CHEMISTRY

Std 10 Holiday Homework

I. Complete the Practical copy (CATIONS) from the pdf.

II. Learn chapters 1,2,3 and 4 and prepare well for your Send up.

Read the instructions carefully before writing in the copy

(Instruction:- Diagrams to be drawn with sharpened pencil and at the center of the page leaving enough space on either side for labeling. A margin is to be drawn all the four sides of the plain page on which the diagrams are drawn. Labeling has to be done with pencil only, no colour pencil or sketch pen to be used. All diagrams are to be done by graphite pencil only. Format for writing the experiments as given in the PDF should be strictly followed. If the instructions are not followed the work will not be evaluated.

Buy a thick practical copy from the book stall. Do not write anything on the Certificate Page as well as on the Index page. That will be filled in the class in the presence of the concern teacher. Now on the Centre of the next ruled Page Write in Bold latter- "CELL DIVISION".

Then turn to the next page. On the plain side You will draw the diagram of each of the stages of cell division given below. Here you do not need to write the notes of each stage on a fresh page. You may write about two stages on the same page. Because all these are coming under the title :- Experiment 1.But make sure the diagram is drawn just on the opposite side(Plain page) of the notes on each stage. That means both should come face to face)

Cell Division

Experiment 1

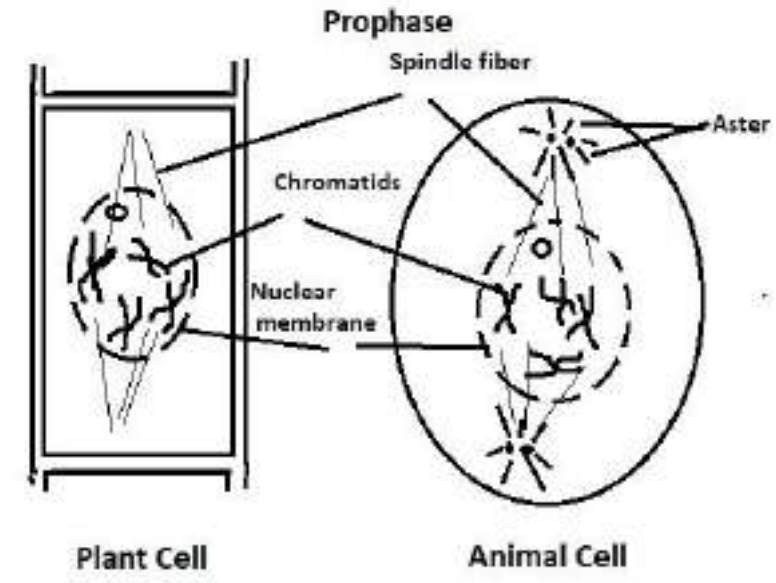
Stages of mitosis.

Aim:-	To study the various stages of mitosis from permanent slides.
Observation:-	Mitosis is a type of cell division in which one cell gives rise to two daughter cells which have the same number of chromosome as in the parent cell. In this cell division nuclear division

	(Karyokinesis) takes place first which takes place in four phases.

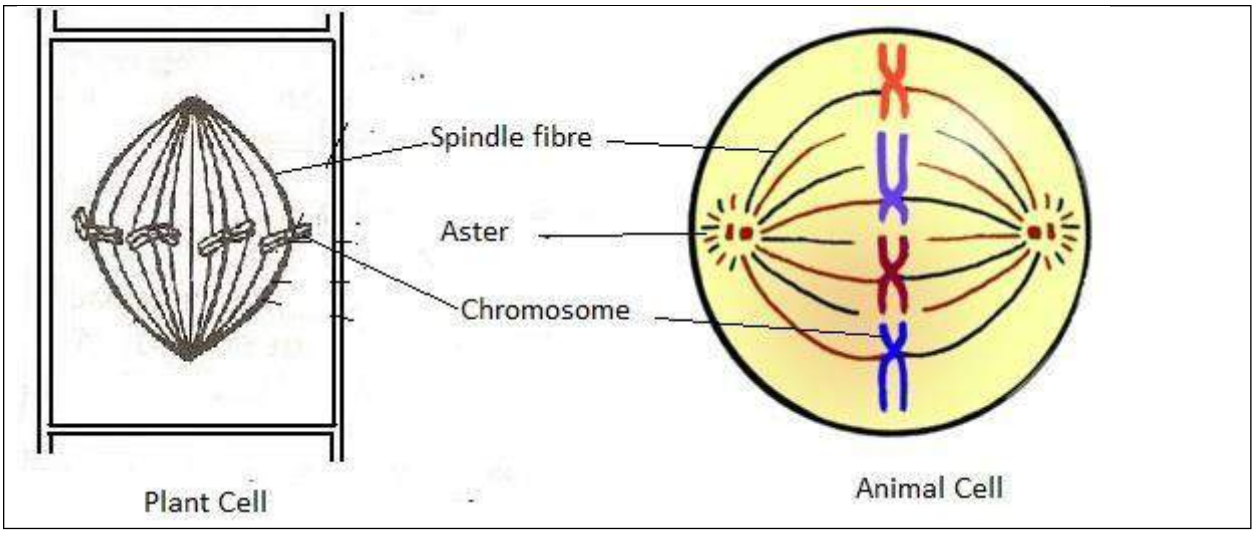
Prophase

Events that occur during Prophase.	1. The chromatin fibers disentangle, condense and appear as duplicated chromatids attached by centromere. 2. In Animal cell, the centrioles split and migrate to the opposite poles. 3. The spindle fibers appear between the two poles of the dividing cell. 4. Nuclear membrane and nucleolus disappear.



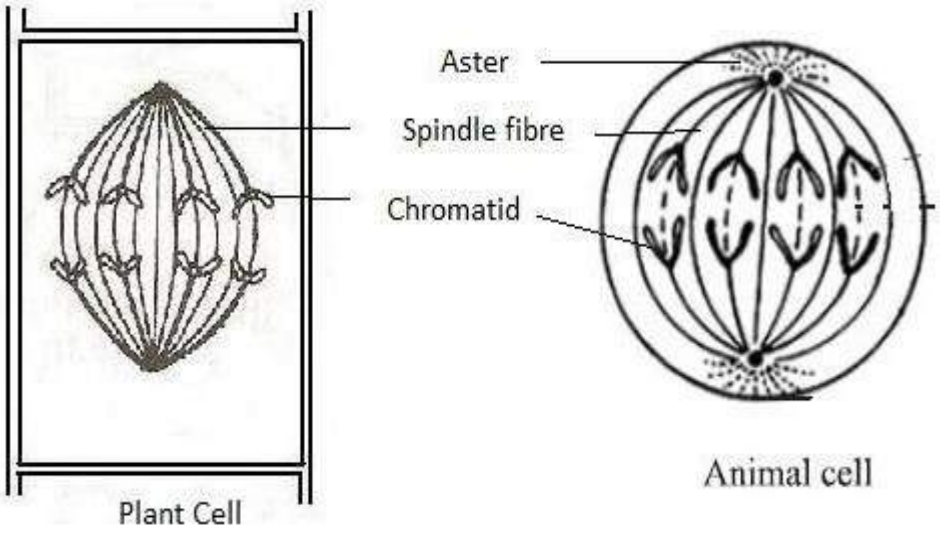
Metaphase.

Events that occur during Metapahse.	1. The chromosomes arranged on the equatorial plane of the cell. 2. Spindle fibers are attached to the centromere of each duplicated chromosome from both the poles.



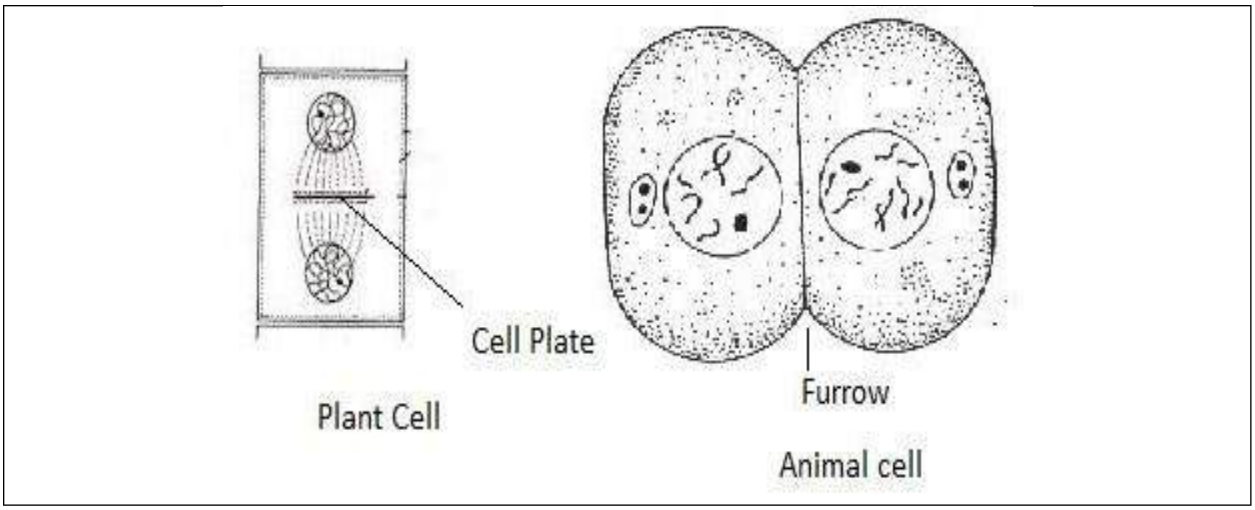
Anaphase

Events that occur during Anaphase.	1. The centromere split dividing the chromatids which are pulled towards the opposite poles of the cell due to the shortening of spindle fibers.



Telophase

Events that occur during Telophase.	1. The chromatids uncoil into chromatin network. 2. Nuclear membrane and nucleolus reappear forming two daughter nuclei.



(Instructions:- Now turn to a new page and write at the center in bold letters what is given below)

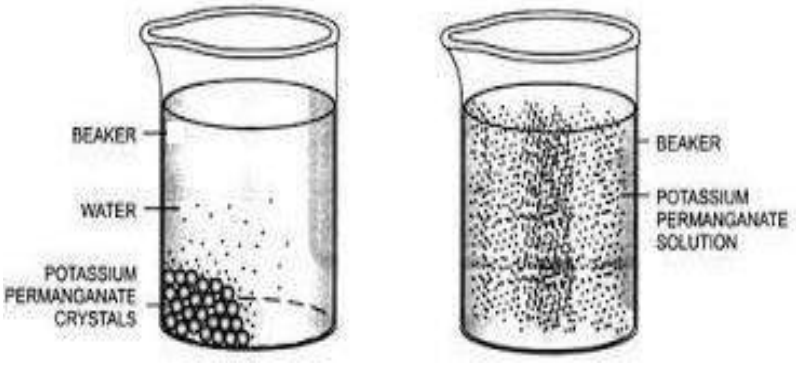
Plant Physiology

(Instructions:- Now turn to the next page and write the notes on the ruled page and diagram on the plain page as it is given below.)

