1. A thin strip of an epidermal cell from the fleshy scale of an onion bulb was examined in a drop of water under a microscope. All epidermal cells looked alike and the following shows one of them:

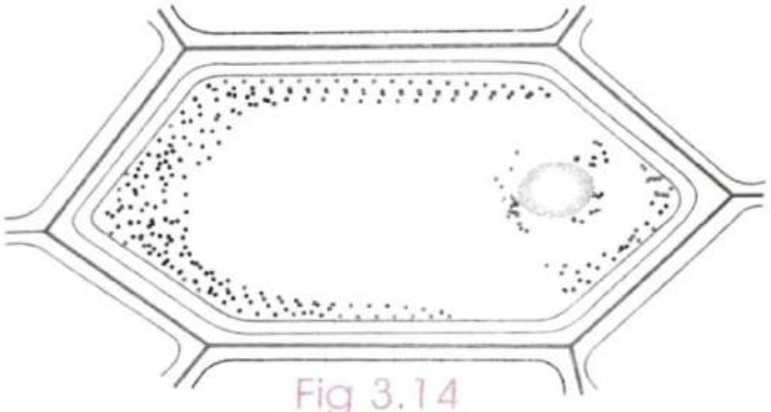


Fig 3.14

The thin strip was then transferred to a drop of a strong sugar solution on a slide and was re-examined under the microscope after about five minutes.

(a) Make a drawing of one of the epidermal cells as it would appear after immersion in a strong sugar solution.

(b) What scientific term is used for the change shown in (a) above?

(c) What would you do to bring this cell back to its original condition?

(d) Give the scientific term used for the recovery of the cell as a result of the step taken in (c) above.

2. Fig 3.15 represents the results of an experiment conducted on two freshly taken leafy shoots of a herbaceous plant. The lower ends of the shoots are dipped in ordinary water:

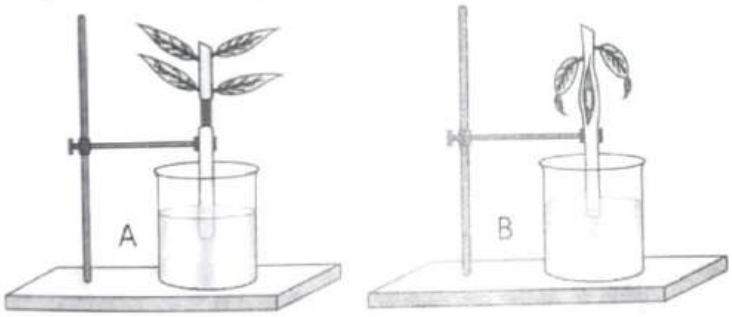


Fig 3.15

(a) What is the aim of the experiment?

(b) Some parts of the stem in both the shoots have been removed. Name the conducting tissue in shoot A and in shoot B that has been removed.

(c) What are the results of the experiment?

3. In Fig 3.16, 'A' shows a cell in the normal state and

4. Figure 3.17 represents a plant cell after being placed in a strong sugar solution. Guidelines 1 to 5 indicate the following:

(1) Cell wall (2) Strong sugar solution

(3) Protoplasm (4) Large vacuole

(5) Nucleus

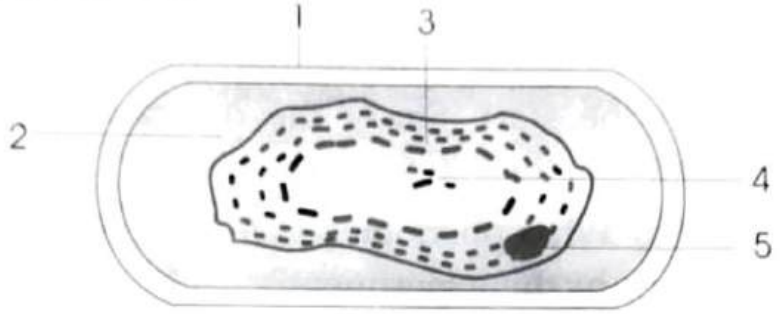


Fig 3.17

Study the diagram and answer the following questions:

(a) What is the state of the cell shown in the diagram?

