S.H.I.P.S.
[A Premier Institution

Home Assignment

2024-25

Grade-X

Name: _____

Section: _____ Roll. No. _____

Note:

1. **Assignment Marks will be added in the Terminal Assessment.**
2. **Parents are required to let their child do his/her assignments on his/her own.**
3. **Use loose sheets if required to perform the task.**
4. **Best Assignment of the year will be recognised.**

'Summer Vacation weaves a magic wand over the little world of our kids, everything softer and more beautiful.'

So, Hello Summer!!

The seven Golden Commandments for an exemplary Summer Vacation [to be followed by Parents Ward Duo].

a) What about Dining Together? A family that dines together, stays happy forever.
Feasting together with your ward atleast twice a day will strengthen bonds between you and your ward. They will share with you their innermost desires, once you start this process.

b) Teaching them Dignity of Labour: Asking your ward to engage in household chores like cleaning their dishes after meals, assisting maids and house servants, or gardeners or assisting you in cooking and serving food.

c) Visit to Orphanages: Instead of visiting malls, which promotes pseudo culture, allow your kids to visit orphanages so that they connect with the lesser fortunate, learn about their plight. Only by seeing the downtrodden, first hand, can they develop 'Empathy'.

d) Kinship with Mother Nature:- In order to develop affinity and accordance with nature, let the kids work in their kitchen garden, let them plant a sapling or a seed in medium sized pot on the first day of summer break. Ask them to nurture it throughout the holiday and to carry to school with their name tags on 11 July, 2018. This sapling will be nurtured by your ward in the school for the next few years. This way they will learn the value of 'caring' and also appreciate all that you do for them.

e) Shun the Indoor Era: Let them gel with rustic, invigorating natural environment. Let them steer clear of indoor culture which has made them slothful. Let them get dirty, let them bask in natural sunshine, prohibit air conditioners for them.
As Emerson said, "Live in the sunshine, swim the sea, drink the wild air."
Let your kids be adventurous, wild. Let them be REAL KIDS FOR A CHANGE.

f) Sow in them seeds of Philanthropy and Good Humanitarianism: Allow them to donate their old, unused stuff to the needy. Teach them to be generous. Let them donate with their own hands, their discarded clothes, stationery, bags, books, bottles, tiffin boxes etc.

So Dear Parents,

LET HOLIDAY MODE BE ACTIVATED

Holidays are a perfect time to reflect on our blessings and seek out ways to make life better for those around us.

May Your Days be Merry and Bright

Hope You Enjoy a Blissful Bonding with Your Ward.

LET THE MEMORIES OF HOLIDAYS LAST FOREVER

S.H.I.P.S.
[A Premier Institution]

ENGLISH

SUMMER HOLIDAYS HOMEWORK

CLASS X JUNE , 2024 – 2025

English Language and Literature (Code No. 184) CBSE

1. Writing Skills : Unseen Comprehension

2. Grammar : Tenses

3. PROJECT ON NELSON MANDELA (20 MARKS)

SECTION A: READING SKILLS

1. Read the text carefully and answer the questions.

1. Before starting an operation, the nurse in charge usually counts the cotton mops. A mop is a piece of sterilized cotton gauze. At the end of the operation, she counts the used and unused mops and totals them. This figure should tally with the number of mops counted at the start of the surgery. This procedure is followed strictly to prevent the possibility of a mop getting left behind in a patient's body through oversight.
2. The operation was successful and the surgeon was about to sew up and close the abdomen. In keeping with the routine, he asked the OT nurse, "Sister, is the mop count okay? If it is fine, give me the needle and catgut." The young nurse counted the mops and said, "Sorry doctor, the count is not okay. There is a difference of one mop."
3. The surgeon started searching inside the abdomen. He found no mop. "No sister, there is nothing inside", he told her. The nurse searched the OT, but she too could not find the missing mop. She was quite concerned. If the mop count did not tally, the surgeon could not stitch up the patient's abdomen. The surgeon was concerned too. He insisted that if the missing mop was not found, then there must have been an error in the initial count. Politely, but firmly, she said, "No sir, unless I find that missing mop, I cannot give you the needle and catgut."
4. The surgeon controlled his rising anger and searched the abdomen once again. The nurse was in a dilemma. But she did not change her stand. The surgeon warned angrily, "If you do not obey my instructions, I will dismiss you after the operation."
5. The inexperienced nurse's apparent defiance made the surgeon angry. He looked down in frustration. To his amazement, he saw the blood-soaked cotton mop lying on the OT floor. "Hey, the mop is here", he exclaimed. "Now the count is complete. Give me the ...". Before he could complete the sentence, the needle and catgut were in his hands.

6. After everything was over, the surgeon called the young nurse aside and expressed his appreciation. He told her, "I am sorry that I put extra pressure on you, sister. However, I am curious to know how you could stand your ground even after I threatened you." She said hesitantly, "Sir, I merely obeyed the principle taught to me by my teacher, if the mop count is not correct, then the needle and catgut should not be given to the surgeon. I just followed my teacher's words." The surgeon was wonderstruck and immensely pleased.

vii. At the end of the operation, the count of used and unused mops is not tallied with the mop count before the operation. What does it suggest?
   a) Less than required mops have been used in the surgery.
   b) There is a possibility of wastage of mops during the surgery.
   c) A mop may be retained in the patient's body.
   d) Additional mops have been used in the surgery.

viii. She was quite concerned. Why do you think she was concerned?
   a) The patient's condition was worsening.
   b) The doctor was getting angry.
   c) There was a delay in the completion of surgery.
   d) The missing mob was found on the floor.

ix. Despite pressure from the surgeon, the nurse stands her ground. What does it reveal about her character?

x. Identify the tone of the surgeon when he says, I will dismiss you after the operation.

xi. Was it justified on the part of the doctor to put extra pressure on the nurse? Give reason in support of your answer.

xii. Which word in paragraph 4 means the same as a situation in which you have to make a difficult choice?

xiii. Complete the following sentence appropriately:
The nurse did not give the needle and catgut to the surgeon as she was sure _____.

xiv. Complete the following:
_____ made the surgeon angry.

xv. What was the doctor reminded by the nurse after the operation?
   a) To be patient while performing a surgery
   b) To follow the principles strictly
   c) To be more careful when using the mops
   d) To be flexible in his approach

xvi. After the surgery, the doctor was convinced that he had a competent nurse with him.
   a) True b) False

Gap fills worksheet for class 10 | Tenses

1. Information technology ……1…… (change) the way we access information.
2. Since its introduction in the 1980's, the internet ……..2……. (become) cheap and commonplace.
3. Some people ……..3……. (see) this as an opportunity to deal with problems like unemployment.
4. They ……4…… (argue) that the government ……..5……. (provide) free internet access to people ……6…… (look) for a job.
5. I ……7…… (not agree) with this point of view for several reasons.

6. Lack of skills …….. 8…… (be) the main reason that ……9……. (prevent) jobless people from ……..10……. (find) employment.
7. Instead of ……11…… (offer) free internet to the people, the government ……12…… (organize) training programs for the jobless.
8. Giving free internet is unlikely to be of any help. In the first place, it ……13…… (be) nearly impossible to control how these technologies ……14…… (use).
9. Instead of this, the government ……15…… (use) public money to provide subsidized or free bus tickets for the unemployed who …….16……. (need) to travel for a job interview.

PROJECT ON SIR. NELSON

HINDI

ग्रीष्मकालीन कार्य

कक्षा दसवीं

1- पोर्टफोलियो बनाना है।

2- पंजाब और महाराष्ट्र के संस्कृति, पोशाकें, ऐतिहासिक और धार्मिक स्थलों, खान-पान से संबंधित परियोजना कार्य पूर्ण करना है. (पंचशीट में करना है कार्डबोर्ड फाइल में समस्त कार्य करना है तथा संबंधित चित्र भी लगाने हैं।)

3- समस्त पाठों की पुनरावृत्ति करनी है।

4. सभी वर्गों को गुणवत्ता रूपी शिक्षा मिले, इस पर पोस्टर बनाएंॅ। एस.डी.जी. लक्ष्य (4)

PUNJABI

1. **ਹੇਠ ਲਿਖੀਆਂ ਕਾਵ ਟੁਕੜੀਆਂ ਨੂੰ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦਿਓ-**

(1) ਰਾਜੇ ਲਸ਼ਕਰਾਂ ਵਿੱਚ ਸਲਾਹ ਕੀਤੀ,
ਸ਼ੇਰ ਸਿੰਘ ਨੂੰ ਕਿਵੇਂ ਸਦਾਈਏ ਜੀ।
ਉਹ ਹੈ ਪੁੱਤਰ ਸਰਕਾਰ ਦਾ ਫ਼ਤਹਿ - ਜੰਗੀ,
ਗੱਦੀ ਓਸ ਨੂੰ ਚਾਇ ਬਹਾਈਏ ਜੀ।

1. **ਰਾਜੇ ਨੇ ਕਿਸ ਨਾਲ ਸਲਾਹ - ਮਸ਼ਵਰਾ ਕੀਤਾ?**
2. **ਸ਼ੇਰ ਸਿੰਘ ਨੂੰ ਬੁਲਾ ਕੇ ਉਹ ਕੀ ਕਰਨਾ ਚਾਹੁੰਦੇ ਸਨ?**
3. **'ਫ਼ਤਹਿ - ਜੰਗੀ' ਸ਼ਬਦ ਤੋਂ ਕੀ ਭਾਵ ਹੈ ?**

(2) ਨੀ ਮੈਂ ਕਿਹੜੇ ਦੇਸ਼ ਉੱਡਾ,
ਨੀ ਮੈਂ ਕਿਹੜੇ ਦੇਸ਼ ਜਾਵਾਂ?
ਏਥੇ ਜੰਗ ਦੇ ਨੇ ਭਾਂਬੜ,
ਉੱਥੇ ਕਾਲ ਦਾ ਪਰਛਾਵਾਂ,
ਖਿੰਡੀ ਮੁਰਦਿਆਂ ਦੀ ਬਦਬੋ,
ਉੜੀ ਜ਼ਿੰਦਗੀ ਦੀ ਖੁਸ਼ਬੋ,
ਮਹਿਕਾਂ ਦਾ ਸੀਨਾ ਛਣਿਆਂ,
ਛਲਨੀ ਹੋਈਆਂ ਹਵਾਵਾਂ।

1. **ਕਾਲ ਦਾ ਪਰਛਾਵਾਂ ਕਿਸ ਨੂੰ ਕਿਹਾ ਗਿਆ ਹੈ?**
2. **ਕਵੀ ਦੀ ਦੁਚਿਤੀ ਦਾ ਕਾਰਨ ਕੀ ਹੈ?**
3. **ਕਵੀ ਨੂੰ ਜ਼ਿੰਦਗੀ ਦੀ ਖ਼ੁਸ਼ਬੋ ਦਿਖਾਈ ਨਹੀਂ ਦਿੰਦੀ?**

(3) ਹੇਠ ਦਿੱਤੇ ਚਿੱਤਰਾਂ ਦਾ ਵਰਣਨ ਕਰੋ-

1. 