Experiment 2

Study of Diffusion

Aim:	To demonstrate the process of diffusion
Requirement:	A beaker, distilled water, a few crystals of potassium permanganate.
-Procedure: -	A few potassium permanganate crystals were droppedin a beaker filled with distilled water. The beaker was left undisturbed for a few hours.
Observation :-	The dissolution of potassium crystals took place immediately. In the beginning water in the vicinity of thecrystals becomes violet in colour. Finally the whole water turned pink.
Inference :-	The molecules of potassium permanganate were highly concentrated in the crystals. When the crystals dissolvedthe molecule still was at higher concentration than the rest of the water in the surrounding area. The moleculesmoved from their region of higher concentration to their region of lower concentration. The trend continued tillthe molecules were uniformly distributed.

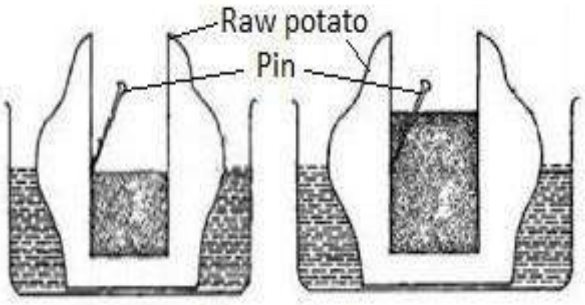
	The experiment demonstrate diffusion which is the movement of molecules from their higher concentrationto their lower concentration when they are in direct contact.
	

(Instruction:- Now Turn to a new page and draw the diagram on the plain page and notes on the ruled page as it is given below. Likewise each experiment should start on a new page till experiment Number 11)

Experiment 3

Study of Osmosis

Aim :-	To demonstrate osmosis using a potato osmoscope.
Requirements :-	A raw potato, a petridish, concentrated sugar solution, distilled water, and a paper pin.
Procedure :-	A large sized potato was peeled and a cavity was made with a cork borer. The cavity was filled with concentrated sugar solution and its level was marked by a pin. The petridish was filled with water and a potato was placed in it
Observation :-	The level of sugar solution rose in the cavity.
Inference :-	The water molecules move from their region of higher concentration to their region of lower concentration through the differentially permeable membrane of the cells of potato.

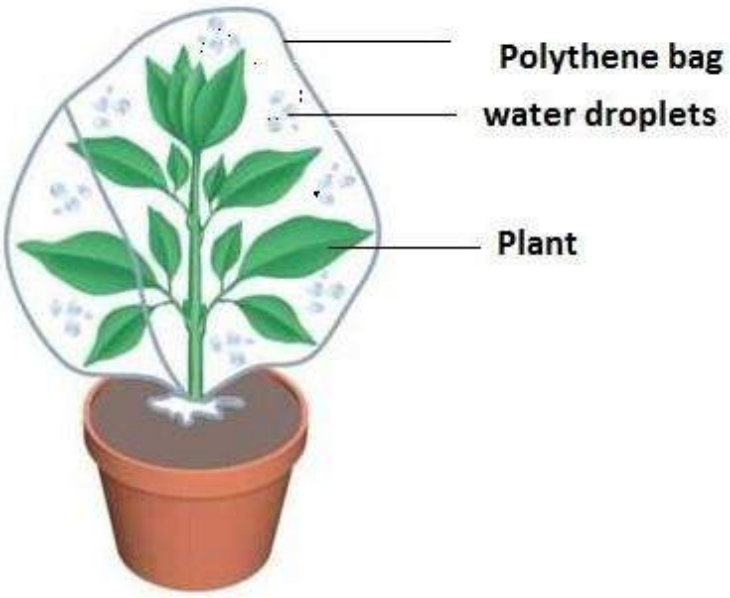


Potato Osmoscope

Experiment 4.

Study of Transpiration

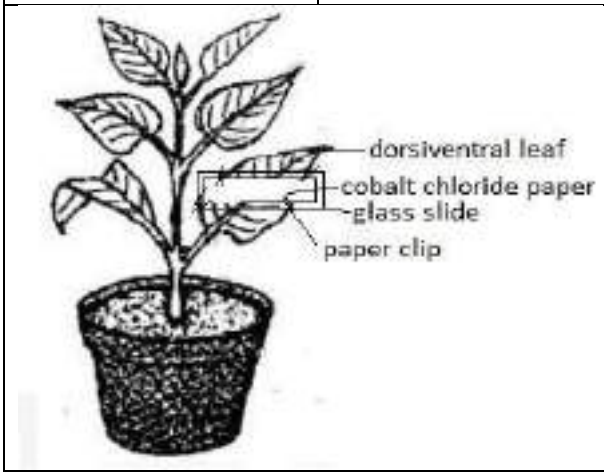
Aim :-	To demonstrate transpiration in plants.
Requirements :-	A potted plant, a polythene bag and a thread.
Procedure :-	A well-watered potted plant was taken and its aerial part was covered with a transparent polythene bag. The mouth of the polythene bag was tied around the base of the stem. The plant was left in sunlight for a few hours.
Observation :-	Tiny droplets appear in the inner surface of the polythene bag.
Inference :-	The water transpired by the aerial parts of the plants and condensed on the inner surface of the polythene bag.



Experiment No. 5

Study of Unequal Transpiration on a dorsiventral leaf.

Aim:-	To demonstrate unequal Transpiration on a dorsiventral leaf using a dry cobalt chloride paper.
Requirements :-	A potted plant, Two Dry glass slides, Dry cobalt chloride paper, Paper clips.
	Procedure:- Two strips of dry cobalt chloride papers are placed on both sides of a selected leaf and glass slides are place over it and fixed it by using paper clips.
Observation:-	The cobalt chloride paper fixed on the lower surface of the leaf turns pink earlier as compared to the paper fixed on the upper surface.
Inference:-	More transpiration takes place from the lower surface of dorsiventral leaf due to the presence of more stomata.

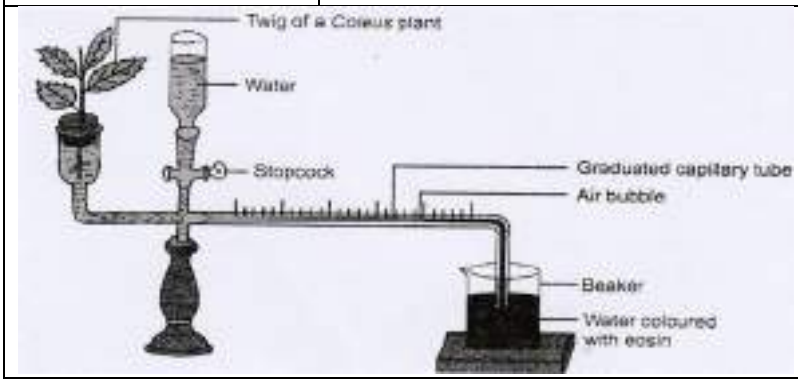


Experiment 6

Study of Ganong' s Potometer

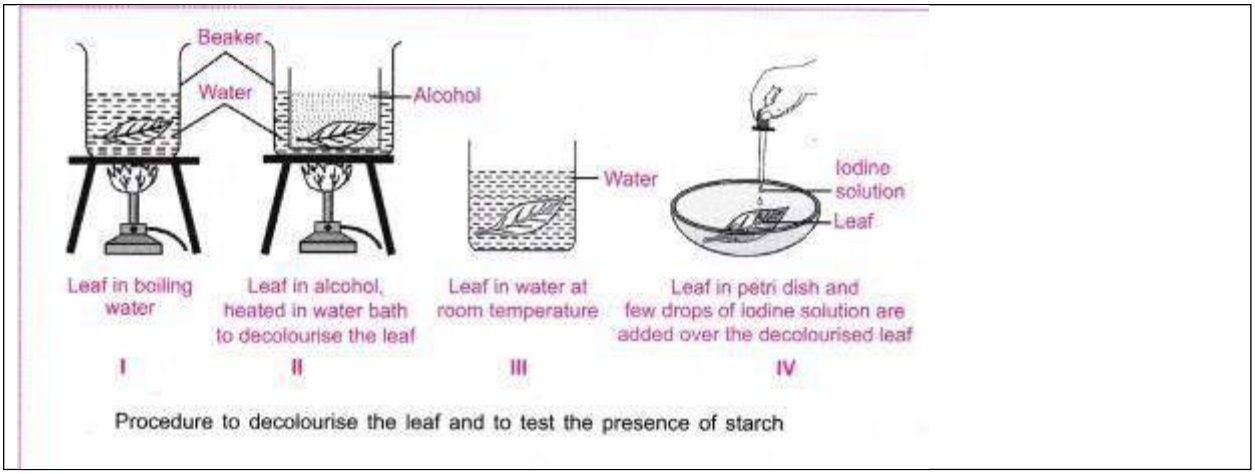
Aim :-	To demonstrate uptake of water and rate of transpiration using Ganong's Potometer
Requirments:-	Ganong's Potometer, Twig of coleus, Beaker, water, eosin solution.
Procedure:-	i. The twig of Coleus is cut obliquely under water and fitted at one end of the graduated capillary tube of the photometer. ii. The photometer is filled with water. iii. The end of the graduated tube is dipped in a beaker containing coloured water.

	iv. An air buble is introduced in the graduated tube by lifting the tube above the coloured water.
Observation:-	The air bubble moves forward in the capillary tube as transpiration takes place from the twig.
Inference:-	As Transpiration occurs from the twig, suction force develops which pulls the coloured water from the beaker. This causes the air bubble to move forward.



Experiment 7
Study of Starch Test

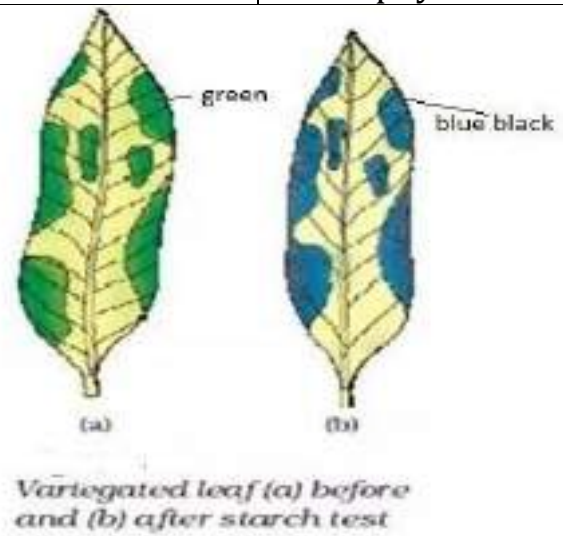
Aim :-	To test the presence of starch in a green leaf
Requirement :-	A beaker, watch glass, methylated spirit, water, iodine solution and a burner.
Procedure :-	A leaf was detached from a plant and boiled in water for a few minutes. This was to destroy the enzymes and kill the cells to make them permeable. The leaf was then boiled in methylated spirit in a water bath to remove the chlorophyll. The leaf was again washed with water to remove excess of alcohol. The leaf was then placed in a petridish and iodine was pored over it.
Observation :-	The leaf turned blue black
Inference :-	The part of the leaf containing starch turned blue black on coming in contact with iodine solution.



Experiment 8

Chlorophyll for Photosynthesis.