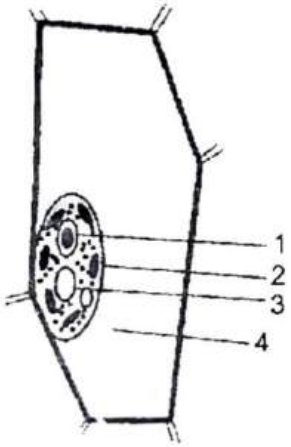
(b) Name the structure which acts as a selectively permeable membrane.

(c) If the cell had been placed in distilled water instead of strong sugar solution, which feature would not have been presented?

(d) If the cell in the diagram possessed chloroplasts, where would these be present?

(e) Name any one feature of this plant cell which is not present in animal cells.

(b) Given below is a diagram of the cell as seen under the microscope after ha placed in a solution.



(i) What is the technical term used for the state/condition of the cell shown ab
(ii) Give the technical term for the solution in which the cell was placed.
(iii) Name the parts numbered 1 to 4.
(iv) Is the cell given above a plant cell or an animal cell? Give two reasons in sup your answer as evident from the diagram.
(v) What would you do to bring this cell back to its original condition?

Genetics

Question 7

(a) A homozygous dominant tall pea plant bearing red flowers (TTRR) is cr with a homozygous recessive dwarf pea plant bearing white flowers (ttrr).

(i) What is the phenotype and genotype of F_1 individuals?

(ii) Write the possible combination of gametes that are obtained when tw hybrid plants are crossed.

(iii) Mention the phenotypic ratio of the F_2 generation.

(iv) State Mendel's Law of Independent Assortment.

(v) Name two X-linked disorders found in humans.

(b) A pea plant which is homozygous for Green pods which are inflated [GGII] is crossed with a homozygous plant for yellow pods which are constricted [ggii]. Answer the following questions:

(i) Give the phenotype and genotype of the F_1 generation.
Which type of pollination has occurred to produce F_1 generation?

(ii) Write the phenotypic ratio of the F_2 generation.

(iii) Write the possible combinations of the gametes that can be obtained if two F_1 hybrid plants are crossed.

(iv) State Mendel's law of 'Segregation of Gametes'.

(v) What is the scientific name of the plant which Mendel used for his experiments on inheritance?

Question "

(a) In a homozygous pea plant, axial flowers **(A)** are dominant over terminal flowers **(a)**.

(i) What is the phenotype and genotype of the $\mathbf{F_1}$ generation if a plant bearing pure axial flowers is crossed with a plant bearing pure terminal flowers?

(ii) Draw a Punnett square board to show the gametes and offsprings when both the parent plants are heterozygous for axial flowers.

(iii) What is the phenotypic ratio and genotypic ratio of the above cross shown in (ii)?

(iv) State Mendel's Law of Dominance.

(v) Name two genetic disorders commonly seen in human males.

Question "

(a) A homozygous tall plant (T) bearing red coloured (R) flowers is crossed with a homozygous dwarf (t) plant bearing white (r) flowers :-

(i) Give the genotype and phenotype of the plants of F_1 generation.

(ii) Mention the possible combinations of the gametes that can be obtained from the F_1 hybrid plant.

(iii) State the Mendel's law of Independent Assortment.

(iv) Mention the phenotypes of the offsprings obtained in F_2 generation.

(v) What is the phenotypic ratio obtained in F_2 generation?

In a homozygous plant round seeds (R) are dominant over wrinkled seeds (r).

(i) Draw a Punnett square to show the gametes and offspring when both the plants have heterozygous round seeds (Rr).

(ii) Mention the Phenotype and Genotype ratios of the offsprings in F_2 generation.

(iii) Name the sex chromosomes in human males and females.

(iv) Briefly explain the term 'Mutation'.

(v) What is the number of chromosomes in the gametes of human beings?

History and Civics

HISTORY HOLIDAY HOMEWORK-2025-26
STD X

1.) Write the MCQ and Short Answer Questions from the Previous Year Board papers from 2018 onwards till 2024, for the following chapters- Union Legislature, Union Executive, Union Cabinet.
2.)) Thoroughly learn the chapters taught in class.
3.) Make the History Project for your internal assessment according to the instructions mentioned below.

