and how it addresses the needs of your target market.

5. Reflection and Future Planning:

- Reflect on your experience with the assignment. What did you learn about entrepreneurship? What challenges did you encounter, and how did you overcome them?
- Based on your reflections, outline your goals and aspirations for further exploring entrepreneurship in the future.

Evaluation Criteria:

Your assignments will be evaluated based on the following criteria:

1. Understanding of entrepreneurship concepts and principles.
2. Quality of market research and identification of opportunities.
3. Creativity and feasibility of the business idea.
4. Clarity and coherence of the prototype.

5. Reflection on the assignment experience and future aspirations.

This assignment is designed to kickstart your journey into the world of entrepreneurship and encourage you to think creatively and critically about business opportunities. Embrace the challenges, explore new ideas, and unleash your entrepreneurial spirit!