Aim :-	To demonstrate chlorophyll is necessary for photosynthesis.
Requirement :-	A potted plant with variegated leaf and iodine solution.
Procedure :-	A potted plant was destarched by keeping it in a dark room for 48 hours. The plant was then exposed to sunlight for a few hours. A leaf was detached and drawn on the paper to mark the distribution of chlorophyll. Then the starch test was performed.
Observation :-	Only the green parts of the leaf turned blue black showing the presence of starch.
Inference :-	The green parts of the leaf contains chlorophyll and it is these parts which manufactures starch. Hence chlorophyll is necessary for photosynthesis.

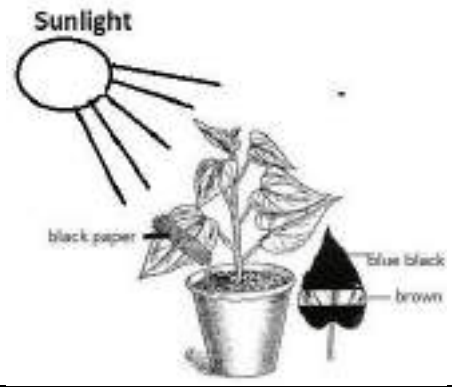


Variegated leaf (a) before and (b) after starch test

Experiment 9

Sunlight for Photosynthesis

Aim :-	To prove that sunlight is essential for photosynthesis.
Requirement :-	A potted plant, black chart paper, clips and iodine solution.
Procedure :-	A potted plant was destarched by placing it in complete darkness for 24 – 48 hours. A leaf of the destarched plant was covered with black paper on which s certain design was cut and it was attached to the leaf by paper clips. The plant was kept in sunlight for a few hours. The leaf was removed and tested for the presence of starch.
Observation :-	The portion of the leaf covered with black paper remained brown while the exposed part turned blue black.
Inference :-	The portion of the leaf exposed to sunlight turned blue black due to the formation of starch. Hence sunlight is essential for photosynthesis.

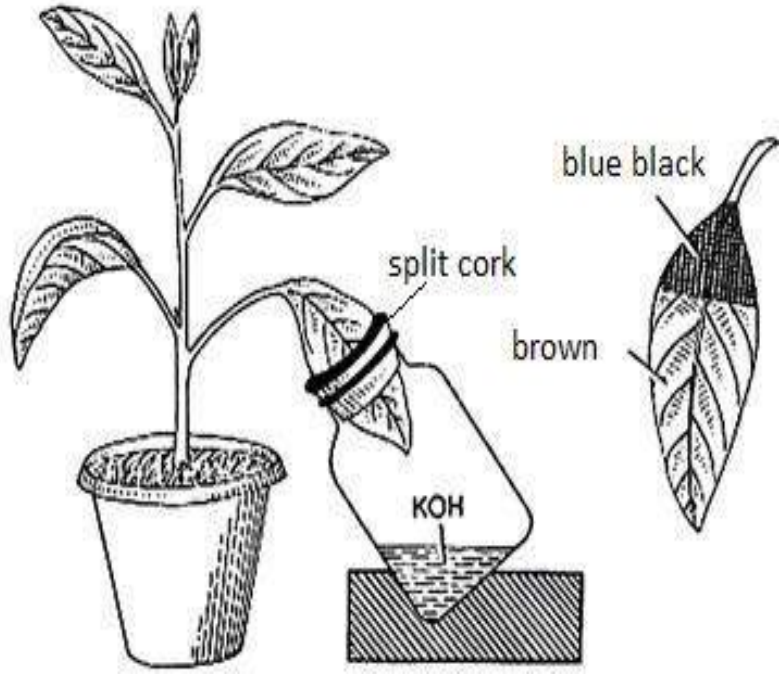


Experiment 10

Carbon dioxide for Photosynthesis

Aim :-	To show that carbon dioxide is necessary for photosynthesis.
Requirement :	A conical flask, cork, caustic potash pellets, petridish, iodine solution.
Procedure :-	A potted plant was destarched by keeping it in darkness for 24 to 48hours. The cork was spilt vertically. A few caustic potash pellets were introduced into the flask. A leaf from the destarched plant was fixed between the two pieces of cork and the cork was fitted tightly in the mouth of the flask. The leaf was so adjusted that half of it was outside the bottle and the other half inside it

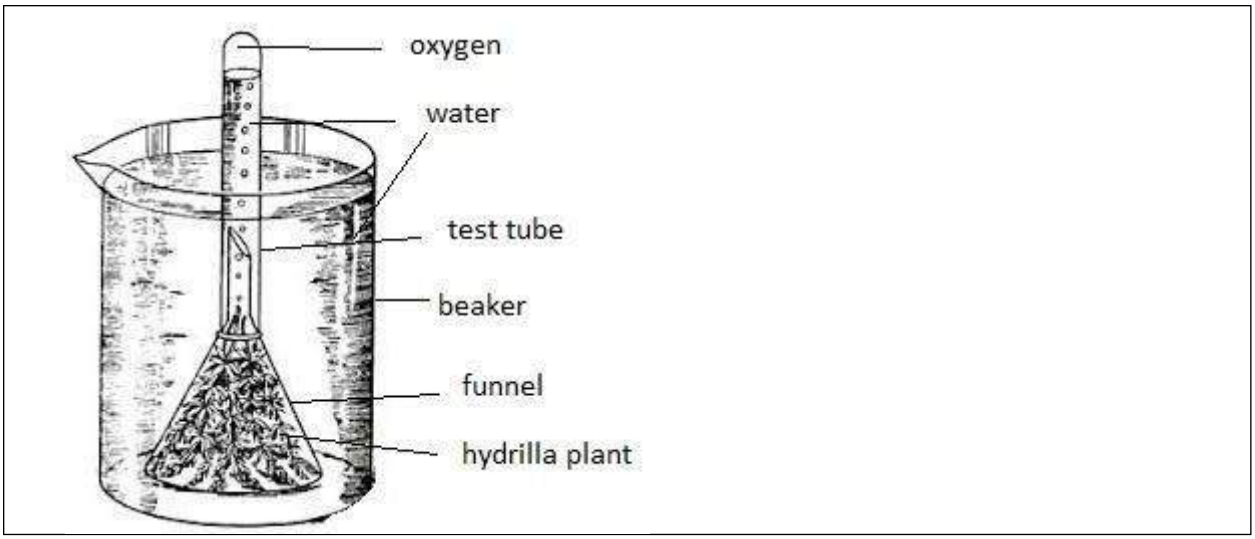
Observation :-	After a few hours the leaf was removed from the plant and tested for starch. The part of the leaf inside the flask did not turn blue black but the part outside the bottle turned blue black with iodine solution.
Inference :-	Caustic potash solution absorbed all the carbon dioxide inside the bottle. Therefore no photosynthesis took place inside the flask due to the absence of carbon dioxide.



Experiment 11

Liberation of oxygen during photosynthesis.

Aim :-	To show that oxygen is liberated during photosynthesis.
Requirements :-	A beaker, Funnel, test tube and a water plant (hydrilla)
Procedure :-	Some twigs of a water plant were taken and placed under a funnel in a beaker containing pond water. A test tube filled with water was inverted over the stem of the funnel. The apparatus was placed in the sun for a few hours.
Observation :-	Bubbles of gas was collected in the test tube. The gas collected re kindled a glowing splinter.
Inference :-	The gas liberated during photosynthesis is oxygen.


oxygen
water
test tube
beaker
funnel
hydrilla plant

Std – X

Commercial Studies

Page

Project Work

You need to prepare two projects in one Project Copy of 56 pages on any two topics of the topics given in the Book.
Divide the project in different chapters :

1. Contents
2. Acknowledgement
3. Certificate
4. The Subject details of the topic
5. Conclusion
6. Bibliography

Topics :

1. Assignment / Project work Page 109
2. Project work page 138
3. Project No. 2 Page 149
4. Project work page 208
5. Project work Page 234

10th H.W (Comp. App)

[Project work.]

Q1. Create a method Armstrong() as per the given instructions

int Armstrong (int n) → The method accepts an integer value and returns the Sum & Cube of all its digits.

Eg. 153 = 1 + 125 + 27 = 153.

Now, Write a program using the method above to check all 3 digits numbers. if they are armstrong number or not. print appropriate message if the number is not armstrong.

Q2. Write a menu driven program using 3 different methods as per the instructions given below.

Perfect

int [redacted] (int n) → Returns the Sum of factors of the given number excluding the number.

Ex 6 → 1+2+3 = 6. [redacted]

Void pattern() → To print the pattern given below.

AAAAA
BBBB
CCC
DD
E

double Series (int n) → It Returns the Sum of Series given below

$$S = \frac{1}{2} + \frac{2}{3} + \frac{3}{4} + \frac{4}{5} \cdots\cdots \frac{N}{n+1}$$

Use Switch Case for menu driven part with proper indentation. and check if the number is perfect or not.

[Write variable discription for both the programs]

Work Should be done in your project copy Were other project questions are done.

—x—

HOLIDAY HOMEWORK 2024-25

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

Holiday Homework
Std. 10

(The Holiday Homework is to be done in your classwork notebook.)

English Language

1. Do question 5 (Do as Directed) of Papers 10 to 15 from your Text Book - Pearls of English Language
2. Copy down the following Proverbs in your notebook and learn them. Learn their meaning too.

List of Proverbs

1. Actions speak louder than words.
2. An apple a day keeps the doctor away.
3. A bad workman blames his tools.
4. Do not put all your eggs in one basket.
5. Blood is thicker than water.
6. Let bygones be bygones.
7. If the cap fits, wear it.
8. Character is destiny.
9. Do not count your chickens before they are hatched.
10. Too many cooks spoil the broth.
11. Failure teaches success.
12. Fortune favours the brave.
13. A friend in need is a friend indeed.
14. When God shuts one door, He opens another.
15. Make hay while the sun shines.
16. Two heads are better than one.
17. History repeats itself.
18. Hunger is the best sauce.
19. A jack of all trades and master of none.
20. He knows most who speaks least.
21. Knowledge is power.
22. Better late than never.
23. Look before you leap.
24. Out of sight, out of mind.
25. Absence makes the heart grow fonder.

English Literature

Q1. ICSE 2008
Read the extract given below and answer the questions that follow-

Caesar: Are we all ready? What is now amiss,
That Caesar and his senate must redress?
Metellus: Most high, most mighty, and most puissant Caesar,
Metellus Cimber throws before thy seat
An humble heart.
[kneeling]

a) Where are the speakers? What does 'puissant' mean?
Explain: 'Metellus Cimber throws before thy seat an humble heart". [3]
b) At the start of the scene what reply does the soothsayer give when Caesar says,
"The Ides of March are come? What was Caesar's attitude then? Give a reason for your answer. [3]
c) What specific duties have been allotted by the conspirators to Trebonius and Casca?
Why does Cassius become nervous when Popilius Lena speaks to him as they enter? [3]

d) Who else had a petition for Caesar? How did Caesar respond to his pleas that his was a suit that 'touches Caesar nearer? What characteristic of Caesar is seen in his reply? [3]
e) Shortly after this Caesar is stabbed to death by the conspirators. At this point in the play what are your feelings for (a) Caesar and (b) the conspirators.
Give one reason each to support your answer. [4]

Q2. 1993 ICSE
Read the extract given below and answer the questions that follow:-

Cassius: I know not what may fall; I like it not.
Brutus: Mark Antony, here, take you Caesar's body.
You shall not in your funeral speech blame us.
But speak all good you can devise of Caesar,
And say you do't by our permission;
Else shall you not have any hand at all
About his funeral. And you shall speak
In the same pulpit whereto I am going.
After my speech is ended.

a) State what Cassius does not like. What is the reason for Cassius' dislike?
b) Earlier, Brutus assured Cassius that he would take precautions before Antony is allowed to speak at the funeral of Caesar. State two of the precautions Brutus said he would take in this regard.
c) Enumerate the conditions laid down by Brutus on Antony before the latter was allowed to speak in Caesar's funeral.
d) Narrate briefly the prophecy of Antony over the corpse of Caesar.
e) Give five of the statements put forward by Antony in his funeral speech which roused the people against the conspirators.