HISTORY PROJECT

FIRST WORLD WAR- CAUSES AND CONSEQUENCES

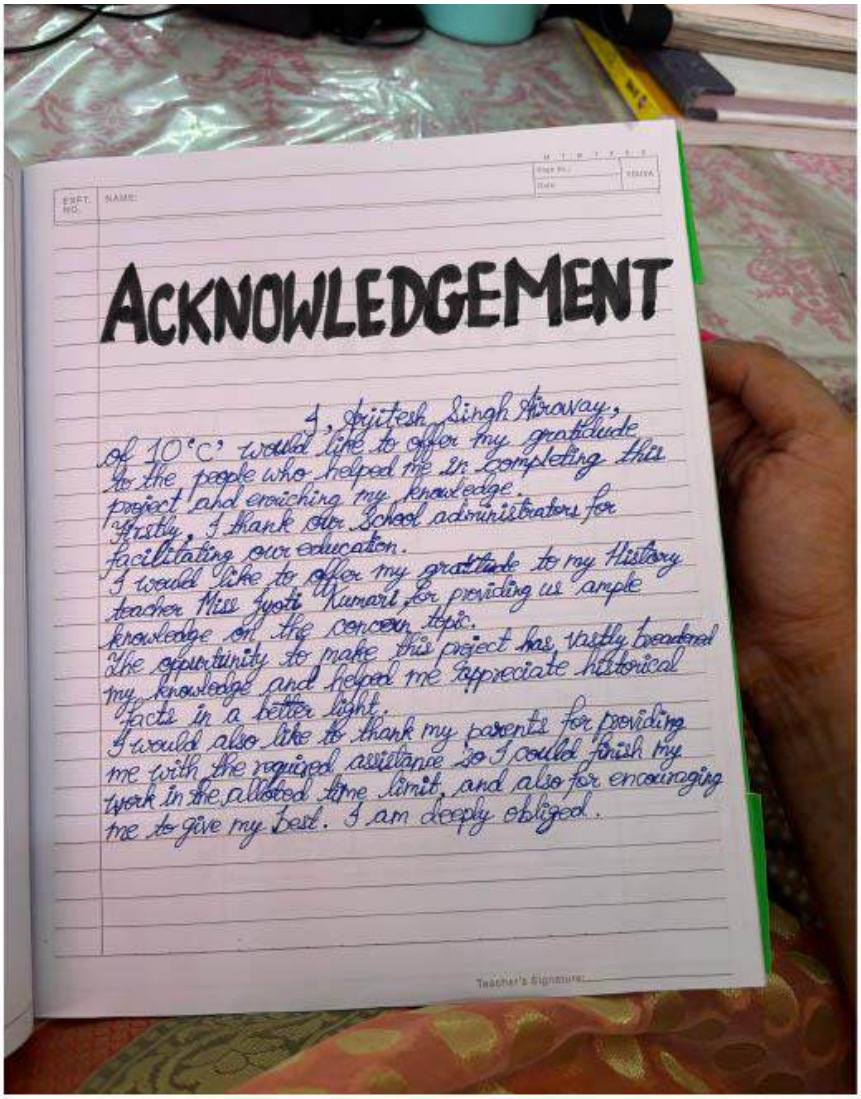
Instructions:-
1.) The students should only use the school practical copy consisting of 96 pages. (Around Rs 65).They will cover it with a cellophane paper. Only school practical copies will be accepted.
2.) Students shall not use red or green pen for writing. Only black or blue pen can be used.
3.) Students may either paste black and white or coloured pictures. They may even draw sketches of characters/events. A brief description of the picture pasted should be provided.
4.) The project should contain a minimum of 30 pages. The maximum page limit lies on the discretion of the student.
5.) The students shall not to decorate the project with any stickers or other ornaments.
6.) The students shall fill in the details- name, class, section and roll number correctly.

Content:-

The following order is be followed for the History Project.
1.) Acknowledgment
2.) Content/ Index
3.) Introduction to History Project
4.) Introduction to First World War- A brief sketch of the political scenario leading to the First World War, Uniqueness of the War
5.) Causes of the War- All causes such as Franco Prussian War, Armament Race, Imperialism, Immediate Cause to be discussed in detail
6.) Events to be mentioned briefly for chronology.
7.) Consequences- Special Emphasis on Treaty of Versailles, Treaty of Sevres, Territorial Rearrangement, Formation of League of Nations and other consequences to be discussed.
8.) Conclusion (it should be your own interpretation)
9.) Bibliography (sources from which the content has been drawn)
10.) Thank You

Note:-
The students should submit the Project on **7th July, 2025**. It is mandatory to submit the work on time.

4.) Make 20 MCQs from all the chapters taught: Civics: Chapters 1, 2, 3. Write them in your fair notebook.