2. 

(4) ਹੇਠ ਲਿਖਿਆ ਵਿਸ਼ਿਆਂ ਤੇ ਲੇਖ ਰਚਨਾ ਲਿਖੋ-

ਸਮੇਂ ਦੀ ਬੱਚਤ, ਬੇਰੁਜ਼ਗਾਰੀ

(5) ਕਿਸੇ ਅਖ਼ਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਪੱਤਰ ਲਿਖੋ ਜਿਸ ਵਿੱਚ ਨਿਤ ਵਰਤੋਂ ਦੀਆਂ ਵਸਤਾਂ ਦੀਆਂ ਕੀਮਤਾਂ ਵਿੱਚ ਵਾਧੇ ਕਾਰਨ ਚਿੰਤਾ ਪ੍ਰਗਟ ਕਰੋ।

(6) ਕਿਸੇ ਪੰਜਾਬੀ ਅਖ਼ਬਾਰ ਦੇ ਸੰਪਾਦਕ ਨੂੰ ਮੰਗਤਿਆਂ ਦੀ ਸਮੱਸਿਆ ਸਬੰਧੀ ਆਪਣੇ ਵਿਚਾਰ ਇੱਕ ਪੱਤਰ ਰਾਹੀਂ ਪ੍ਰਗਟ ਕਰੋ।

7. ਪੋਸਟਰ - ਪੰਜਾਬੀ ਮਾਂ ਬੋਲੀ

8. (Assignment)

ਪੁਰਾਤਨ ਸੱਭਿਆਚਾਰ

(Roll no 1 -20)

ਪੰਜਾਬ ਦੇ ਲੋਕ - ਗੀਤ

(21- 30)

SCIENCE

Section A

1. Which of the following statements about the given reaction are correct? **[1]**

$3Fe(s) + 4H_2O(g) \rightarrow Fe_3O_4(s) + 4H_2(g)$

i. Iron metal is getting oxidized

ii. Water is getting reduced

iii. Water is acting as a reducing agent

iv. Water is acting as a oxidizing agent

a) (ii) and (iv)

b) (iii) and (iv)

c) (i), (ii) and (iii)

d) (i), (ii) and (iv)

2. Solid calcium oxide reacts vigorously with water to form calcium hydroxide accompanied by the liberation of heat. This process is called slaking of lime. Calcium hydroxide dissolves in water to form its solution called lime water. Which among the following is (are) true about slaking of lime and the solution formed? **[1]**

i. It is an endothermic reaction

ii. It is an exothermic reaction

iii. The pH of the resulting solution will be more than seven

iv. The pH of the resulting solution will be less than seven

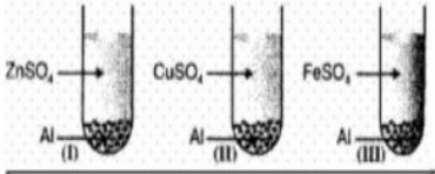
a) (i) and (ii)

b) (iii) and (iv)

c) (i) and (iv)

d) (ii) and (iii)

3. **[1]**



Obseravation	I	II	III
Solution after reaction	Colourless	Colourless	Colourless
Metal Deposited	Zn	Cu	Fe

Which of the following is correct conclusion?

a) Al is more reactive than Cu and Fe but less reactive than Zn

b) Al is more reactive than Cu but less reactive than Zn and Fe

c) Al is more reactive than Zn and Cu but less reactive than Fe

d) Al is more reactive than Zn, Cu, Fe

4. Which of the following is(are) an endothermic process(es)? **[1]**

i. Dilution of sulphuric acid

ii. Sublimation of dry ice

iii. Condensation of water vapours

iv. Evaporation of water

a) (iii) only

b) (ii) and (iv)

c) (i) and (iii)

d) (ii) only

5. A student added zinc granules to copper sulphate solution taken in a test tube. Out of the following, the correct observations made by the student will be **[1]**

A. Zinc granules have no regular shape.

B. Zinc granules have silvery grey colour.

C. The colour of zinc granules changed to brownish-black.

a) C only

b) B only

c) A only

d) All of these

6 **Assertion (A):** A reducing agent is a substance that can either accept electrons. **[1]**

Reason (R): A substance that helps in reduction is known as a reducing agent.

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.

7 **Assertion (A):** To dilute sulphuric acid, acid is added to water and not water to acid. **[1]**

Reason (R): Specific heat of water is quite large.

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.

8 **Assertion (A):** A chemical reaction becomes faster at higher temperatures. **[1]**

Reason (R): At higher temperatures, molecular motion becomes more rapid.

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.

9 **Assertion (A):** In the following chemical equation, **[1]**

$CuO\ (s) + Zn\ (s) \rightarrow ZnO\ (s) + Cu\ (s)$

Zinc is getting oxidised and copper oxide is getting reduced.

Reason (R): The process in which oxygen is added to a substance is called oxidation whereas the process in which oxygen is removed from a substance is called reduction.

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.

10 **Assertion (A):** Silver bromide is kept in the coloured bottles. **[1]**

Reason (R): Silver bromide is kept in coloured bottles because it decomposes in presence of light.

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.

Question 11 to 15 are based on the given text. Read the text carefully and answer the questions:

A reaction in which two or more reactants combine to form a single product is called a combination reaction. For example, calcium oxide reacts vigorously with water to form calcium hydroxide. The reaction is highly exothermic in nature, as lots of heat is produced during the reaction.

$$\underset{\text{Calcium oxide}}{CaO_{(s)}} + \underset{\text{Water}}{H_2O_{(l)}} \longrightarrow \underset{\text{Calcium hydroxide}}{Ca(OH)_{2(aq)}} + Heat$$

Solution of $Ca(OH)_2$ is used for white wash the walls. Calcium hydroxide reacts slowly with carbon dioxide in air to form a thin layer of calcium carbonate on the wall which gives a shiny appearance to wall. Calcium carbonate will form after two or three days of white wash.

11 What is the chemical name of quick lime? **[1]**

a) Calcium carbonate

b) Calcium oxide

c) Carbon dioxide

d) Calcium hydroxide

12 When carbon dioxide is passed through lime water, **[1]**

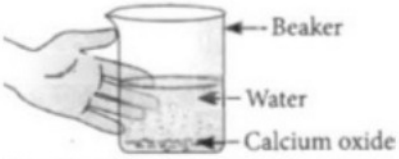
a) calcium hydroxide is formed

b) white precipitate of CaO is formed

c) colour of lime water becomes green.

d) lime water turns milky

13 Following observations are observed when calcium oxide reacts vigorously with water. **[1]**



Identify the incorrect observations.

I. It is an endothermic reaction.

II. Slaked lime is produced.

III. Quick lime is produced.

IV. It is an exothermic reaction.

V. It is a combination reaction.

a) (III) and (IV)

b) (I) and (II)

c) (II), (IV) and (V)

d) (I) and (III)

14 Quick lime combines vigorously with water to form (A) which reacts slowly with the carbon dioxide in air to form (B). Identify the compounds(A) and (B). **[1]**

a) (A) - Calcium, (B) - Calcium bicarbonate

b) (A) - Calcium carbonate, (B) - Calcium hydroxide

c) (A) - Calcium bicarbonate, (B) - Calcium

d) (A) - Calcium hydroxide, (B) - Calcium carbonate

15 Among the following, the endothermic reaction is **[1]**

a) combination of zinc and hydrochloric acid to form zinc chloride and hydrogen

b) combination of nitrogen and oxygen to form nitrogen monoxide

c) combination of carbon and oxygen to form carbon monoxide

d) combination of glucose and oxygen to form carbon dioxide and water

(I) BALANACE THE CHEMICAL EQUATIONS:

1. $Al + CuCl_2 \rightarrow AlCl_3 + Cu$
2. $FeSO_4 \rightarrow Fe_2O_3 + SO_2 + SO_3$
3. $Fe + H_2O \rightarrow Fe_3O_4 + H_2$
4. $BaCl_2 + H_2SO_4 \rightarrow BaSO_4 + HCl$
5. $Ca(OH)_2 + HNO_3 \rightarrow Ca(NO_3)_2 + H_2O$
6. $Pb(NO_3)_2 \rightarrow PbO + NO_2 + O_2$
7. $MnO_2 + HCl \rightarrow MnCl_2 + H_2O + Cl_2$
8. $C_6H_{12}O_6 + O_2 \rightarrow CO_2 + H_2O$ + energy
9. $HNO_3 + Ca(OH)_2 \rightarrow Ca(NO_3)_2 + H_2O$

(II) WRITE CHEMICAL EQUATIONS FOR THE FOLLOWING REACTIONS AND BALANCE THEM:

1. Silver bromide on exposure to sunlight decomposes into silver and bromine.
2. Sodium metal reacts with water to form sodium hydroxide and hydrogen gas.
3. Solution of barium chloride and sodium sulphate in water reacts to give insoluble barium sulphate and solution of sodium chloride.
4. Hydrogen gas combines with nitrogen to form ammonia.
5. Hydrogen sulphide gas burns in air to give water and sulphur dioxide.
6. Barium chloride reacts with ammonium sulphate to give ammonium chloride and precipitate of barium sulphate.
7. Potassium metal reacts with water give potassium hydroxide and hydrogen gas.
8. Calcium hydroxide + carbon dioxide → calcium carbonate + water
9. zinc + silver nitrate → zinc nitrate + silver
10. Potassium bromide + barium iodide → potassium iodide + barium bromide

QUESTIONS:

1. What happens chemically when quick lime is added to water?
2. How will you test for the gas which is liberated when HCL reacts with an active metal?
3. What is an oxidation reaction? Is it exothermic or endothermic? Give one example of oxidation Reaction.
4. Give an example of photochemical reaction.
5. Give an example of a decomposition reaction. Describe any activity to illustrate such a reaction by heating.
6. Why is respiration considered as exothermic process?
7. Balance the following chemical equation.