Q3. ICSE 1990
Read the extract given below and answer the questions that follow:-

Antony: Hie hence and tell him so. Yet, stay awhile,
Thou shall not back till I have borne this corpse
Into the market place; there shall I try,
In my oration, how the people take
The cruel issue of these bloody men;

a) To whom was Antony speaking? Where were they? How had the person being spoken to come to be there?
b) What did Antony mean by "Hie hence and tell him so"?
c) What is a "corpse"? Whose was it? How is this brought out in line 5 of this extract?
d) What is meant by the word "oration?" How did Antony come to make this oration?
e) What did he mean by "how the people take"? What instruction did Antony now give this person?
f) State how Antony turned the public against the conspirators.

Q4. Copy question and answer 13 from page 133 of your Text Book – W. Turner
Describe in your own words the speeches of Brutus and Antony.
List down the relative significance of both.

Geography Project Work (2024-25) For Class X

Name of the Topic:

'INDUSTRIES IN INDIA'

Format Of The Project :

i) Acknowledgement
ii) Contents
1. Introduction of the topic
2.Importance and classification of industries.
3.Agro based industries in India
i) Sugar industry
ii) Textile industry (cotton & silk)
4.Mineral based Industries in India
i) Iron and steel industry
ii) Petrochemicals
iii) Electronics
5.Conclusion
6.Bibliography.

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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 a blue or black Gel pen for writing.
4. Headings and subheadings should be clearly written and highlighted.
5. Pictures should be pasted neatly and headings should be givenPictures should be 6. 6. 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 chapters 10 & 11.
10.Use only practical notebook prescribed by the school.

HINDI STD-10

ग्रीष्मावकाश - 2024-25

हिन्दी परियोजना कार्य: 2024–25

कक्षा: 10

1) निम्नलिखित विषयों में से किसी एक विषय पर लगभग 250 शब्दों में संक्षिप्त हिन्दी लेख लिखिए:–

क) कुछ समय पहले किसी अवकाश के समय आप सपरिवार किसी पहाड़ी स्थान पर घूमने गए. दुर्भाग्यवश पर्यटकों की भीड़ के कारण आपको बहुत सी विकट समस्याओं का सामना करना पड़ा। अपने इस अनुभव का वर्णन प्रस्ताव के रूप में लिखिए।

ख) आज महानगरों में बड़े–बड़े 'शॉपिंग मॉल' स्थान–स्थान पर दिखाई देते हैं। इतने 'शॉपिंग मॉल' बनने के कारणों पर प्रकाश डालते हुए एक प्रस्ताव लिखिए कि जब आप अपने परिवार के साथ किसी मॉल को घूमने गए तो आप को वहाँ किन–किन चीजों ने सबसे अधिक आकर्षित किया तथा वहाँ आपने क्या–क्या खरीदा?

2) निम्नलिखित विषय पर पत्र लिखिए।

आप गाँव में स्थित किसी विद्यालय में गए वहाँ की बुरी स्थिति देखकर उसके सुधार हेतु शिक्षामंत्री को पत्र लिखिए।

3) निम्नलिखित गद्यांश को ध्यान से पढ़िए और उसके नीचे लिखे प्रश्नों के उत्तर अपने शब्दों में लिखिए।

दक्षिण पूर्वी एशिया के दो छोटे किन्तु महत्वपूर्ण देश हैं– कंबोडिया और लाओस। कई वर्ष पहले की बात है इन दोनों देशों में पहले अच्छी मित्रता हुआ करती थी लेकिन अब ये दो पड़ोसी देश आपस में युद्ध करने की तैयारी कर रहे थे। झगड़ा दोनों देशों में बहने वाली एक नदी को लेकर था। नदी का नाम था 'मीकांग' जो लाओस से निकलकर कंबोडिया में बहती थी। दोनों देशों के लिए यह नदी बहुत महत्वपूर्ण थी। साथ ही दोनों देशवासी उसे पूजते भी थे। नदी के पानी की सिंचाई से दोनों देशों के खेत हरे–भरे रहते थे। दोनों देश मीकांग को जीवनदायिनी समझते थे दोनों का उस पर दावा था। इस मामले को लेकर स्थिति इतनी बिगड़ गई कि एक बार वे एक–दूसरे के देश पर हमला करने को तैयार हो गए और अपनी–अपनी सेनाएँ लेकर आमने–सामने खड़े हो गए।

अचानक महात्मा बुद्ध वहाँ युद्धभूमि में पहुँच गए। उन्होंने युद्ध के लिए तैयार देशों की विशाल सेनाएँ देखी। महात्मा बुद्ध को इस प्रकार वहाँ अचानक देखकर दोनों की सेनाओं में खलबली मच गई । बुद्ध ने दोनों देशों के राजाओं, मंत्रियों तथा अन्य अधिकारियों को अपने पास बुलाया। दोनों सेनाओं के बीच खड़े होकर उन्होंने उन सभी से प्रश्न किया कि वे लोग आपस में क्यों युद्ध करने जा रहे हैं? बुद्ध को

दोनों सेनाओं से यही जवाब मिला कि उनके जीवन की आधार 'भीकांग' नदी के जल के लिए यह युद्ध होने जा रहा है। बुद्ध ने पुनः प्रश्न किया कि नदी के जल और मानव के रक्त दोनों में से कौन अधिक मूल्यवान है। एक स्वर में दोनों ओर से जवाब मिला कि मानव का रक्त निस्संदेह नदी के जल से अधिक मूल्यवान है। भगवान बुद्ध ने दोनों पक्षों को समझाते हुए कहा कि शायद दोनों देशों की आपसी ईर्ष्या के कारण स्थिति इतनी बिगड़ गई थी कि उन्हें लगने लगा था कि इस नदी के जल को बाँटने की समस्या का हल केवल युद्ध के द्वारा निकालना संभव नहीं है। बुद्ध ने उन्हें समझाया कि समस्याओं का हल युद्ध के द्वारा निकालना संभव नहीं है। महात्मा बुद्ध की बातों को सुनकर दोनों सेनाओं में शांति छा गयी और दोनों पक्षों के लोग सोच में पड़ गए महात्मा बुद्ध के सुझाव के अनुसार उन दोनों देशों ने मिलकर एक शांति सभा बनाई । उस शांति सभा ने दोनों देशों के दावे को ध्यान से सुना। उन्होंने दोनों देशों में जाकर असली स्थिति को अपनी आँखों से खुद देखा और समझा कि यह नदी तो इन दोनों के लिए ही समान महत्व रखती है। फिर इसके लिए विवाद कैसा? इसी विषय पर खूब सोच–विचार करने के बाद, अंत में उस सभा ने एक दिन ऐसा निर्णय दिया कि दोनों देश मान गए। आखिरकार उन के बीच होनेवाला युद्ध टल गया और दोनों देशों में फिर से मित्रता हो गई । इसलिए कहते हैं कि मनुष्य का विवेक और समझ एक ऐसी शक्ति होती है, जिसके द्वारा मानव हिंसात्मक और सर्वनाशकारी युद्धों तक को रोक सकता है और शांति के साथ प्रेमपूर्वक जीवन बिता सकता है तथा दूसरों के लिए प्रेरणा भी बन सकता है।

1 कंबोडिया और लाओस कहाँ स्थित हैं और पहले इन दोनों देशों के आपसी संबंध कैस थे?

2 कौन–सी नदी इन दोनों देशों के लिए बहुत महत्वपूर्ण थी और क्यों?

3 एक दिन अचानक महात्मा बुद्ध कहाँ पहुँच गए थे? वहाँ जाकर उन्होंने अपने पास किस और क्यों बुलाया?

4 अंत में कंबोडिया और लाओस के बीच की समस्या को किस प्रकार सुलझाया गया?

5 इस कहानी से मिलने वाली उन शिक्षाओं को लिखिए जो आज के समय में भी विश्व में शांति बनाए रखने में काम आ सकती हैं।

4) निम्नलिखित प्रश्नों के उत्तर निर्देशानुसार लिखिए:–

i 'आहार' का विलोम बताइए:–

क) शाकाहार ख) निराहार ग) माँसाहार घ) उपहार

ii 'दिन' का उचित पर्यायवाची शब्द बताइए:–

क) निशि–वासर ख) दिवा–देव

ग) दिवस–वार घ) रजनी–रमणी

iii 'कमाना' का भाववाचक संज्ञा बताइए:–

क) कम ख) कमी ग) कमाऊ घ) कमाई

iv 'पत्थर' का विशेषण बताइए:–

क) पथरी ख) पाथरी ग) पत्थरशिला घ) पथरीला

v 'पतीवरता' शब्द का शुद्ध रूप बताइए:–

क) पतीव्रता ख) पतिव्रता ग) पतिवर्ता घ) प्रतिव्रता

vi 'उन्नीस बीस का अंतर' मुहावरे का अर्थ बताइए:–

क) अत्यधिक अंतर होना ख) गिनती का अंतर होना

ग) एक समान होना घ) बहुत कम अंतर होना

vii निर्देशानुसार उचित वाक्य बताइए:–

कई बार देश की रक्षा से जुड़े फैसलों को गुप्त रखा जाना आवश्यक होता है।

(रेखांकित वाक्यांश हेतु उपयुक्त शब्द का प्रयोग किस विकल्प में हुआ है।)

क) कई बार देश की रक्षा से जुड़े फैसले रहस्यमयी होते हैं।

ख) कई बार देश की रक्षा से जुड़े फैसले गुप्तचर होते हैं।

ग) कई बार देश की रक्षा से जुड़े फैसले गोपनीय होते हैं।

घ) कई बार देश की रक्षा से जुड़े फैसले अल्पचर्चित होते हैं।

Viii निर्देशानुसार उचित वाक्य बताइए:–

रोगी की दिशा ठीक नहीं है।

(रेखांकित शब्द के स्थान पर उचित शब्द का प्रयोग कीजिए।)

क) रोग ख) दशा ग) दया घ) बीमारी

5) निम्नलिखित गद्यांश को पढ़िए और उसके नीचे लिखे प्रश्नों के उत्तर हिन्दी में लिखिए:–

'चुपचाप बैठे तंग हो रहा था, कूढ़ रहा था कि मित्र अचानक बोले–"देखो वह क्या है?" मैंने देखा कि कोहरे की सफेदी में कुछ ही हाथ दूर से एक काली–सी मूर्ति हमारी तरफ आ रही थी, मैंने कहा– "होगा कोई।"

अपना–अपना भाग्य श्री जैनेंद्र कुमार

क) 'मैंने' शब्द से किसकी ओर संकेत किया गया है? वह इस समय किस स्थान पर है?