ACKNOWLEDGEMENT

I, Jujitesh Singh Hiraway, of 10°C' would like to offer my gratitude to the people who helped me in completing this project and enriching my knowledge.
Firstly, I thank our School administrators for facilitating our education.
I would like to offer my gratitude to my History teacher Miss Jyoti Kumari for providing us ample knowledge on the concern topic.
The opportunity to make this project has vastly broadened my knowledge and helped me appreciate historical facts in a better light.
I would also like to thank my parents for providing me with the required assistance so I could finish my work in the allotted time limit and also for encouraging me to give my best. I am deeply obliged.

Teacher's Signature:

Geography Project Work (2025-26)

For Class- X

Name of the Topic: **TRANSPORT IN INDIA**

Format of the project

1.Acknowledgement

2.Contents:

a) Introduction of the topic

b)Importance of Transport

c)Means of transport in India

d) Roadways

e) Railways

f) Waterways

g) Airways

h) The role of transport network in the development of India.

i) Bibliography

Points to be noted when writing a Project :

1. **Follow the format of the project which is given to you.**
2. **Handwriting should be neat and words should be clearly written.**
3. **Use either blue or black Gel pen for writing.**
4. **Headings and sub-headings should be clearly written and highlighted.**
5. **Pictures should be pasted neatly and headings should be given**
6. **Pictures should be Photostatted and diagrams and sketches should be used to explain facts.**
7. **No decorative materials to be used**
8. **The topic heading ,the name ,the class and roll no. of the student should be written on the first page of the project copy.**
9. **Refer to the textbook chapter 12.**

Note: Use only Practical notebook prescribed by the School.

MATHS ASSIGNMENTS
STD. 10 (2025-26)

NOTE :

1. Make separate notebook for Maths Assignment.
2. Answer the questions in the same sequence chapter wise as asked below.
3. Work should be neat and clean.
4. Date of submission : 25th June, 2025

Chapter: Banking

1. Mohan has a recurring deposit account in a bank for 2 years at 6% p.a. simple interest. If he gets ₹1200 as interest at the time of maturity, find:

(a) the monthly instalment

(b) the amount of maturity

2. Priyanka has a recurring deposit account of ₹1000 per month at 10% per annum. If she gets ₹5550 as interest at the time of maturity, find the total time for which the account was held.

3. Manish opened a recurring deposit account in a bank. He deposited ₹2500 per month for two years. At the time of maturity, he got ₹67,500. Find:

(a) the total interest earned by Manish

(b) the rate of interest per annum.

4. Mr Gupta has a recurring deposit account in a bank. He deposits ₹2500 per month for two years. If he gets ₹66,250 at the time of maturity, find:

(a) the interest paid by the bank

(b) the rate of interest.

5. Mr Garg deposits a certain sum of money each month in a recurring deposit account of a bank. If the rate of interest is 8% p.a, and Mr Garg gets ₹8,088 from the bank after 36 months, find the value of his monthly instalment.

6. Vandana has a recurring time deposit account of ₹340 per month at 6% p.a. If she gets ₹7157 at the time of maturity, find the total time for which the account was held.

In each of the following, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:

7. Assertion (A): A recurring deposit is also known as cumulative time deposit.

Reason (R): In a recurring deposit acount, the amount received by the account holder on the expiry of the specified period is known as premium.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

8. Assertion (A): Kaveri has a 2 years recurring deposit account and deposits ₹2000 per month. On maturity she gets ₹48,000 plus interest.

Reason (R): Maturity value = (P × n) + S.I.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.b2 (

9. Assertion (A): Mukesh deposits ₹1000 per month in a recurring deposit account for 3 years at 5% p.a. The maturity value he gets is ₹38775.

Reason (R): Under Recurring Deposit Scheme, an investor deposits a fixed amount every month for a specified time period.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

Chapter: Linear Inequations

1. Solve : $-10\frac{1}{3} < \frac{5y}{3} + 3 \leq \frac{y}{2} + 5\frac{1}{3}, y \in R$

   Graph the solution set on the number line.