   $Fe(s) + H_2O(g) = Fe_3O_4 + H_2(g)$

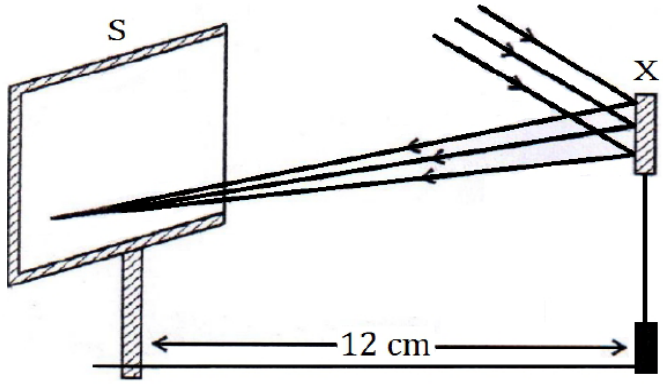
   $MnO_2 + HCL = MnCl_2 + Cl_2 + H_2O$

   $HNO_3 + Ca(OH)_2 = Ca(NO_3)_2 + H_2O$
8. On what basis is a chemical equation balanced?
9. State any two observations in an activity suggesting the occurrence of a chemical reaction.
10. Name a reducing agent which may be used to obtain manganese from manganese dioxide.
11. What change in colour is observed when silver chloride is left exposed to sunlight? Also mention the type of chemical reaction.
12. Define a combination reaction. Give one example of an exothermic combination reaction.
13. What is observed when a solution of potassium iodide is added to lead nitrate solution?
    a. What type of reaction is this? Write a balanced chemical equation for this reaction.
14. Distinguish between an exothermic and an endothermic reaction.

STD 10 Science							Roll No. :
Student Name :							Class :
Question	1	2	3	4	Marks Obtained	Total Marks	Signature of Examiner :
Marks Obtained						58	Date : 14-05-2024

Que 1 (A) Select and write one most appropriate option out of the four options given for each of the questions **[8]**

1. Study the following diagram and select the correct statement about the device 'X':



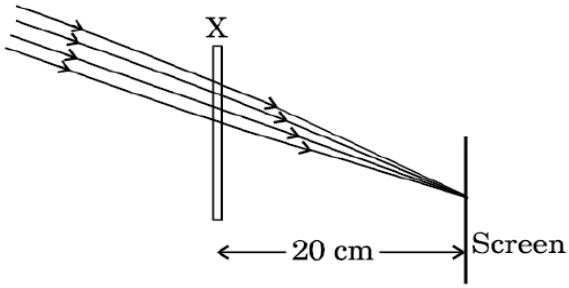
(A) Device 'X' is a concave mirror of radius of curvature 12cm.

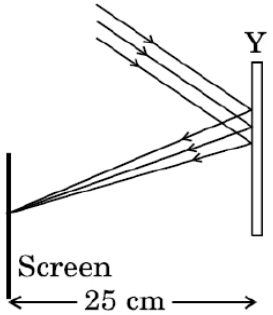
(B) Device 'X' is a concave mirror of focal length 6cm.

(C) Device 'X' is a concave mirror of focal length 12cm.

(D) Device 'X' is a convex mirror of focal length 12cm.

2. Study the given ray diagrams and select the correct statement from the following:





(A) Device X is a concave mirror and device Y is a convex lens, whose focal lengths are 20 cm and 25 cm respectively.

(B) Device X is a convex lens and device Y is a concave mirror, whose focal lengths are 10 cm and 25 cm respectively.

(C) Device X is a concave lens and device Y is a convex mirror, whose focal lengths are 20 cm and 25 cm respectively.

(D) Device X is a convex lens and device Y is a concave mirror, whose focal lengths are 20 cm and 25 cm respectively.

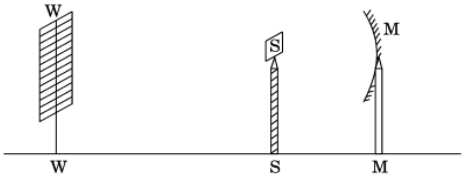
3. A 10mm long awl pin is placed vertically in front of a concave mirror. A 5mm long image of the awl pin is formed at 30cm in front of the mirror. The focal length of this mirror is:

(A) -30cm. (B) -20cm. (C) -40cm. (D) -60cm.

4. The laws of reflection hold good for:

(A) Plane mirror only. (B) Concave mirror only. (C) Convex mirror only. (D) All mirrors irrespective of their shape.

5. A student obtains a sharp image of the distant window (W) of the school laboratory on the screen (S) using the given concave mirror (M) to determine its focal length. Which of the following distances should he measure to get the focal length of the mirror?



(A) MW. (B) MS. (C) SW. (D) MW - MS.

6. A student has to determine the focal length of a concave mirror by obtaining the image of a distant object on a screen. For getting best result he should focus:

(A) A distant tree or an electric pole. (B) A well-illuminated distant building. (C) Well-lit grills of the nearest window. (D) A burning candle laced at the distant edge of the laboratory table.

7. The figure given alongside shows the image of a clock as seen a plane mirror. The correct time is:
Figure.

(A) 2.25 (B) 2.35 (C) 6.45 (D) 9.25

8. An object is placed in front of a convex mirror. Its image is formed :

(A) at a distance equal to the object distance in front of the mirror.

(B) at twice the distance of the object in front of the mirror.

(C) half the distance of the object in front of the mirror.

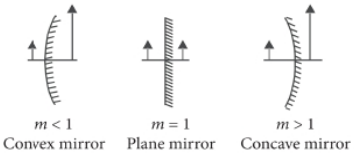
(D) behind the mirror and it's position varies according to the object distance.

Que 1 (B) Assertion - Reasoning based questions. **[3]**

9. For two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

a. Both A and R are true, and R is correct explanation of the assertion.
b. Both A and R are true, but R is not the correct explanation of the assertion.
c. A is true, but R is false.
d. A is false, but R is true.

Assertion: We can decide the nature of a mirror by observing the size of erect image in the mirror.



Reason: The minimum distance between a real object and its real image in a concave mirror is non zero.

10.

For two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

a. Both A and R are true, and R is correct explanation of the assertion.
b. Both A and R are true, but R is not the correct explanation of the assertion.
c. A is true, but R is false.
d. A is false, but R is true.

Assertion : Light is able to reach earth from the sun.

Reason: Light rays can travel in vaccum.

11. For two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

a. Both A and R are true, and R is correct explanation of the assertion.
b. Both A and R are true, but R is not the correct explanation of the assertion.
c. A is true, but R is false.
d. A is false, but R is true.

Assertion: In the case of concave mirror, the minimum distance between real object and its real image is zero.

Reason: If concave mirror forms virtual image of real object, the image is magnified.

Que 1 (C) Fill in the blank with correct answer.[1 Mark each] [6]

12. a. If the magnification has a plus sign, then image is _____ and _____.
b. If the magnification has a minus sign, then the image is _____ and _____.

13. Convex mirrors have _____ in comparison to concave mirrors.

14. Parallel rays of light are reflected by a concave mirror to a point called the _____.

15. _____ mirror is a spherical mirror whose reflecting surface is curved inwards.

16. A ray of light which is parallel to the principal axis of a convex mirror, appears to be coming from _____ after reflection from the mirror.

17. For a convex mirror, parallel rays of light appear to diverge from a point called the _____ .

Que 2 (A) Answer the following question. : [26]

18. Draw a ray diagram to show the path of the reflected ray corresponding to an incident ray of light parallel to the principal axis of a convex mirror and show the angle of incidence and angle of reflection on it.

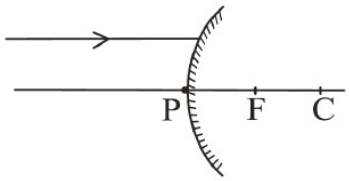
19. State two positions in which a concave mirror produces a magnified image of a given object. List two differences between the two images.

20. List four properties of the image formed by a plane mirror.

21. An object is placed at a distance of 12cm in front of a concave mirror of radius of curvature 30cm. List four characteristics of the image formed by the mirror.

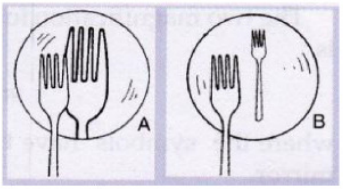
22. List four specific characteristics of the images of the objects formed by convex mirrors.

23. A ray of light is incident on a convex mirror as shown. Redraw the diagram and complete the path of this ray after reflection from the mirror. Mark angle of incidence and angle of reflection on it.



24. Name the type of mirrors used in the design of solar furnaces. Explain how high temperature is achieved by this device.

25. The diagrams show the appearance of a fork when placed in front of and close to two mirrors A and B, turn by turn.



a. Which mirror is convex.
b. Which mirror is concave.

Give reasons for your choice.

26. The letter F is placed in front of a plane mirror:
a. How would its image look like when seen in a plane mirror?
b. What is the name of the phenomenon involved?

27. Briefly describe how you would find the focal length of a concave mirror quickly but approximately.

28. Explain why, concave mirrors are used as shaving mirrors.

29. The image formed by a concave mirror is observed to be virtual, erect and larger than the object. Where should the position of the object be relative to the mirror? Draw ray diagram to justify your answer.

30. Which kind of mirrors are used in the headlights of a motorcar and why?

Que 3 (A) Answer short answer questions. [3 Mark each] **[15]**

31. The image formed by a spherical mirror is real, inverted and is of magnification - 2. If the image is at a distance of 30 cm from the mirror, where is the object placed ? Find the focal length of the mirror. List two characteristics of the image formed if the object is moved 10 cm towards the mirror.