ख) 'काली–सी मूर्ति' किसकी थी? लेखक ने उसकी दशा का वर्णन किस प्रकार किया है?

ग) बालक कहाँ का रहनेवाला था? उसने अपने तथा अपने परिवार के विषय में क्या जानकारी दी?

घ) प्रस्तुत कहानी मनुष्य की संवेदनहीनता का यथार्थ चित्रण प्रस्तुत करती है– कहानी का उदाहरण देकर इस कथन को सिद्ध कीजिए।

6) बेनीमाधव सिंह पुराने आदमी थे। इन भावों को ताड़ गए। उन्होंने निश्चय किया कि चाहे कुछ भी क्यों न हो, इन द्वेषियों को ताली बजाने का अवसर न दूँगा। तुरंत कोमल शब्दों में बोले, 'बेटा, मैं तुमसे बाहर नहीं हूँ। तुम्हारा जो जी चाहे करो, अब तो लड़के से अपराध हो गया।'

बड़े घर की बेटी: प्रेमचंद

क) कथन के वक्ता एवं श्रोता का परिचय दीजिए।

ख) 'इन भावों को ताड़ गए' कथन किस संदर्भ में कहा गया है? श्रोता ने उसे क्यों नहीं समझा था? स्पष्ट कीजिए।

ग) किस लड़के से, कौन सा अपराध हो गया था और क्यों? समझाकर लिखिए।

घ) क्या श्रोता ने अपराध के लिए माफ किया? श्रोता का हृदय–परिवर्तन कराने में कौन, किस प्रकार सहायक था?

6) 'ऐसो को उदार जग माही।
बिनु सेवा जो द्रवै दीन पर राम सरिस कोउ नाही।

विनय के पद: तुलसीदास

क) तुलसीदास जी किस काल एवं शाखा के कवि थे? उनकी भक्ति–भावना पर प्रकाश डालिए।

ख) प्रस्तुत पद में 'गति' शब्द से क्या तात्पर्य है? राम ने गीध और शबरी को यह गति कब प्रदान की थी?

ग) विभीषण का परिचय दीजिए। राम ने उसे कौन–सी संपदा प्रदान कर अपनी उदारता दिखाई तथा उदारता दिखाते समय उनका भाव किस प्रकार का था?

घ) पद की अंतिम दो पंक्तियों का भाव स्पष्ट कीजिए।

7) 'मेघ आए बड़े बन–ठन के सँवर के।
आगे–आगे नाचती–गाती बयार चली,

दरवाजे–खिड़कियाँ खुलने लगी गली–गली,

पाहुन त्यों आए हो, गाँव में शहर के।

मेघ आए: सर्वेश्वरदयाल सक्सेना

क) मेघ कहाँ आए हैं और कब आए हैं?

ख) बयार को किस का प्रतीक बताया गया है? उसके आने पर गाँव वालों की क्या स्थिति थी?

ग) पेड़, धूल भरी आँधी तथा नदी को किस–किस का प्रतीक बताया गया है? समझाइए।

घ) प्रस्तुत कविता में किस अलंकार का प्रयोग किया गया है तथा जिस ऋतु के विषय में बताया गया है उसके विषय में चार पंक्तियाँ लिखिए।

MATHEMATICS HOLIDAY HOMEWORK, CLASS X

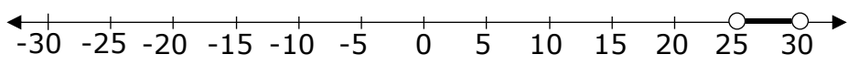
Chapter – Banking

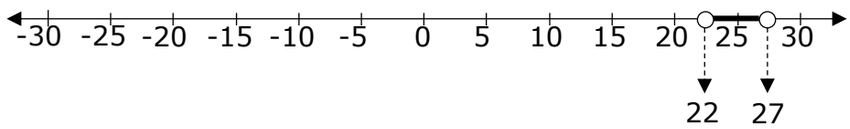
1. Kavita has a cumulative time deposit account in a bank. She deposits ₹600 per month and gets ₹6165 at the time of maturity. If the rate of interest be 6% per annum, find the total time for which the account was held.
2. Kavita has a cumulative time deposit account in a bank. She deposits ₹800 per month and gets ₹16700 as maturity value. If the rate of interest be 5% per annum, find the total time for which the account was held.
3. David opened a recurring deposit account in a bank and deposited ₹300 per month for two years. If he received ₹7725 at the time of maturity, find the rate of interest per annum.
4. Preeti 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.
5. Rekha opened a recurring deposit account for 20 months. The rate of interest is 9% per annum and Rekha receives ₹441 as interest at the time of maturity. Find the amount Rekha deposited each month.
6. Mr. Sonu has a recurring deposit account and deposits ₹750 per month for 2 years. If he gets ₹19125 at the time of maturity, find the rate of interest.

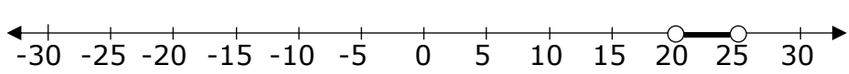
Chapter – Linear Inequation

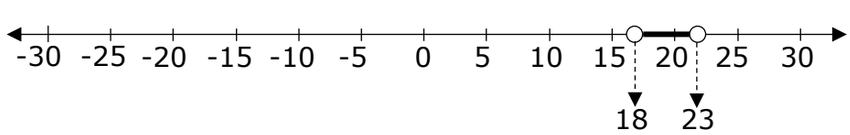
CASE STUDY BASED QUESTIONS

1. Case Study I : Shivam's father is a building contractor. One day Shivam got his father's measuring tape. He used it to find the dimensions of the kitchen garden in his home. He found that the length of the garden is one metre more than twice its breadth. He told his friend Akhil that the perimeter of the garden is more than or equal to 110 m and is less than or equal to 140 m.
   Based on this information, answer the following questions:
   1. If breadth of the garden is x m, then algebraic representation of the given information is :
      (a) $140 \leq 6x + 2 \leq 110, x \in R$
      (b) $110 \leq 6x + 2 \leq 140, x \in R$
      (c) $110 \leq 4x + 2 \leq 140, x \in R$
      (d) $110 \leq 2x + 1 \leq 140, x \in R$
   2. The solution set for the breadth of the garden is :
      (a) $\{x \in R : 18 \leq x \leq 23\}$
      (b) $\{x \in R: 16 \leq x \leq 24\}$
      (c) $\{x \in R: 18 \leq x \leq 24\}$
      (d) $\{x \in R: 20 \leq x \leq 28\}$
   3. The greatest possible value of the breadth of the garden is
      (a) 18 m
      (b) 20 m
      (c) 22 m
      (d) 23 m
   4. What is the least possible length of the garden?
      (a) 34 m
      (b) 36 m
      (c) 37 m
      (d) none of these
   5. What is the greatest possible length of the garden?
      (a) 47 m
      (b) 51 m
      (c) 46 m
      (d) none of these

2. Case Study II : A few countries such as the USA officially use Fahrenheit as a unit for measuring temperature. Other countries prefer Celsius over Fahrenheit. The two different scales are related by the linear equation $\frac{F-32}{9}=\frac{C}{5}$. A scientist wants to store an experimental solution between a temperature range of 68°F and 77°F.
   Based on the above information, answer the following questions:
   1. The algebraic representation of the given information in degree Celsius is :
      (a) $68 < \frac{5}{9}C + 32 \leq 77, C \in R$
      (b) $68 \leq \frac{5}{9}C - 32 \leq 77, C \in R$
      (c) $68 \leq \frac{9}{5}C - 32 < 77, C \in R$
      (d) $68 < \frac{9}{5}C + 32 < 77, C \in R$
   2. The solution set for the temperature in degree Celsius is :
      (a) {C ∈ R : 18 C < 23}
      (b) {C ∈ R : 20 C < 25}
      (c) {C ∈ R : 22 C < 27}
      (d) {C ∈ R : 25 C < 30}
   3. What is the range of the temperature in degree Celsius?
      (a) between 20°C and 25°C
      (b) between 25°C and 30°C
      (c) between 18°C and 23°C
      (d) between 22°C and 27°C
   4. Which of the following is the graphical representation of the temperature in degree Celsius?
      (a)
      

      (b)
      

      (c)
      

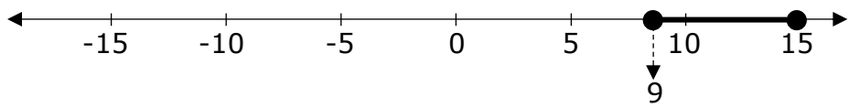
      (d)
      

   5. If the minimum temperature that can be maintained in a particular refrigerator is 0°C, what is the possible temperature range of the refrigerator on a Fahrenheit scale?
      (a) $F > \frac{160}{9}$
      (b) $F < \frac{160}{9}$
      (c) F > 32
      (d) F < 32

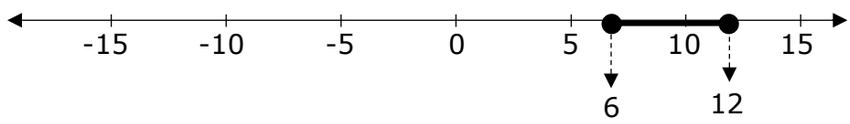
3. Case Study III : In drilling world's deepest hole, the Kola Superdeep Borehole, the deepest man-made hole on the earth it was found that the temperature T in degree Celsius, x km below the earth's surface was given by T = 30 + 25(x - 3) & 3 ≤ x ≤ 15. If the temperature lies between 180° C to 330° C, then based on this information, answer the following questions.
   1. The linear inequation for the depth of the hole is :
      (a) 180 < 30 + 25 (x - 3) < 330
      (b) 180 ≤ 30 + 25 (x – 3) ≤ 330
      (c) 330 < 30 + 25 (x - 3) ≤ 180
      (d) 330 < 30 + 25 (x - 3) < 180

2. The solution set for the depth is :
   (a) $\{x \in R : 6 \leq x \leq 12\}$
   (b) $\{x \in R : 9 \leq x \leq 12\}$
   (c) $\{x \in R : 3 \leq x \leq 15\}$
   (d) $\{x \in R : 9 \leq x \leq 15\}$
3. The minimum possible depth of the hole for the given temperature range is :
   (a) 3 km
   (b) 6 km
   (c) 9 km
   (d) cannot be determined
4. The maximum possible depth of the hole for the given temperature range is :
   (a) 9 km
   (b) 12 km
   (c) 15 km
   (d) None of these
5. Which of the following is the graphical representation of the solution set for the depth of the hole for the given temperature range?