2. Solve the inequation and represent the solution set on the number line:

$$-3 + x \leq \frac{8x}{3} + 2 \leq \frac{14}{3} + 2x, x \in I$$

3. Solve the following inequation and represent the solution set on the number line:

$$-3 < \frac{1}{2} - \frac{2x}{3} \leq \frac{5}{6}, x \in R$$

4. Solve the following inequation and represent the solution set on the number line:

$$4x - 19 < \frac{3x}{5} - 2 \leq \frac{-2}{5}, x \in R$$

5. Solve the inequation, write the solution set and represent it on the number line.

$$\frac{-x}{3} \leq \frac{x}{2} - 1\frac{1}{3} < \frac{1}{6}, x \in R$$

6. Find the values of x which satisfy the inequation:

$$-2\frac{5}{6} < \frac{1}{2} - \frac{2x}{3} \leq 2, x \in W$$

   Graph the solution set on the number line.

7. Solve the following inequation, write the solution set and represent it on the number line:

$$2x - 1 \geq x + \frac{7 - x}{3} > 2, x \in R$$

In each of the following, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:

8. Assertion (A): If $2x - 5 \leq 3x+2$, then $x \geq -7$.

Reason (R): Multiplying each side of an inequality by the same non-zero negative number, reverses the inequality.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

9. Assertion (A): The solution set of $x<6.5$, $x \in N$ is $\{1,2,3,4,5\}$

Reason (R) : The set of all those values of x which satisfy the given inequation is called the solution set of the inequation.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

10. Assertion (A): If $8 < 5(y+1)-2 \leq 18$, $y \in R$, then the smallest integer value of y is 0.

Reason (R): Adding or subtracting a negative value to each side of an inequation, reverses the inequality.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

Chapter: Trigonometrical Identities

1. Prove the following identity: $\frac{\sec A}{\sec A - 1} + \frac{\sec A}{\sec A + 1} = 2cosec^2 A$

2. Prove that : $\sqrt{\sec^2\theta + cosec^2\theta} = tan\theta + cot\theta$

3. Prove that : $(cosec\,\theta - sin\,\theta)(\sec\theta - \cos\theta)(\tan\theta + \cot\theta) = 1$

4. Prove that : $\frac{\sin A}{1+\cot A} - \frac{\cos A}{1+\tan A} = \sin A - \cos A$

5. Prove that : $\sin^4\theta - \cos^4\theta = 1 - 2\cos^2\theta$

6. Prove that : $\frac{1-\sin\theta}{1+\sin\theta} = (\sec\theta - \tan\theta)^2$

7. Prove that : $\sin^2 A \cos^2 B - \cos^2 A \sin^2 B = \sin^2 A - \sin^2 B$

8. Simplify : $(\sec^2\theta - 2tan^2\theta)(1 - \sin\theta)(1 + \sin\theta)$

9. Find the value of : $\tan^2 A + \cot^2 A - \sec^2 A\, cosec^2 A$

10. Simplify : $\frac{\sin A}{\cot A + cosec\, A} - \frac{\cos A}{\cot A - cosec\, A}$

In each of the following, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct

11. Assertion (A): If $x = 2\sin^2 A$, $y = 2\cos^2 A + 1$, then the value of $x + y$ is 3.

Reason (R) : For an acute angle θ, $\sin^2\theta + \cos^2\theta = 1$

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

12. Assertion (A) : $\sin\theta$ can be expressed in terms of $\sec\theta$ as : $\sin\theta = \frac{\sqrt{\sec^2\theta - 1}}{\sec\theta}$

Reason (R) : For an acute angle θ, $1 + \tan^2\theta = \sec^2\theta$

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

13. Assertion (A) : $(1 - \text{cosec}^2 A)(1 - \sec^2 A) = 1$.

Reason (R) : $1 + \tan^2 A = \sec^2 A$ and $1 + \cot^2 A = \text{cosec}^2 A$.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

14. Assertion (A) : If $2\tan A = 4\sin A$, then $\sin A = \cos A$.

Reason (R) : For any acute angle A, $\sin^2 A.\text{cosec}^2 A = 1$.

(a) A is true, R is false.

(b) A is false, R is true.

(c) Both A and R are true, and R is the correct reason for A.

(d) Both A and R are true, and R is incorrect reason for A.

****

Computer Applications

Holiday homework class 10th (computer application)

Q1 Design a program as per the following details

Find the value of series s=x^1/1!+ x^2/2!.....x^n/n!