32. An object 4 cm in height, is placed at 15 cm in front of a concave mirror of focal length 10 cm. At what distance from the mirror should a screen be placed to obtain a sharp image of the object. Calculate the height of the image.

33. A student wants to project the image of a candle flame on a screen 90 cm in front of a mirror by keeping the flame at a distance of 15 cm from its pole.
a. Suggest the type of mirror he should use.
b. Determine the linear magnification in this case.
c. Find the distance between the object and its image.
d. Draw ray diagram to show the image formation in this case.

34. If the image formed by mirror for all positions of the object placed in front of it is always virtual and diminished, state the type of the mirror. Draw a ray diagram in support of your

answer. Where are such mirrors commonly used and why?

35. A student wants to project the image of a candle flame on a screen 48 cm in front of a mirror by keeping the flame at a distance of 12 cm from its pole.
    a. Suggest the type of mirror he should use.
    b. Find the linear magnification of the image produced.
    c. How far is the image from its object?
    d. Draw ray diagram to show the image formation in this case.

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BIOLOGY

Syllabus:-
Nutrition
Respiration

MULTIPLE CHOICE QUESTIONS:-

1. Desert plants take up which gas at night and prepare an intermediate which is acted upon by the energy absorbed during day

A.Oxygen B. Carbon dioxide C. Carbon monoxide D. Nitrogen

2. In Woody stem respiration take place through

A. Stomata B.General surface C lenticels D.Guard cells

3. The respiratory pigment haemoglobin has a very high affinity for which gas

A.Oxygen B. Carbon dioxide C. Carbon monoxide D. Nitrogen

4. The enzymes trypsin and acts on which of the following

A proteins B.fats C.lipids D.carbohydrates

5. How many molecules of ATP are gained during anaerobic respiration of 1 molecule of glucose

A. 36 B. 2 C. 38 D. 4

ASSERTION/REASON

Read the Assertion and Reason carefully to mark the correct option out of the options given below:
(A) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(B) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(C) Assertion is true but Reason is false.
(D) Assertion is false but Reason is true.

ASSERTION:-Those organism which can make their own food from the inorganic substance present in the environment are called autotrophs.
REASON:- The autotrophs contain the green pigment called chlorophyll which is capable of trapping sunlight energy, This energy is utilised to form the food for the plant by the process of photosynthesis.

ASSERTION:- Villi are present in the inner surface of the small intestine.
REASON:- Villi help in absorbing digested food into the blood of a person

ASSERTION:- The formation of small cavities in the teeth due to the action of acid forming bacteria.
REASON:- Brushing of teeth twice a day prevents dental caries.

ASSERTION:- Respiration is essential for life because it provide energy for carrying out all the activity process necessary to keep the organisms alive
REASON:- Respiration is taking in Oxygen and giving out of carbon dioxide.

SHORT ANSWER QUESTIONS:-

1. name the organ which separate the following enzyme in human digestive system

A.Pepsin B. Salivary amylase C. Trypsin D. Lipase

2. Why is the small intestine in herbivores longer than in carnivores?
3. Why is the rate of breathing in aquatic organisms much faster than terrestrial organisms?
4. What causes movement of food inside the alimentary canal?

5. Draw well labelled diagram of

a.Human digestive system b. Human respiratory system

c. Respiratory organs in plants d. Open and closed stomata

HOTS :-

1. After vigorous exercise you may experience cramps in your legs. Why does this happen?
2. Which organs secrets a hormone when the blood sugar rises. Name the hormone and digestive enzymes released by this organ.
3. "All plants give out oxygen during the day and carbon dioxide during the night" Do you agree with the statement? Give reason
4. If salivary amylase is lacking in the Saliva, which of the events in the mouth cavity will be affected and how?
5. Leaves of healthy potted plants were coated with Vaseline. Will this plant remain healthy for a long time? Give reason for your answer.

PRESENTATION:- (ANY ONE)

• Short presentation on

NUTRITION IN HUMAN

RESPIRATION IN ORGANISM

• Instructions:

1. Topic must have introduction.
2. Information about all the types.
3. Complete information about any one topic

• 4. Relevant diagram must be attached with your presentation

• 5. Cover page must be attached

• Mode: PPT/Video

Time : 2 to 3 min.

MODEL:- working model on (Any one)

- Hydraulics.
- Solar energy
- Different types of Pollution
- Biological models
- Waste management
- Natural disasters Proofing buildings
- Chemistry related
- Physics related Model
- Hydroponics

Note :-Complete fair notebook Learn full chapters.

CHAPTER 3

Pair of Linear Equation in Two Variables

OBJECTIVE QUESTIONS

1. The 2 digit number which becomes $\frac{5}{6}$ th of itself when its digits are reversed. The difference in the digits of the number being 1, then the two digits number is

(a) 45 (b) 54

(c) 36 (d) None of these

[Board 2022 Term-1 SQP STD]

2. In a number of two digits, unit's digit is twice the tens digit. If 36 be added to the number, the digits are reversed. The number is

(a) 36 (b) 63

(c) 48 (d) 84

[Board 2022 Term-1 SQP Basic]

3. If $3x+4y : x+2y = 9:4$, then $3x+5y : 3x-y$ is equal to

(a) 4 : 1 (b) 1 : 4

(c) 7 : 1 (d) 1 : 7

[Board 2022 Term-1 STD]

4. The pair of equations $3^{x+y} = 81$, $81^{x-y} = 3$ has

(a) no solution

(b) unique solution

(c) infinitely many solutions

(d) $x = 2\frac{1}{8}, y = 1\frac{7}{8}$

[Board 2022 Term-1 Basic]

5. A fraction becomes 4 when 1 is added to both the numerator and denominator and it becomes 7 when 1 is subtracted from both the numerator and denominator. The numerator of the given fraction is

(a) 2 (b) 3

(c) 5 (d) 15

[Board 2022 Term-1 Basic]

6. For which value(s) of p, will the lines represented by the following pair of linear equations be parallel

$3x-y-5 = 0$ and $6x-2y-p = 0$

(a) all real values except 10 (b) 10

(c) 5/2 (d) 1/2

[Board Term-1 Delhi 2012]

7. x and y are 2 different digits. If the sum of the two digit numbers formed by using both the digits is a perfect square, then value of $x+y$ is

(a) 10 (b) 11

(c) 12 (d) 13

[Board 2022 Term-1 STD]

8. The value of k for which the system of linear equations $x+2y=3$, $5x+ky+7=0$ is inconsistent is

(a) $-\frac{14}{3}$ (b) $\frac{2}{5}$

(c) 5 (d) 10

[Board 2020 OD Standard]

9. The value of k for which the system of equations $x+y-4=0$ and $2x+ky=3$, has no solution, is

(a) -2 (b) $\neq 2$

(c) 3 (d) 2

[Board 2020 Delhi Standard]

10. The pair of linear equations $2kx+5y=7$, $6x-5y=11$ has a unique solution, if

(a) $k \neq -3$ (b) $k \neq \frac{2}{3}$

(c) $k \neq 5$ (d) $k \neq \frac{2}{9}$

[Board Term-1 SQP 2012]

11. The pair of equations $x+2y+5=0$ and $-3x-6y+1=0$ has

(a) a unique solution

(b) exactly two solutions
(c) infinitely many solutions
(d) no solution

[Board Term-1 Foreign 2012]

12. If a pair of linear equations is consistent, then the lines will be
(a) parallel
(b) always coincident
(c) intersecting or coincident
(d) always intersecting

[Board Term-1 OD 2013]

13. The pair of equations $y = 0$ and $y = -7$ has
(a) one solution
(b) two solutions
(c) infinitely many solutions
(d) no solution

[Board Term-1 SQP 2017]

14. For what value of k, do the equations $3x - y + 8 = 0$ and $6x - ky = -16$ represent coincident lines ?
(a) $\frac{1}{2}$ (b) $-\frac{1}{2}$
(c) 2 (d) -2

[Board Term-1 Foreign 2016]

15. The pair of equations $x = a$ and $y = b$ graphically represents lines which are
(a) parallel
(b) intersecting at (b, a)
(c) coincident
(d) intersecting at (a, b)

[Board Term-1 Foreign 2011]

16. If the lines given by $3x + 2ky = 2$ and $2x + 5y + 1 = 0$ are parallel, then the value of k is
(a) $-\frac{5}{4}$ (b) $\frac{2}{5}$
(c) $\frac{15}{4}$ (d) $\frac{3}{2}$

[Board Term-1 OD 2011]

17. The value of c for which the pair of equations $cx - y = 2$ and $6x - 2y = 3$ will have is
(a) 3 (b) -3
(c) -12 (d) no value

[Board Term-1 SQP 2014]

18. One equation of a pair of dependent linear equations $-5x + 7y = 2$ The second equation can be
(a) $10x + 14y + 4 = 0$
(b) $-10x - 14y + 4 = 0$
(c) $-10x + 14y + 4 = 0$
(d) $10x - 14y = -4$

[Board Term-1 OD 2013]

19. If $x = a$ and $y = b$ is the solution of the equations $x - y = 2$ and $x + y = 4$, then the values of a and b are, respectively
(a) 3 and 5 (b) 5 and 3
(c) 3 and 1 (d) -1 and -3

[Board Term-1 OD 2015]

20. Aruna has only ₹ 1 and ₹ 2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is ₹ 75, then the number of ₹ 1 and ₹ 2 coins are, respectively
(a) 35 and 15 (b) 35 and 20
(c) 15 and 35 (d) 25 and 25

[Board Term-1 OD 2016]

21. The father's age is six times his son's age. Four years hence, the age of the father will be four times his son's age. The present ages (in year) of the son and the father are, respectively.
(a) 4 and 24 (b) 5 and 30
(c) 6 and 36 (d) 3 and 24

[Board Term-1 Delhi 2016]

ONE MARK QUESTIONS

22. Find the value of k for which the system of linear equations $x + 2y = 3$, $5x + ky + 7 = 0$ is inconsistent.

[Board 2020 OD Standard]