(a)



(b)



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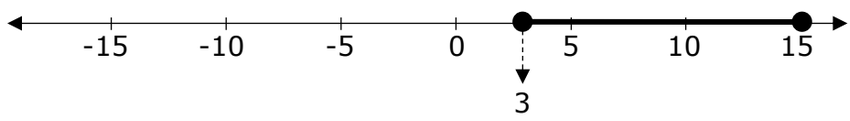
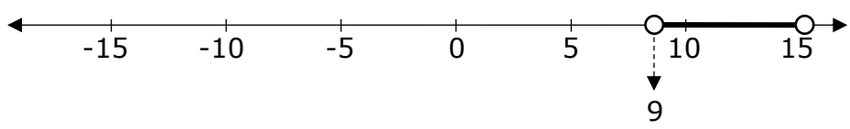


(d)



Chapter – Quadratic Equations (Using Formula)

1. Solve for x and give your answer correct to 2 decimal places :

1. $x^2 - 10x + 6$
2. $x^2 + 7x = 7$
3. $x^2 - 7x + 3 = 0$
4. $2x^2 - 6x + 3$
5. $3x^2 - x - 7 = 0$
6. $3x^2 - 32x + 12 = 0$
7. $4x^2 - 7x + 2 = 0$

2. Solve for x the quadratic equation $x^2 - 4x - 8 = 0$. Give your answer correct to three significant figures.

Chapter – Quadratic Equations (Nature of roots)

Find the values of k for which each of the following equations has equal roots :

1. $9x^2 + kx + 1=0$
2. $x^2 - 2kx + 7k - 12 = 0$
3. $(3k + 1)x^2 + 2(k + 1)x + k = 0$
4. $x^2 - 2(5 + 2k)x + 3(7 + 10k) = 0$
5. $(k + 1)x^2 + 2(k + 3)x + (k + 8) = 0$
6. $kx^2 + kx + 1 = - 4x^2 - x$
7. $3kx^2 = 4(kx - 1)$
8. $x^2 + 4kx + (k^2 - k + 2) = 0$

Chapter – Quadratic Equations (MCQ)

CASE STUDY BASED QUESTIONS

Case Study I : Some students planned a picnic. The total budget for hiring a bus was ₹1440. Later on, eight of them refused to go and instead paid their total share of money towards the fee of one economically weaker student of their class and thus, the cost for each member who went for picnic is increased by ₹30.

1. If x students planned for the picnic, then the share for hiring the bus per student who went for the picnic, was :

   (a) ₹ 30x

   (b) ₹ 1440x

   (c) ₹ $\frac{1440}{x}$

   (d) ₹ $\frac{1440}{x - 8}$

2. The algebraic representation of the given information in the form of a quadratic equation is:

   (a) $x^2 - 8x - 384 = 0$

   (b) $x^2 + 8x - 384 = 0$

   (c) $x^2 - 8x - 184 = 0$

   (d) $x^2 + 8x - 184 = 0$

3. How many students went for the picnic?

   (a) 24

   (b) 16

   (c) 32

   (d) 2

4. How much money was paid towards the fee?

   (a) ₹280

   (b) ₹340

   (c) ₹420

   (d) ₹480

5. What would be the share of each student if all the students had attended the picnic?

   (a) ₹90

   (b) ₹30

   (c) ₹60

   (d) None of these

Case Study II : A bus travels at a certain average speed for a distance of 75 km and then travels a distance of 90 km at an average speed of 10 km/hr more than the original speed. If it takes 3 hours to complete the total journey, then based on this information, answer the following questions:

1. If the original speed of the bus be x km/hr, then time taken by the bus to travel the next given distance is :

   (a) $\left(\frac{75}{x}\right)$ hours

   (b) $\left(\frac{90}{x}\right)$ hours

   (c) $\left(\frac{90}{x + 10}\right)$ hours

   (d) $\left(\frac{90}{x - 10}\right)$ hours

2. The quadratic equation for the given information, if the original speed of the bus be x km/hr, is :

   (a) $x^2 + 45x - 250 = 0$

   (b) $x^2 - 45x - 250 = 0$

   (c) $x^2 - 75x - 450 = 0$

   (d) $x^2 - 45x + 250 = 0$

3. The original speed of the bus is :

   (a) 50 km/hr

   (b) 40 km/hr

   (c) 75 km/hr

   (d) 60 km/hr

4. The speed of the bus during which it travels the distance of 90 km is :

   (a) 70 km/hr

   (b) 50 km/hr

   (c) 60 km/hr

   (d) 85 km/hr

5. The time taken by the bus to travel a distance of 510 km with the new speed is :

   (a) 8 hours

   (b) $8\frac{1}{2}$ hours

   (c) $10\frac{1}{5}$ hours

   (d) $12\frac{3}{4}$ hours

****

PHYSICS (CLASS -X)

HOLIDAY HOMEWORK (2024-45)

A. ICSE BOARDS QUESTIONS OF YEAR **2019**, **2020**, **2022**, **2023** and **2024** FROM CHAPTER **1**, CHAPTER **2** and CHAPTER **3**.

B. Choose the correct answers to the questions from the given options.

QUESTION 1

The moment of force of 12 N force about a point X is 3 Nm. What is the distance of the point of application of the force from the point X?

(a) 25 m (b) 25cm (c) 0.25cm (d) 0.4cm

QUESTION 2

The iron door of a building is 3m broad. It can be opened by applying force of 100 N normally at the middle of the door. Calculate the least force needed to open the door.

(a) 0 N (b) 25N (c) 50N (d) 100N

QUESTION 3

A body is acted upon by two unequal forces in opposite direction, but not in the same line and there is no fixed pivoting point. what will happen to the body?

(a) body will have rotational motion

(b) body will have rotational motion

(c) body will have both rotational and translational motion

(d) no motion will be there in the body.

QUESTION 4

The centre of gravity of solid cone of height h is at a distance "x" from its vertex. The value of x is-

(a) 2h/3 (b)3h/4 (c)h/3 (d)h/4

QUESTION 5

Which among the following is correct regarding centrifugal force:

(a) it is a real force

(b) it acts along the radius towards the centre of the circular path

(c) it is not a force of reaction due to centripetal force

(d) numerically centripetal force is greater than centrifugal force

QUESTION 6

A uniform half meter rule can be balanced at the 30 cm mark when a mass of 40 g is hung from its one end. The mass of the meter scale is-

(a) 20 g (b) 160 g (C) 40 g (d) 100 g

QUESTION 7

The centre of gravity of a body depends upon:

(a) mass of the body

(b) density of the body

(c) acceleration due to gravity

(d) distribution of mass of the body

QUESTION 8

A steering wheel of diameter 50 cm is rotated clockwise by applying couple with each force of magnitude 7 N. The moment of couple applied is :

(a) 1.75 N m (b) - 1.75 N m (c) 3.5 N m (d) - 3.5 N m

QUESTION 9

What should be the angle between direction of force and direction of displacement so that work done is maximum?

(a) 0° (b) 90° (c)180° (d) 45°

QUESTION 10

Work done by an opposing force on a moving body is 40 J such that the initial K.E of the body of "x" J decreases to 50 J. The value of x is:

(a) 10 J (b) 90 J (c) 50 J (d) 40 J

QUESTION 11

Which physical quantity does the "electron volt" measure?

(a) energy (b) power (c)torque (d) focal length

QUESTION 12

A force of 10^6 dyne displaces a body by a distance of 4m at an angle θ to its own direction. If the amount of work done is 20 J, then θ is

(a) 0° (b) 60° (c) 45°
(d) 30°

QUESTION 13

A weighing 200 N runs on a straight road with K.E of 160 J. His velocity is (g=10N/Kg)-

(a) 4 m/s (b) 40 m/s (c) 16 m/s
(d) 1.6 m/s

QUESTION 14

In a thermocouple, the change in energy is from:

(a)electrical to heat(b)electrical to mechanical (c)heat to electrical(d)mechanical to electrical

QUESTION 15

How fast should a man weighing 600 N run so that his K.E is 750 J. (g=10N/Kg)

(a)5 m/s (b) 25 m/s (c) 50 m/s (d) 10 m/s

QUESTION 16

The power of a motor is 80 kW. At what speed can motor raise the load of 10,000 N?

(a) 20 m/s (b) 80 m/s (c) 40 m/s (d) 1 m/s

QUESTION 17

If a machine is used as a speed multiplier, then which of the following statement is correct?

(a)displacement of load is greater than displacement of effort at the same time

(b)displacement of effort is greater than displacement of load at the same time

(c)velocity of load is greater than velocity of effort

(d)both (a) and (c) are correct.

QUESTION 18

Among the following related to a machine, which one remains constant?

(a) efficiency (b) mechanical advantage (c) dissipation of energy (d) velocity ratio.

QUESTION 19

How is mechanical advantage (M.A) of a machine related to its velocity ratio (V.R) for a practical machine?

(a) M.A = V.R (b) M.A >V.R (c) M.A<V.R (d) M.A ≥V.R

QUESTION 20

In a single movable pulley, if the effort moves by a distance 20 m upwards, by what height load is raised?

(a) 40 m (b) 20 m (c) 5 m (d) 10 m

QUESTION 21

In a block and tackle system, the distance moved by load is 20 m when the distance moved by effort is 100 m (effort being applied in downward direction) .

(i) find its velocity ratio.

(a) 0.2 (b) 5 (c) 120 (d) 80

(ii) what is the mechanical advantage of the above pulley, if its efficiency is 80 %.

(a) 4 (b) 5 (c) 4.5 (d) 3.5%

(iii) what is the total number of pulleys in the above block and tackle system

(a)5 (b)4 (c) 3 (d) 6

QUESTION 22

A man opens a nut by applying a force of 200 N by using a lever handle of length 0.5 m. what should be the length of the handle if he wants to open it by applying a force of 50 N?

(a) 2 m (b) 3 m (c) 0.25 m (d) 1 m

QUESTION 23

Nm/s is the unit of which physical quantity?

(a) work (b) force (c) torque (d) power

QUESTION 24

Which process is used in nuclear power plant to generate electricity?

(a) law of conservation of energy

(b) principle of moments

(c) nuclear fusion

(d) nuclear fission.

QUESTION 25

A boy weighing 360 N climbs up 50 steps, each 20 cm high in 2 minutes. Calculate the power spent. (g=10 N/Kg)

(a) 30 W (b) 20 W (c) 300 W (d) 3 W

C. Write questions and answers of the chapters covered before the commencement of the summer vacation.

HUMAN BIOLOGY (Write this at the center of a fresh page.)