Make use of the methods given below

Int fact(int n) . It returns the factorial of n

Double sum(int x,int n) – it calculates and returns the value of s using the method Fact()

Write the main() method and invoke functions accordingly

Q2. Write a program to overload a method Area() as follows

Void area(double r) it calcutes and prints the area of circle

Void area (int a ,int b) it calculates and prints area of rectangle

Void area(int a,int b,int c) using 3 sides of a triangle it calculates and prints area of triangle

Write the main() method and invoke functions according to users choice

Economics Applications

HOLIDAY HOMEWORK 2025-26

ECONOMICS PROJECT

STANDARD – 10

TOPICS

1. Banking
2. Village Survey
3. Market Survey
4. Household Survey

Each Project 25 Marks

Two Projects in two Practical copies to be

used. Two Projects in each copy.

Project - 1 Banking

1. Acknowledgement
2. Content
3. Location of the Bank
4. Explain about the function of the Bank . Refer Book -Chapter -17 Banking
5. Function of commercial and Central Bank in detail.
6. Take interview of Bank employee
7. Question to be asked
   (a) What is your Name ?
   (b) From How many years you are in this job?
   (c) Are you satisfied with your job?
   (d) What is your future prospect in this job?
   (e) Any problem that particular branch is facing?
8. Conclusion

Project -2

Village Survey

1. Acknowledgement
2. Content
3. Name and Location of the village from nearest railway station
4. Area of the particular village.
5. Population ratio of Male and Female.
6. Educational facilities – School and College 7. Occupation – Like farming ,Cattle rearing etc.
8. Write about MGNREGA.
9. Transportation facility
10. Sources of water like well , tube well

11. Electricity facilities
12. Waste management – How they dispose waste ? Whether they have proper drainage system? Sanitation facility
13. What problem that particular village is facing like lack of electricity,road
14. What step should be taken by the Govt. for the upliftment of the village
15. Conclusion

Project -3

Household

Survey

Take ten houses for survey and collect these information from each household.

1. Name of the head of the family
2. Number of family members in the house and children.
3. Number of earning members
4. Whether joint/Nuclear family
5. Income and expenses of the family on various head.
6. Items Expenditure
   Food Cloth Rent
   Education Electricity LPG
   Expenditure on LIC premium Servant
   Other expenses Medicine etc.
   Saving
7. Conclusion Project-4

Market Survey

Select ten shops for Markey Survey

1. Location of the shop
2. Name of the owner
3. Five products weekly sale
4. Five brands of each product to be selected to observe their sale.
5. Product : Pen , Shop, Shampoo , Toothpaste, Chocolates Eg.

Cello	Agni	Trimax	Link	Flair
10	50	5	20	50
…….	….	…..	…..	….

6. Interview of the consumer
   (a) Which product do you like ?
   (b) What is the basis behind the choice of the product?
   (c) Conclusion

16. Electricity facilities
17. Waste management – How they dispose waste ? Whether they have proper drainage system? Sanitation facility
18. What problem that particular village is facing like lack of electricity,road
19. What step should be taken by the Govt. for the upliftment of the village
20. Conclusion

Project -3 Household Survey

Take ten houses for survey and collect these information from each household.

1. Name of the head of the family
2. Number of family members in the house and children.
3. Number of earning members
4. Whether joint/Nuclear family
5. Income and expenses of the family on various head.
6. Items Expenditure
   Food Cloth Rent
   Education Electricity LPG
   Expenditure on LIC premium Servant
   Other expenses Medicine etc. Saving
7. Conclusion Project-4

Market Survey

Select ten shops for Markey Survey

7. Location of the shop
8. Name of the owner
9. Five products weekly sale
10. Five brands of each product to be selected to observe their sale.
11. Product : Pen , Shop, Shampoo , Toothpaste, Chocolates Eg.

Cello	Agni	Trimax	Link	Flair
10	50	5	20	50
…….	….	…..	…..	….

12. Interview of the consumer
    (a) Which product do you like ?
    (b) What is the basis behind the choice of the product?
    (c) Conclusion

Project work

Std 10 Commercial Studies

You are required to prepare two projects

Project 1. Advertising and sales promotion

Project 2. Functions of Banks

Sequence of the pages and activities

1. Cover page
2. Acknowledgement
3. Certificate
4. Contents

Project 1

i) Introduction to advertising
ii) Sales promotion
iii) Methods of advertising
iv) Different types of Sales Promotion activities
v) How does advertising and sales promotion benefit the business
vi) Conclusion

Project 2

vii) Different types of bank account
viii) Introduction to banks and banking
ix) Out of particular bank for example State Bank of India ICICI Bank etc
x) Functions performed by the bank
xi) Conclusion

Bibliography