23. Find the value of k for which the system of equations $x + y - 4 = 0$ and $2x + ky = 3$, has no solution.

[Board 2020 Delhi Standard]

24. For which value(s) of p, will the lines represented by the following pair of linear equations be parallel ?

$$3x - y - 5 = 0, \quad 6x - 2y - p = 0$$

[Board Term-1 OD 2017]

25. The 2 digit number which becomes $\frac{5}{6}$ th of itself when its digits are reversed. If the difference in the digits of the number being 1, what is the two digits number?
[Board Term-1 Delhi 2011]

26. In a number of two digits, unit's digit is twice the tens digit. If 36 be added to the number, the digits are reversed. What is the number ?
[Board Term-1 Delhi 2016]

27. If $3x+4y : x+2y = 9 : 4$, then find the value of $3x+5y : 3x-y$.
[Board Term-1 Foreign 2012]

28. raction becomes 4 when 1 is added to both the numerator and denominator and it becomes 7 when 1 is subtracted from both the numerator and denominator. What is the numerator of the given fraction ?
[Board Term-1 Foreign 2016]

29. x and y are 2 different digits. If the sum of the two digit numbers formed by using both the digits is a perfect square, then what is the value of $x+y$?
[Board Term-1 OD 2013]

30. If a pair of linear equations is consistent, then the lines will be intersecting or coincident. Justify.
[Board 2008]

31. The pair of equations $y=0$ and $y=-7$ has no solution. Justify.
[Board Term-1 Foreign 2014]

32. If the equations $kx-2y=3$ and $3x+y=5$ represent two intersecting lines at unique point, then the value of k is ..... .
[Board Term-1 2011]

33. Find whether the pair of linear equations $y=0$ and $y=-5$ has no solution, unique solution or infinitely many solutions.
[Board Term-1 OD 2011]

34. If $am=bl$, then find whether the pair of linear equations $ax+by=c$ and $lx+my=n$ has no solution, unique solution or infinitely many solutions.
[Board Term-1 OD 2015]

35. If $ad \neq bc$, then find whether the pair of linear equations $ax+by=p$ and $cx+dy=q$ has no solution, unique solution or infinitely many solutions.
[Board Term-1 Delhi 2015]

36. Two lines are given to be parallel. The equation of one of the lines is $4x+3y=14$, then find the equation of the second line.
[Board 2007]

37. Find whether the lines represented by $2x+y=3$ and $4x+2y=6$ are parallel, coincident or intersecting.
[Board Term-1 Delhi 2016]

38. Given the linear equation $3x+4y=9$. Write another linear equation in these two variables such that the geometrical representation of the pair so formed is:
(1) intersecting lines
(2) coincident lines.
[Board Term-1 2016]

39. Find the value(s) of k so that the pair of equations $x+2y=5$ and $3x+ky+15=0$ has a unique solution.
[Board 2019 OD]

40. If $2x+y=23$ and $4x-y=19$, find the value of $(5y-2x)$ and $(\frac{y}{x}-2)$.
[Board 2020 OD Standard]

41. Find whether the following pair of linear equation is consistent or inconsistent:
$3x+2y=8,\ 6x-4y=9$
[Board Term-1 2016]

42. Is the system of linear equations $2x+3y-9=0$ and $4x+6y-18=0$ consistent? Justify your answer.
[Board Term-1 2012]

43. For what value of k, the pair of linear equations $kx-4y=3,\ 6x-12y=9$ has an infinite number of solutions ?
[Board Term-1 2012]

44. Solve the following pair of linear equations by substitution method:
$3x+2y-7=0,\ 4x+y-6=0$
[Board Term-1 2015]

45. Solve : $99x+101y=499,\quad 101x+99y=501$
[Board Term-1 2012]

46. Solve graphically : $2x-3y+13=0;\ 3x-2y+12=0$
[Board 2020 OD Basic]

47. Solve graphically : $2x+3y=2,\ x-2y=8$
[Board 2020 Delhi Basic]

48. A fraction becomes $\frac{1}{3}$ when 2 is subtracted from the numerator and it becomes $\frac{1}{2}$ when 1 is subtracted from the denominator- Find the fraction.
[Board 2019 Delhi]

49. Represent the following pair of linear equations graphically and hence comment on the condition of consistency of this pair.
$x-5y=6$ and $2x-10y=12$.
[Board Term-1 2011]

50. Determine the values of m and n so that the following system of linear equation have infinite number of solutions :
$(2m-1)x+3y-5=0$
$3x+(n-1)y-2=0$
[Board Term-1 2013]

51. For what value of p will the following system of equations have no solution ?
$(2p-1)x+(p-1)y=2p+1;\ \ y+3x-1=0$
[Board Term-1 2011]

52. Solve for x and y :
$\frac{x}{2}+\frac{2y}{3}=-1$ and $x-\frac{y}{3}=3$
[Board Term-1 2015]

53. Solve the following pair of linear equations :
$8x+5y=9,\quad 3x+2y=4$
[Board Term-1 2015]

54. Solve for x and y :
$\frac{x+1}{2}+\frac{y-1}{3}=9;\ \ \frac{x-1}{3}+\frac{y+1}{2}=8.$
Board Term-1 Delhi 2011]

55. Given the linear equation $2x+3y-8=0$, write another linear equation in two variables such that the geometrical representation of the pair so formed is :
(a) intersecting lines
(b) parallel lines
(c) coincident lines.
[Board Term-1 2014]

56. Solve for x and y :
$ax+by=\frac{a+b}{2}$ and $3x+5y=4$
[Board Term-1 2011]

57. Find whether the following pair of linear equations has a unique solutions. If yes, find the solution :
$7x-4y=49, 5x-6y=57$.
[Board Term-1 2017]

FIVE MARKS QUESTIONS

58. For what value of k, which the following pair of linear equations have infinitely many solutions:
$2x+3y=7$ and $(k+1)x+(2k-1)y=4k+1$
[Board 2019 Delhi]

59. Find c if the system of equations $cx+3y+(3-c)=0; 12x+cy-c=0$ has infinitely many solutions?
[Board 2019 Delhi]

60. Determine graphically the coordinates of the vertices of triangle, the equations of whose sides are given by $2y-x=8,\ 5y-x=14$ and $y-2x=1$.
[Board 2020 Delhi Standard]

61. Determine graphically whether the following pair of linear equations :
$3x-y=7$ and $2x+5y+1=0$ has :
(a) unique solution
(b) infinitely many solutions or
(c) no solution.
[Board Term-1 2015]

62. Aftab tells his daughter, '7 years ago, I was seven times as old as you were then. Also, 3 years from now, I shall be three times as old as you will be.' Represent this situation algebraically and graphically.
[Board Term-1 2015]

63. For Uttarakhand flood victims two sections A and B of class contributed Rs. 1,500. If the contribution of X-A was Rs. 100 less than that of X-B, find graphically the amounts contributed by both the sections.
[Board Term-1 2016]

64. Solve graphically the pair of linear equations :
$3x-4y+3=0$ and $3x+4y-21=0$
Find the co-ordinates of the vertices of the triangular

region formed by these lines and $x-$axis. Also, calculate the area of this triangle.
[Board Term-1 2015]

65. The cost of 2 kg of apples and 1kg of grapes on a day was found to be Rs. 160. After a month, the cost of 4kg of apples and 2kg of grapes is Rs. 300. Represent the situations algebraically and geometrically.
[Board Term-1 2013]

66. Solve for x and y :
$2x-y+3$ and $3x-5y+1=0$
[Board Term-1 2015]

67. Draw the graphs of the equations $x-y+1=0$ and $3x+2y-12=0$. Determine the co-ordinates of the vertices of the triangle formed by these lines and the X-axis and shade the triangular region.
[Board Term-1 2013]

68. Solve the following pair of linear equations graphically:
$x+3y=12,\ 2x-3y=12$
Also shade the region bounded by the line $2x-3y=2$ and both the co-ordinate axes.
[Board Term-1 2013, 2012]

69. Solve the following pair of linear equations graphically:
$x-y=1,\ 2x+y=8$
Also find the co-ordinates of the points where the lines represented by the above equation intersect $y-$ axis.
[Board Term-1 Delhi 2012]

70. Draw the graph of the following equations:
$2x-y=1,\quad x+2y=13$
Find the solution of the equations from the graph and shade the triangular region formed by the lines and the y-axis.
[Board Term-1 OD 2012]

71. Solve the following pair of equations graphically:
$2x+3y=12,\ x-y-1=0.$
Shade the region between the two lines represented by the above equations and the X-axis.
[Board Term-1 2013]

72. Solve $x+y=5$ and $2x-3y=4$ by elimination method and the substitution method.
[Board Term-1 2015]

73. For what values of a and b does the following pair of linear equations have infinite number of solution ?
$2x+3y=7, a(x+y)-b(x-y)=3a+b-2$
[Board Term-1 2015]

74. Find the value of p and q for which the system of equations represent coincident lines $2x+3y=7$, $(p+q+1)x+(p+2q+2)y=4(p+q)+1$
[Board Term-1 Delhi 2012]

WORD PROBLEMS

75. In an election contested between A and B, A obtained votes equal to twice the no. of persons on the electoral roll who did not cast their votes and this later number was equal to twice his majority over B. If there were 1,8000 persons on the electoral roll. How many votes for B.
[Board Term-1 2012]

76. Sum of the ages of a father and the son is 40 years. If father's age is three times that of his son, then find their respective ages.
[Board Term-1 2015]

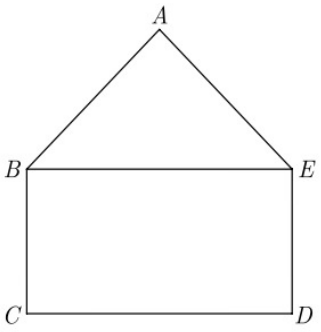
77. Half the perimeter of a rectangular garden, whose length is 4 m more then its width, is 36 m. Find the dimensions of garden.
[Board Term-1 2013]

78. A part of monthly hostel charge is fixed and the remaining depends on the number of days one has taken food in the mess. When Swati takes food for 20 days, she has to pay Rs. 3,000 as hostel charges whereas Mansi who takes food for 25 days Rs. 3,500 as hostel charges. Find the fixed charges and the cost of food per day.
[Board Term-1 2016, 2015]

79. The present age of the father is twice the sum of the ages of his 2 children. After 20 years, his age will be equal to the sum of the ages of his children. Find the age of the father.
[Board Term-1 2012]

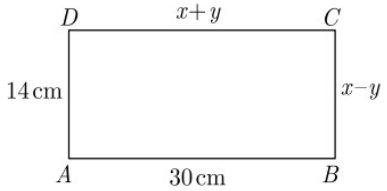
80. In the figure, $ABCDE$ is a pentagon with $BE \parallel CD$ and $BC \parallel DE$. BC is perpendicular to CD. $AB=5$ cm, $AE=5$ cm, $BE=7$ cm, $BC=x-y$ and $CD=x+y$.