Prepared by Department of Biology, Don Bosco Academy. Patna (not to copy)

Experiment 12 (Each Experiment has to be started on a new page)

Study of blood sample

Constituent of blood	Plasma , formed cells
Plasma	55 % - 60 % of total blood volume
Colour	Straw coloured
Composition	90 – 92 % water, 8% blood protein, 1 % of inorganic salts

Erythrocytes

Shape	Bi concave and disc like
Life span	120 days
Size	3 microns in diameter
Function	It contains respiratory pigment called hemoglobin which transports the respiratory gases

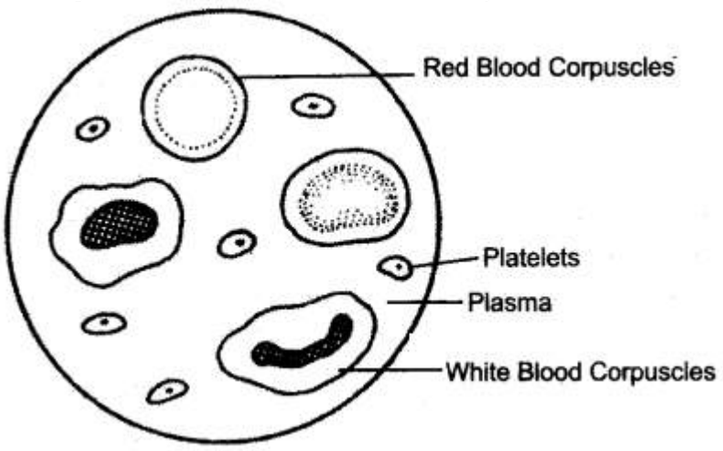
Leucocytes

Shape	Amoeboid and irregular
Size	8 – 10 microns
Types	Neutrophil, Eosinophil, Basophil, Lymphocytes, Monocytes
Function	phagocytosis ,They produce antibodies to neutralize the effect of antigen.
Life Span	14 days

Thrombocytes

Shape	Oval or polygonal
Size	5 microns
Function	It initiate the process of clotting
Life Span	3 – 5 days

Diagram:- **All diagrams are to be drawn and labeled with pencil on the plain side of the opposite side where you have written the above notes)**



Experiment 12

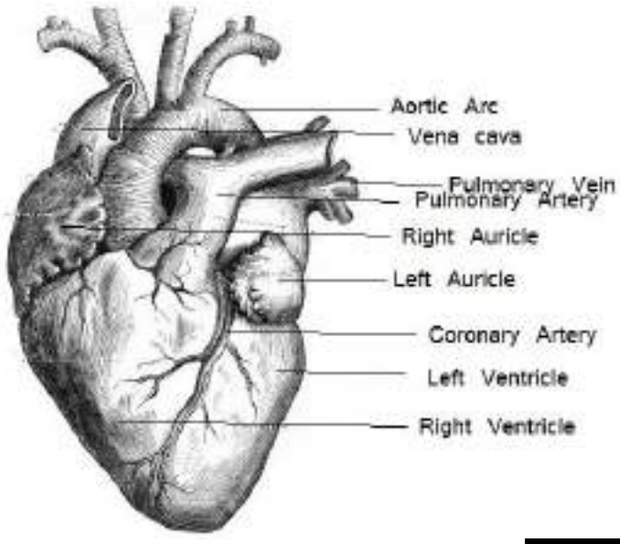
Study of Human Heart

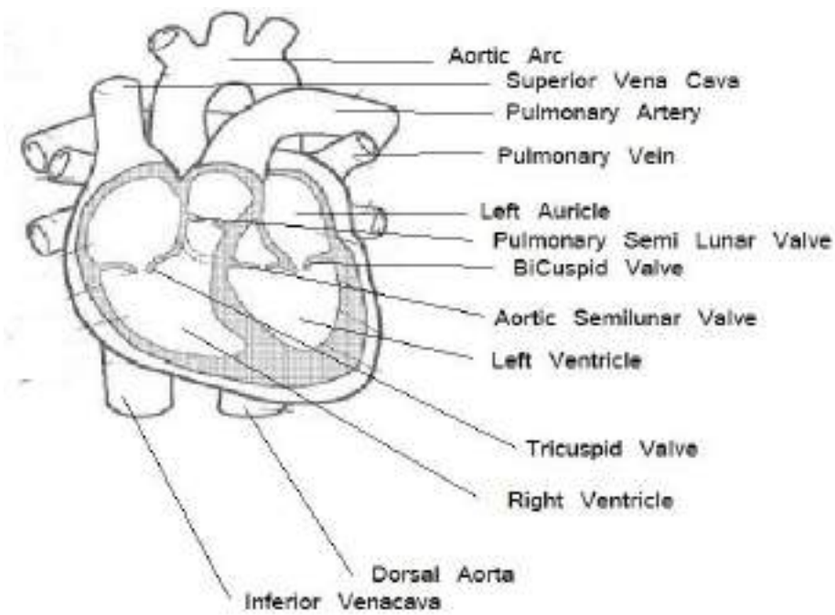
Location	The heart is located in the thoracic cavity between two lungs.
Shape	It is more or less triangular in shape
Size	It is as big as one's fist
Pericardium	The heart is covered by double layered pericardium enclosing pericardial fluid
Blood Vessels arising from heart	
Aorta	It arises from left ventricle and carries oxygenated blood to different body organs
Pulmonary artery	It arises from the right ventricle and carries

	deoxygenated blood to lungs
Coronary Artery	It originates from the aorta and supplies oxygenated blood to the muscles of heart
Vena Cava	Superior and inferior vena cava brings deoxygenated blood from various parts of the body to the right auricle
Pulmonary Vein	It brings oxygenated blood from lungs to the left auricle
Chambers of Heart	The human heart consists of four chambers. Auricles are the upper chambers and ventricles are the lower Chambers
Valves	Tricuspid valves are located in the right ventricle at the aperture of right auricle to the right ventricle . Bicuspid valves are located in the left ventricle at the aperture between the left auricle to the left ventricle. Semilunar valves are located at the origin of pulmonary artery in the right ventricle and aorta in the left ventricle
Chordae Tendinae	They are tendinous chords which holds the flaps of cuspid valves.
Papillary Muscle	They are muscular projections of the ventricular walls to which chordate tendineae are attached.

Diagrams (Both diagrams can be drawn on the same page or two different pages in case the notes exceeds to the next page)

External View





Experiment No. 13

Study of Human excretory system

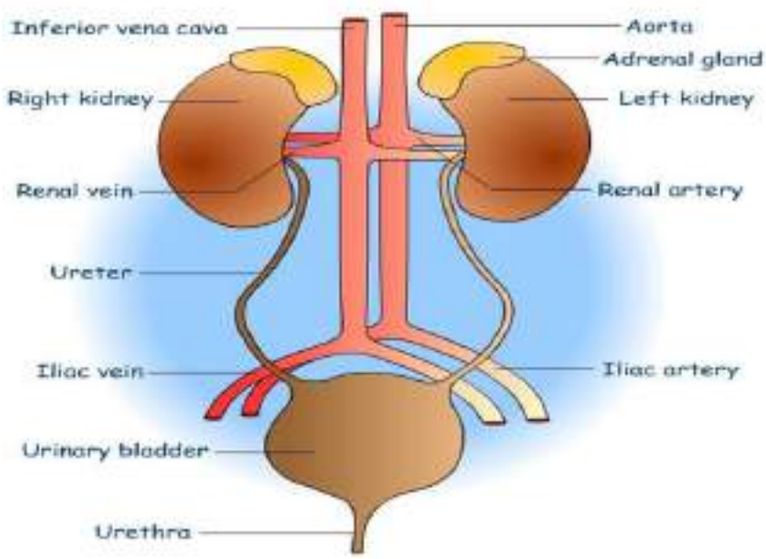
Kidney	They are bean shaped reddish brown organs located on either sides of the lumbar vertebrae protected by last two ribs.
Ureter	It is a muscular tube arising from the median surface of each kidney and joins with urinary bladder.
Urinary Bladder	It is a large distensible sac located in the pelvic region
Urethra	It is a short muscular tube leading outside from the urinary bladder

Internal Structure of Human Kidney

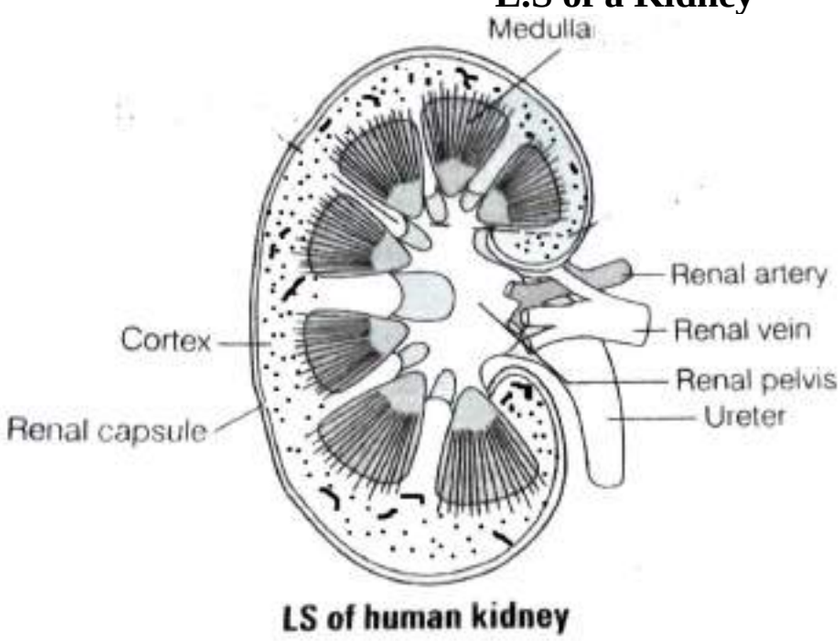
Capsule	It is the outer protective covering of the kidney
Renal Cortex	It is the outer region of the kidney formed of malphigian body, proximal and distal convoluted tubule. It is dark red and has dotted appearance.
Renal Medulla	It is the inner region of the kidney consisting of Henle's loop and collecting ducts. It is light red
Pelvis	It is the anterior expanded part of the ureter.

Diagrams. ((Both diagrams can be drawn on the same page or two different pages in case the notes exceeds to the next page)

Human Urinary System



L.S of a Kidney

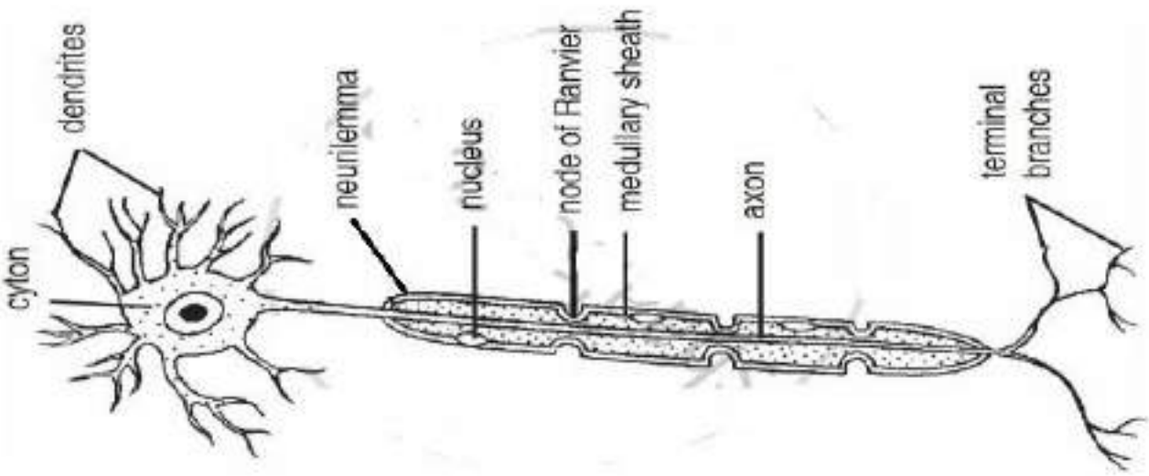


LS of human kidney

Experiment No. 14

Aim	To study a Human Neuron
Structure	**Function**
Nissl's Granule	These are RNA protein complex which synthesis the protein to form enzyme required for the Synthesis of Neurotransmitter
Dendron	They receive impulses from other neurons or receptors and pass them to cyton of next neuron.
Axon	It transmits impulse to next neuron or the effector organ
Neurolemma	It provide protection and insulate the axon to prevent the leakage of nerve impulses.
Myelin sheath	It provide insulation to axon and prevent the leakage and mixing of the nerve impulses. It also increases the speed of nerve impulse transmission.
Node of Ranvier	They are associated with the conduction of nerve impulses and exchange of food and oxygen between nerve tissue and its surrounding.