If the perimeter of $ABCDE$ is 27 cm. Find the value of x and y, given $x, y \neq 0$.



[Board 2020 SQP Standard]

81. In Figure, $ABCD$ is a rectangle. Find the values of x and y.



[Board 2018]

82. Seven times a two digit number is equal to four times the number obtained by reversing the order of its digits. If the difference of the digits is 3, determine the number.

[Board Term-1 2017]

83. 4 chairs and 3 tables cost Rs 2100 and 5 chairs and 2 tables cost Rs 1750. Find the cost of one chair and one table separately.

[Board Term-1 2015]

84. A chemist has one solution which is 50 % acid and a second which is 25 % acid. How much of each should be mixed to make 10 litre of 40 % acid solution.

[Board Term-1 2015]

85. It can take 12 hours to fill a swimming pool using two pipes. If the pipe of larger diameter is used for four hours and the pipe of smaller diameter for 9 hours, only half of the pool can be filled. How long would it take for each pipe to fill the pool separately?

[Board 2020 OD Standard]

86. A man can row a boat downstream 20 km in 2 hours and upstream 4 km in 2 hours. Find his speed of rowing in still water. Also find the speed of the stream.

[Board 2020 Delhi Standard]

87. A train covered a certain distance at a uniform speed. If the train would have been 10 km/hr scheduled time. And, if the train were slower by 10 km/hr, it would have taken 3 hr more than the scheduled time. Find the distance covered by the train.

[Board Term-1 Delhi 2012]

88. The ratio of incomes of two persons is 11:7 and the ratio of their expenditures is 9:5. If each of them manages to save Rs 400 per month, find their monthly incomes.

[Board Term-1 2012]

89. A and B are two points 150 km apart on a highway. Two cars start A and B at the same time. If they move in the same direction they meet in 15 hours. But if they move in the opposite direction, they meet in 1 hours. Find their speeds.

[Board Term-1 2012]

90. If 2 is subtracted from the numerator and 1 is added to the denominator, a fraction becomes $\frac{1}{2}$, but when 4 is added to the numerator and 3 is subtracted from the denominator, it becomes $\frac{3}{2}$. Find the fraction.

[Board Term-1 2012]

91. If a bag containing red and white balls, half the number of white balls is equal to one-third the number of red balls. Thrice the total number of balls exceeds seven times the number of white balls by 6. How many balls of each colour does the bag contain ?

[Board Term-1 2012]

92. The area of a rectangle gets reduced by 9 square units, if its length is reduced by 5 units and the breadth is increased by 3 units. The area is increased by 67 square units if length is increased by 3 units and breadth is increased by 2 units. Find the perimeter of the rectangle.

[Board Term-1 Delhi 2012]

93. The students of a class are made to stand in rows. If 3 students are extra in a row, there would be 1 row less. If 3 students are less in a row, there would be 2 rows more. Find the number of students in the class.

[Board Term-1 2012]

94. The ages of two friends ani and Biju differ by 3 years. Ani's father Dharam is twice as old as ani and Biju is twice as old as his sister Cathy. The ages of Cathy and Dharam differ by 30 year. Find the ages of Ani and Biju.

[Board Term-1 2012]

95. One says, "Give me a hundred, friend! I shall then become twice as rich as you." The other replies, "If you give me ten, I shall be six times as rich as you." Tell me what is the amount of their (respective) capital.

[Board Term-1 2012]

96. At a certain time in a deer, the number of heads and the number of legs of deer and human visitors were counted and it was found that there were 39 heads and 132 legs.

[Board Term-1 2015]

97. The length of the sides of a triangle are $2x+\frac{y}{2}$, $\frac{5x}{3}+y+\frac{1}{2}$ and $\frac{2}{3}x+2y+\frac{5}{2}$. If the triangle is equilateral , find its perimeter.

[Board Term-1 2012]

98. When 6 boys were admitted and 6 girls left, the percentage of boys increased from 60% to 75%. Find the original no. of boys and girls in the class.

[Board Term-1 2015]

99. A cyclist, after riding a certain distance, stopped for half an hour to repair his bicycle, after which he completes the whole journey of 30 km at half speed in 5 hours. If the breakdown had occurred 10 km farther off, he would have done the whole journey in 4 hours. Find where the breakdown occurred and his original speed.

[Board Term-1 2013]

100. The population of a village is 5000. If in a year, the number of males were to increase by 5% and that of a female by 3% annually, the population would grow to 5202 at the end of the year. Find the number of males and females in the village.

[Board Term-1 2012]

101. A father's age is three times the sum of the ages of his two children. After 5 years his age will be two times the sum of their ages. Find the present age of the father.

[Board 2019 Delhi]

102. Sumit is 3 times as old as his son. Five years later he shall be two and a half times as old as his son. How old is Sumit at present?

[Board 2019 OD]

COMPETENCEY BASED QUESTIONS

103. Lawn Service : Nitin and his sons run a lawn service, which includes mowing, edging, trimming, and aerating a lawn. His fixed cost includes insurance, his salary, and monthly payments on equipment, and amounts to Rs 4000 per month. The variable costs include gas, oil, hourly wages for his employees, and miscellaneous expenses, which run about Rs 75 per lawn. The average charge for full service lawn care is Rs 115 per visit.

(i) How many lawns Nitin must service each month to break even ?

(ii) What is the revenue required to break even ?

(iii) What is the revenue if they get 90 services ?

104. Production of Frying Pan : Due to high market demand, a manufacturer decides to introduce a new line of frying pan. By using existing factory space and retraining some employees, fixed costs are estimated at Rs 84000/mo. The components to assemble and test each frying pan are expected to run Rs 450 per unit. If market research shows consumers are willing to pay at least Rs 690 for this product, find

(i) How many units must be made and sold each month to break even ?

(ii) What is the revenue required to break even ?

105. Theatre Productions : A play is a work of drama, usually consisting mostly of dialogue between characters and intended for theatrical performance rather than just reading. Comedies are plays which are designed to be humorous. Comedies are often filled with witty remarks, unusual characters, and strange circumstances. Certain comedies are geared toward different age groups.

At a recent production of a comedy drama, the Ravindra Rangmanch Theater brought in a total of Rs 304950 in revenue. If adult tickets were Rs 90 and children's tickets were Rs 65, how many tickets of each type were sold if 3800 tickets in all were sold?

106. Alumni Contributions : Alumni can help college sustain through their donations and voluntary help. Alumni can also be helpful in providing valuable financial, intellectual and human resource. If a big chunk of money that institutes require comes from alumni, it will help those institutes remain competitive.

Alumni association of NIT Kuruskhstra donated Rs 100,000 to his alma mater. The college used the funds to make a loan to a science student at 7% interest and a loan to a engineering student at 6% interest. That year the college earned Rs 6350 in interest.

(i) How much was loaned to engineering student?

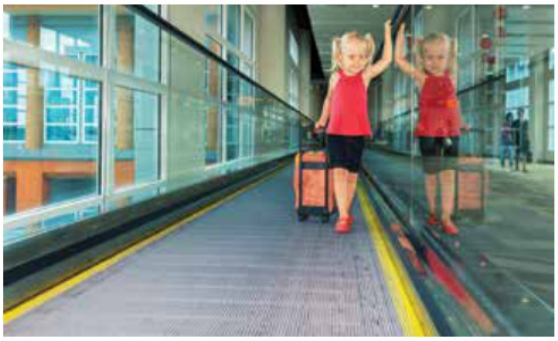
(ii) How much was loaned to science student?

(i) Rs 65000 was loaned to the engineering student.

(ii) Rs 35000 was loaned to the science student.

107. Airport Walkways : A moving walkway, also known as an autowalk, is a slow-moving conveyor mechanism that transports people across a horizontal or inclined plane

over a short to medium distance. Moving walkways can be used by standing or walking on them. They are often installed in pairs, one for each direction.



As part of an algebra field trip, Jenish takes his class to the airport to use their moving walkways for a demonstration. The class measures the longest walkway, which turns out to be 256 ft long. Using a stop watch, Jenish shows it takes him just 32 sec to complete the walk going in the same direction as the walkway. Walking in a direction opposite the walkway, it takes him 320 sec (10 times as long!). The next day in class, Jenish hands out a two question quiz:

(i) What is my (Jenish's) normal walking speed?

(ii) What was the speed of the walkway in feet per second?

108. Nutrition : Shalvi wants to use milk and orange juice to increase the amount of calcium and vitamin A in her daily diet. An ounce of milk contains 38 milligrams of calcium and 56 micrograms of vitamin A. An ounce of orange juice contains 5 milligrams of calcium and 60 micrograms of vitamin A. How many ounces of milk and orange juice should she drink each day to provide exactly 550 milligrams of calcium and 1,200 micrograms of vitamin A?

109. CHEMISTRY : When you mix two or more substances with different levels of concentration, the final solution does not simply equate to the combined concentration levels of the original ingredients. It depends on the concentration of each solution.

Rahman works as a chemist in Biolab Pvt Ltd at Jaipur. He has two solutions of hydrochloric acid in stock: a 50% solution and an 80% solution. He want to make 100 milliliters of a 68% solution? How much of each should be used to obtain 100 milliliters of a 68% solution?

110. Nutrition : Pathmeda village near Sanchore has Gopal Govardhan Gaushala, the largest Gaushala in India, spread over 200 acres. The gaushala takes care of more than 18,000 cattle.

Cows of Pathmeda gaushala in an experiment are to be kept on a strict diet. Each cow is to receive, among other things, 20 grams of protein and 6 grams of fat.

The laboratory technician is able to purchase two

food mixes of the following compositions:
Mix A has 10% protein and 6% fat,
Mix B has 20% protein and 2% fat.
How many grams of each mix should be used to obtain the right diet for a single cow ?

111. Gold Mixing : A jeweller has two bars of gold alloy in stock, one of 12 carats and the other of 18 carats (24 carat gold is pure gold, 12 carat is $\frac{12}{24}$ pure, 18 carat gold is $\frac{18}{24}$ pure, and so on). How many grams of each alloy must be mixed to obtain 10 grams of 14 carat gold?

112. BREAK-EVEN ANALYSIS : It costs a small recording company Rs 176, 800 to prepare a compact disc. This is a one-time fixed cost that covers recording, package design, and so on. Variable costs, including such things as manufacturing, marketing, and royalties, are Rs 46 per CD.

(i) If the CD is sold to music shops for Rs 80 each, how many must be sold for the company to break even?

(ii) What is the break even revenue ?

113. Production : Ridhima Electronics Pvt . Ltd is main supplier for CASIO for electronics component. They manufactures keyboards and screens for graphing calculators at plants in Bangalore and Bhiwadi. The hourly production rates at each plant are given in the table. How many hours should each plant be operated to fill an order for exactly 4,000 keyboards and exactly 4,000 screens?

Plant	Keyboards	Screens
Bangalore	40	32
Bhiwadi	20	32

114. NUTRITION : Orange trees thrive in warm, Mediterranean climates where there is no threat of frost. This full-sun plant produces the best fruit when provided with optimal moisture, light and nutrition, in the form of fertilization. Orange trees require fertilization three times per year. You need to increase fertilizer amounts as the tree ages and becomes established. Complete nutrition is essential for a healthy tree.

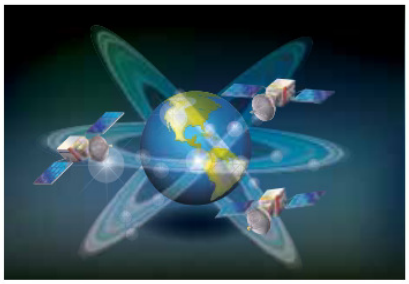
A fruit grower can use two types of fertilizer in an orange grove, brand A and brand B. Each bag of brand A contains 8 pounds of nitrogen and 4 pounds of phosphoric acid. Each bag of brand B contains 7 pounds of nitrogen and 7 pounds of phosphoric acid. Tests indicate that the grove needs 720 pounds of

nitrogen and 500 pounds of phosphoric acid.

(i) How many bags of brand A should be used to provide the required amounts of nitrogen and phosphoric acid?

(ii) How many bags of brand B should be used to provide the required amounts of nitrogen and phosphoric acid?

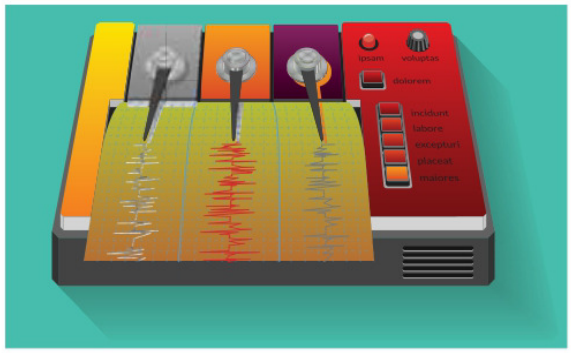
115. Orbital Launches : In 2013 there was a total of 81 commercial and noncommercial orbital launches worldwide. In addition, the number of noncommercial orbital launches was twelve more than twice the number of commercial orbital launches. Determine the number of commercial and noncommercial orbital launches in 2013.



116. EARTH SCIENCE : An earthquake emits a primary wave and a secondary wave. Near the surface of the Earth the primary wave travels at about 5 miles per second and the secondary wave at about 3 miles per second. From the time lag between the two waves arriving at a given receiving station, it is possible to estimate the distance to the quake. (The epicenter can be located by obtaining distance bearings at three or more stations.) Suppose a station measured a time difference of 16 seconds between the arrival of the two waves.

(i) How long did each wave travel ?

(ii) How far was the earthquake from the station ?



117. Architectural Wonders : When it was first constructed in 1889, the Eiffel Tower in Paris, France, was the tallest structure in the world. In 1975, the CN Tower in Toronto, Canada, became the world's tallest structure. The CN Tower is 153 ft less than twice the height of the Eiffel Tower, and the sum of their heights is 2799 ft.

(i) How tall is CN tower?

(ii) How tall is Eiffel tower?

118. TOWER OF PISA : To prove that objects of different weights fall at the same rate, Galileo dropped two objects with different weights from the Leaning Tower of Pisa in Italy. The objects hit the ground at the same time.

An object dropped off the top of Leaning Tower of Pisa falls vertically with constant acceleration. If s is the distance of the object above the ground (in

feet) t seconds after its release, then s and t are related by an equation of the form $s = a + bt^2$ where a and b are constants. Suppose the object is 180 feet above the ground 1 second after its release and 132 feet above the ground 2 seconds after its release.

(i) Find the constants a and b.

(ii) How high is the Leaning Tower of Pisa?

(iii) How long does the object fall?

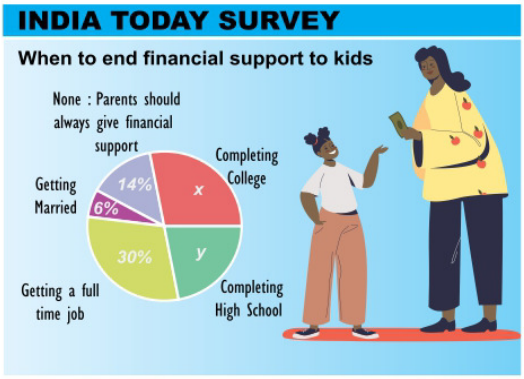
119. Jyoti Kumari is an Indian student from Sirhulli in the rural Darbhanga district of Bihar. She came to notice after she bicycled some 1,200 km with her injured father to reach their home village during COVID-19 lockdowns in India. This act of bravery was praised by the Senior Advisor to the President of the United States, Ivanka Trump, and Prime Minister Narendra Modi. She was given a national award, and a Bollywood film was proposed to record her story.

Jyoti travelled 90 km every day to reach her home town in Harbin. One day, when she started, after riding a certain distance, she stopped for some time to repair his bicycle. After which she completes the whole journey of 90 km at half speed in 12 hours. If the breakdown had occurred 10 km farther off, she would have done the whole journey in 11 hours.

(i) Find where the breakdown occurred.

(ii) Find her original speed.

120. At some point, it's time to kick, or gently ease, kids off the parental gravy train. The circle graph shows the percentage of parents who think significant financial support should end at various milestones.



The difference in the percentage who would end this support after completing college and after completing high school is 6 %.

(i) Find the percentage of parents who would end financial support after a child completes college.

(ii) Find the percentage of parents who would end financial support after a child completes high school.

121. Cash Register Malfunction : You are the manager of a shoe store. On Sunday morning you are going over the receipts for the previous week's sales. A total of 320 pairs of cross-training shoes were sold. One style sold for Rs 1135 and the other sold for Rs 1495. The total receipts were Rs 420,480. The cash register that was supposed to keep track of the number of each type of shoe sold malfunctioned. Can you recover the information? If so, how many of each type were sold?

122. Hostel Life : Banasthali Vidyapith, is a fully residential women's university offering courses from primary to Ph.D. level. It offers a number of UG, PG, and Doctoral level Programs under various Departments. Admission to the same is done on the basis of merit scored in qualifying examination, however, for some courses, an aptitude test is also conducted at the university level.

Swati is doing MSc. in biotechnology from Banastli Vidyapith and lives in university hostel. A part of monthly hostel charge is fixed and the remaining depends on the number of days one has taken food in the mess. When Swati takes food for 18 days, she has to pay Rs. 5160 as hostel charges whereas Taniya who takes food for 23 days Rs. 5760 as hostel charges.

(i) Find the fixed charges of hostel.

(ii) Find the cost of food per day.

123. Uniform motion with current :

$$(R+C)\,t = d \quad \text{With the current}$$

$$(R-C)\,t = d \quad \text{Against the current}$$

The formula shown can be used to solve uniform motion problems involving a current, where d represents distance travelled, R is the rate of the object with no current, C is the speed of the current, and t is the time. Vibhur rows 9 km up river (against the current) in 3 hr. It only took him 1 hr to row 5 km downstream (with the current).

(i) How fast was the current?

(ii) How fast can he row in still water?

124. Canoeing on a stream : On a recent camping trip, it took Mohinder and Aslam 2 hr to row 4 mi upstream from the drop in point to the camp site. After a leisurely weekend of camping, fishing, and relaxation, they rowed back downstream to the drop in point in just 30 min. Use this information to find

(i) Find the speed of the current.

(ii) Find the speed Mohinder and Aslam would be rowing in still water.

125. Luxury Cruise : As India's first domestic cruise liner, Angriya has made many voyages on the Mumbai-Goa sea route, along the pristine Konkan Coast. It has given India and Indians a sense of pride and happiness, while introducing the travelers to coral diversity and royal sea forts along the way.

Last year we enjoyed our summer vacation at Angariya cruise. From Mumbai to the Goa, with the current the trip took 70 hr. After a few days of fun in the sun, the ship leaves for Mumbai, against the current with the return trip taking 82 hr.

(i) Find the speed of the current.
(ii) Find the cruising speed of the ship.

126. Point of No Return : The point during a flight at which an aircraft is no longer capable of returning to the airfield from which it took off due to fuel considerations. Beyond this point the aircraft must proceed to some other destination.

A plane carries enough fuel for 20 hours of flight at an airspeed of 150 miles per hour. How far can it fly into a 30 mph headwind and still have enough fuel to return to its starting point?

127. Computing a Refund : The grocery store we use does not mark prices on its goods. My wife went to this store, purchased three 1-kg packages of almond and two 500-gram packages cashew, and paid a total of Rs 1345. Not knowing that she went to the store, I also went to the same store, purchased two 1-kg packages of almond and three 500-gram packages cashew, and paid a total of Rs 1145. Now we want to return two 1-kg packages of almond and two 500-gram packages cashew. How much will be refunded?