Diagram



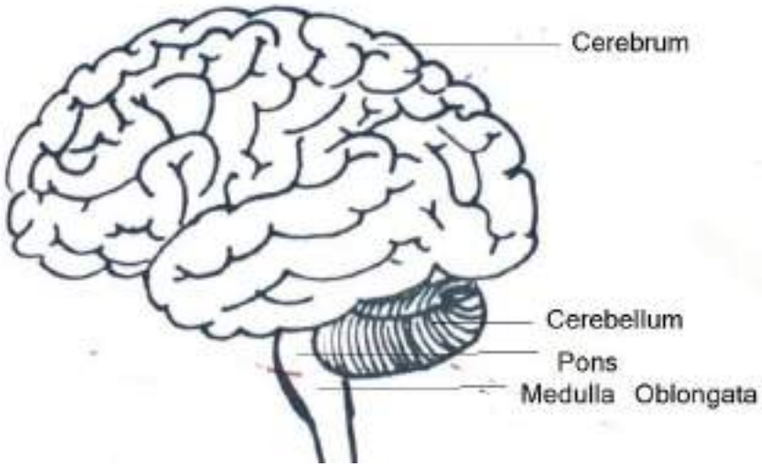
Experiment No.15

Aim	To study the structure and Function of Brain.
Structure	**Function**
1. Forebrain	
Cerebrum	It is the seat of the consciousness, intelligence, memory, reasoning etc. It receives the impulse from different parts of the body and initiate all the voluntary activities. It is also a centre for hearing.
Corpus callosum	It connects the two cerebral hemispheres from base. It also transfer impulse from one hemisphere to other
Thalamus	It acts as the relay station for incoming sensory impulse and out going motor impulse to and from cerebrum
Hypothalamus	It is the regulatory centre fo thirst, hunger, and body temperature. It also controls the functioning of pituitary gland.
2. Mid Brain	It lies sandwich between the fore brain and the hind brain.
3. Hind brain	
Cerebellum	It regulates and co ordinates the group movement of muscle and thus maintains balance of body and posture.
Pons Verolli	It transmit nerve impulses across the nerve fiber that

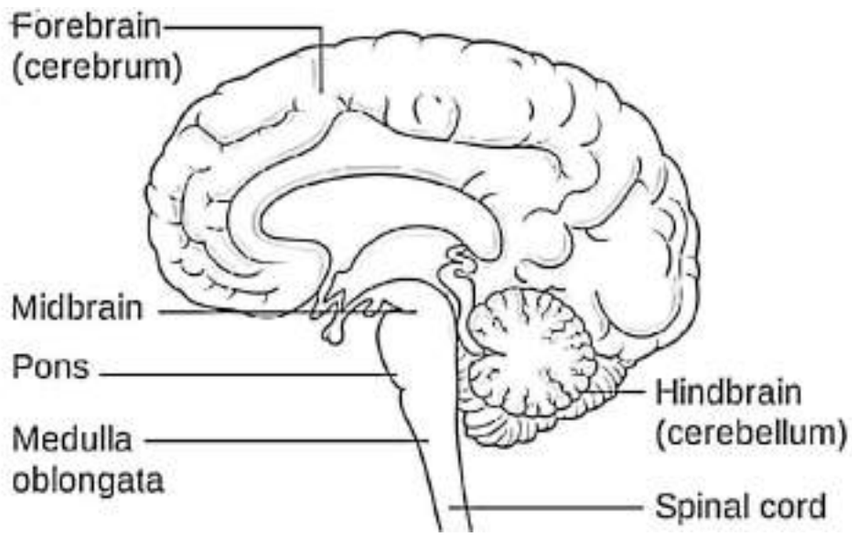
	connects the two lobes of cerebellum and ensure co-ordination of muscle movement on both the sides of the body.
Medulla Oblongata	It is a nerve centre situated within the medulla controls the activities of internal organs such as working of heart, breathing and other involuntary actions.

Diagrams (Both diagrams can be drawn on the same page or two different pages in case the notes exceeds to the next page)

External View



Median Section

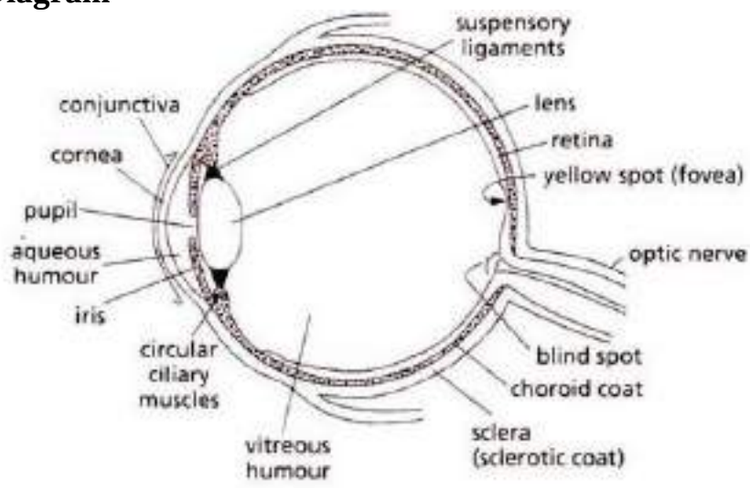


Experiment No.16

Aim	To study human eye.
Structure	Function
Sclera	It is the outer tough, white, opaque, non elastic layer of the eye ball. It continues in front as cornea. It provides shape to the eye ball.
Choroid	It is the middle , pigmented, vascular layer of the eye ball .It prevent light rays from reflecting and Scattering inside the eye.
Retina	It is the inner most photosensitive layer of the eye ball containing rods and cone cells.
Yellow spot	It is the area of brightest vision and also for colour vision. It lies at the center of the retina
Blind spot.	It is an area of no vision as there is no rod and cone cells located.. Here the optic nerve arises, which take the nerve impulse to brain.
Lens	It is a crystalline , transparent, biconvex body held in position by the suspensory ligament.
Cornea	It is the part of the sclerotic layer that bulges out and become transparent in the front region where .It covers the coloured part of the eye. It allows the light

Ciliary body	rays to pass through. It lies at the junction of the choroids and iris. It contains smooth muscles which alter the shape of the Lens.

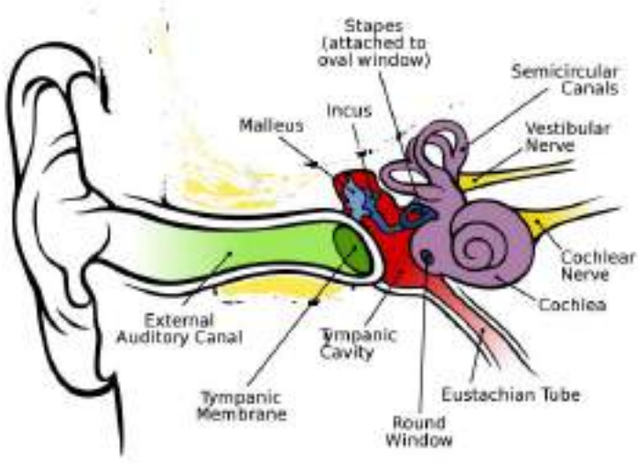
Diagram



Experiment No. 17

Aim	To study structure of human ear.
<u>Structure</u>	<u>Function</u>
Pinna	It is a skin covered flap of elastic cartilage. Muscles also present on it from either sides of the head. It collects sound waves and direct them in to the auditory canal.
Auditory canal	It is "S" shaped tube leading inward from the pinna of the external ear. Sound waves travel from pinna. To the tympanum through the auditory canal.
Ear drum:	Thin, oval ,tightly stretched membrane closing the external ear internally. It converts sound waves into mechanical vibration.
Eustachian Tube	A passage that connects the cavity of the middle ear with the throat or naso pharynx. It equalizes air pressure on ither side of the tympanum.
Ear osscicles	A chain of three small articulated bone that crosses the tympanic cavity of the middle ear.It magnifies and transmit the sound vibrations in to the inner ear.
Inner Ear	It is also referred as membranous labyrinth surrounded by bony labyrynth filled with perilymph. It has Cochlea, vestibule and semicircular canal.
Utriculus and Sacculus	Found on the vestibule and are concerned with static balance of the body
Cochlea	Spirally coiled tube of about two and half turn resembling snails shell. The cochlear canal contain organ of corti.
Organ of Corti	Found on the basilar membrane of the median canal of cochlea and are concerned with hearing.
Vestibule	It is the central canal sac like part of the inner ear consisting of two chambers utricles and sacculus.
Semicircular canal	A set of three semicircular canal in each ear which are arranged at right angles to each other in three different places. It helps in maintaining dynamic balance of the body.

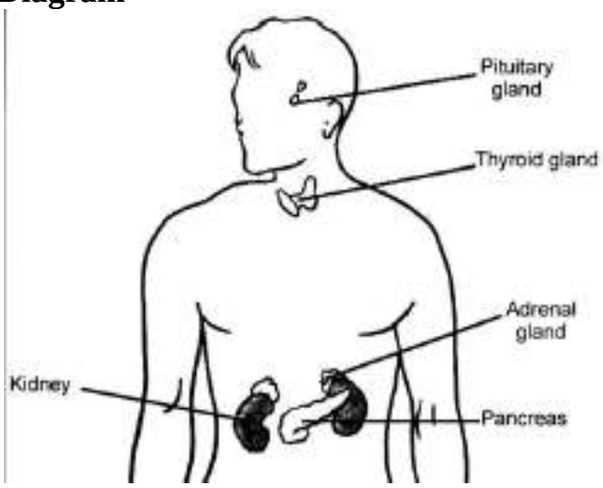
Diagram



Experiment 18
Human Endocrine Glands

Aim	Study of human endocrine glands.
Endocrine System	It consisits of ductless endocrine glands which secrete hormones into the blood stream.
Pituitary Gland	It is a small pea sized gland attached to the hypothalamus of the brain. It is also called master gland because it secretes tropic hormones which controls the secretions of other endocrine glands in the body
Adrenal Gland	A pair of adrenal glands are located above the kidney fitted like a cap. Each adrenal gland consists of two regions - Adrenal cortex and adrenal medulla. The adrenal cortex secretes cortisone which helps in fighting stress. Adrenal Medulla secrete Adrenaline which is an emergency hormone.
Pancreas	It is a heterocrine gland located just below the stomach. It consists of endocrine tissue called Islets of Langerhans formed of Alpha Cells and Beta cells. Alpha cells secrete glucagon and Beta cells secrete insulin
Thyroid Gland	It is a bilobed gland present in front of the neck below the larynx. It secretes thyroxine which regulates the basal metabolism of the body.

Diagram



Thank You

Wish You All The Best
By
Department of Biology, Don Bosco Academy, Patna.

HISTORY HOLIDAY HOMEWORK-2024-25
STD X

1.) Write the MCQ and Short Answer Questions from the Previous Year Board papers from 2018 onwards till 2023, for the following chapters- Union Legislature, Union Executive, Union Cabinet and The First War of Independence.
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- 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 **5th July, 2024**. It is mandatory to submit the work on time.

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