128. Financial Planning : Planning for retirement starts with thinking about your retirement goals and how long you have to meet them. Then you need to look at the types of retirement accounts that can help you raise the money to fund your future. As you save that money, you have to invest it to enable it to grow.

A recently retired couple needs Rs 120,000 per year to supplement their Social Security. They have Rs 1,500,000 to invest to obtain this income. They have decided on two investment options: AA bonds yielding 10% per annum and a fixed deposit yielding 5%.
(i) How much should be invested in each to realize exactly Rs 120,000?
(ii) If, after 2 years, the couple requires Rs 140,000 per year in income, how should they reallocate their investment to achieve the new amount?

129. Actual Number of Calories : University of Arkansas researchers discovered that we underestimate the number of calories in restaurant meals. The next time you eat out, take the number of calories you think you ate and double it.

The researchers concluded that this number should be a more accurate estimate. The actual number of calories in one portion of hamburger and fries and two portions of pizza is 4240. The actual number of calories in two portions of hamburger and fries and one portion of pizza is 3980.
(i) Find the actual number of calories in one portions of hamburger and fries.
(ii) Find the actual number of calories in one portions of pizza.

130. Presale Order : A wireless store owner takes presale orders for a new smartphone and tablet. He gets 340

preorders for the smartphone and 250 preorders for the tablet. The combined value of the preorders is Rs 27,050,000. The price of a smartphone and tablet together is Rs 96500.

(i) How much does smartphone cost?

(ii) How much does tablet cost?

131. MASK : Masks are an additional step to help prevent people from getting and spreading COVID-19. They provide a barrier that keeps respiratory droplets from spreading. Wear a mask and take every day preventive actions in public settings.

Due to ongoing Corona virus outbreak, Wellness Medical store has started selling masks of decent quality. The store is selling two types of masks currently type A and type B.

The cost of type A mask is Rs. 15 and of type B mask is Rs. 20. In the month of April, 2020, the store sold 100 masks for total sales of Rs. 1650.

(i) How many masks of each type were sold in the month of April?

(ii) If the store had sold 50 masks of each type, what would be its sales in the month of April?

(iii) Due to great demand and short supply, the store has increased the price of each type by Rs. 5 from May 1, 2020. In the month of May, 2020, the store sold 310 masks for total sales of Rs. 6875. How many masks of each type were sold in the month of May?

(iv) What percent of masks of each type sale was increased in the month of May, compared with the sale of month April?

(v) What extra profit did store earn by increasing price in May month.

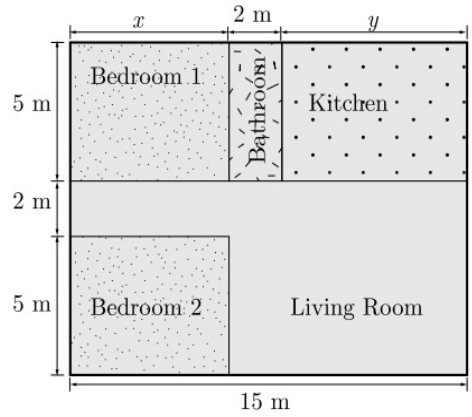
132. Wilt Chamberlain : Wilton Norman "Wilt" Chamberlain was an American basketball player, and played in the NBA during the 1960s. At 7 feet 1 inch, he was the tallest and heaviest player in the league for most of his career, and he was one of the most famous people in the game for many years. He is the first and only basketball player to score 100 points in an NBA game.

In the 1961–1962 NBA basketball season, Wilt Chamberlain of the Philadelphia Warriors made 30 baskets. Some of the baskets were free throws (worth 1 point each) and some were field goals (worth 2 points each). The number of field goals was 10 more than the number of free throws.

(i) How many field goals did he make ?
(ii) How many free throws did he make?
(iii) What was the total number of points scored?
(iv) If Wilt Chamberlain played 5 games during this season, what was the average number of points per game?
(v) If Wilt Chamberlain played 10 games during this season, what was the average number of points per game?

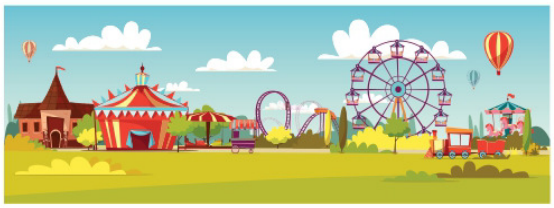
133. Architect : An architect is a skilled professional who plans and designs buildings and generally plays a key role in their construction. Architects are highly trained in the art and science of building design. Since they bear responsibility for the safety of their buildings' occupants, architects must be professionally licensed.

Varsha is a licensed architect and design very innovative house. She has made a house layout for her client which is given below. In the layout, the design and measurements has been made such that area of two bedrooms and kitchen together is 95 sq. m.



(i) Which pair of linear equations does describe this situation ?
(ii) What is the length of the outer boundary of the layout.
(iii) What is the area of bedroom 1 ?
(iv) What is the area of living room in the layout ?
(v) What is the cost of laying tiles in Kitchen at the rate of Rs. 50 per sq. m ?

134. Mr. RK Agrawal is owner of a famous amusement park in Delhi. The ticket charge for the park is Rs 150 for children and Rs 400 for adult.



Generally he does not go to park and it is managed by team of staff. One day Mr Agrawal decided to random check the park and went there. When he checked the cash counter, he found that 480 tickets were sold and Rs 134500 was collected.

(i) Let the number of children visited be x and the number of adults visited be y. Which of the following is the correct system of equations that model the problem ?
(ii) How many children visited the park ?
(iii) How many adults visited the park?
(iv) How much amount collected if 300 children and 350 adults visited the park?
(v) One day total visited children and adults together is 750 and the total amount collected is Rs 212500. What are the number of children and adults visited the park ?

135. Dipesh bought 3 notebooks and 2 pens for Rs. 80. His friend Ramesh said that price of each notebook could be Rs. 25. Then three notebooks would cost Rs.75, the two pens would cost Rs. 5 and each pen could be for Rs. 2.50. Another friend Amar felt that Rs. 2.50

for one pen was too little. It should be at least Rs. 16. Then the price of each notebook would also be Rs.16.

Aditya also bought the same types of notebooks and pens as Dipesh. He paid 110 for 4 notebooks and 3 pens.

(i) Whether the estimation of Ramesh and Amar is applicable for Aditya?

(ii) Let the cost of one notebook be x and that of pen be y. Which of the following set describe the given problem ?

(iii) What is the exact cost of the notebook?

(iv) What is the exact cost of the pen?

(v) What is the total cost if they purchase the same type of 15 notebooks and 12 pens.

136. Jodhpur is the second-largest city in the Indian state of Rajasthan and officially the second metropolitan city of the state. Jodhpur was historically the capital of the Kingdom of Marwar, which is now part of Rajasthan. Jodhpur is a popular tourist destination, featuring many palaces, forts, and temples, set in the stark landscape of the Thar Desert. It is popularly known as the "Blue City" among people of Rajasthan and all over India. The old city circles the Mehrangarh Fort and is bounded by a wall with several gates. The city has expanded greatly outside the wall, though, over the past several decades. Jodhpur is also known for the rare breed of horses known as Marwari or Malani, which are only found here.

Last year we visited Jodhpur in a group of 25 friends. When we went Mehrangarh fort we found following fare for ride :

Ride	Normal Hours Fare	Peak Hours Fare
Horse	Rs 50	3 Times
Elephant	Rs 100	2 Times

Some people choose to ride on horse and rest choose to ride on elephant.

(i) First day we rode in normal hours and we paid Rs 1950 for ride. Let x be the number of horses hired and y be the number elephants hired. Which of the following is the correct system of equation that model the problem ?

(ii) How many horses were hired ?

(iii) How many elephant were hired ?

(iv) Next day we rode in peak hours, then how much total fare was paid by our group?

(v) What was the increase in total fare because of peak hours ride ?

SOCIAL SCIENCE

Complete mapwork on the mapskill:-

Ch -1 Resources and Development (geography)

Identify: Major Soil Types

Prepare a small model on any one of these topics:-

1. How consumers are exploited in the market

2. Sustainable development goals and their objectives

3.Various social issues in the society

4.Various means of transport used in rural and urban areas

5.Types of roads

Write the answer of the following questions in your social science notebooks:-

History Chapter 1 - RISE OF NATIONALISM IN EUROPE

Direction: In the questions given below, there are two statements marked as Assertion(A) and Reason(R).

Read the statements and choose the correct option.

(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

Q.1 Assertion(A): Treaty of Vienna was signed in 1815.

Reason(R): The main objective was to undo the changes that had come about in Europe during Napoleonic wars.

Q.2 Assertion(A): Initially Napoleon was welcomed by people but later people lost faith in him.

Reason(R): Increased taxation, censorship, forced conscription into the French armies created hostile situation.

Q.3 Assertion(A): Civil code of 1805 is also known as Napoleonic Code.

Reason(R): Napoleonic Code did away with all privileges based on birth, established equality before the law and secured the right to property.

Q.4 Assertion(A): The ideas of la patire (the fatherland) and le citoyen (the citizen) emphasized the notion of united community.
Reason(R): German revolutionaries introduced measures that could create a sense of collective identity amongst the French people.
Q.5 Assertion (A): A customs union or zollverein was formed at the initiative of Prussia.
Reason(R): Tariff barriers were abolished and reduced the number of currencies from over thirty to two.
Geography Chapter 1 - RESOURCES AND DEVELOPMENT
Direction: Read the statements and choose the correct option.
(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
Q. 6 Assertion (A): Resources are vital for human survival as well as for maintaining the quality of life.
Reason (R): It was believed that resources are free gifts of nature
Q. 7 Assertion (A): Black soils are black in colour and are also known as regur soils.
Reason (R): Black soils are made up of lava flows
Civics Chapter 1 - POWER SHARING
DIRECTION: Mark the correct choice as:
(a) If both assertion and reason are true and reason is the correct explanation of assertion.
(b) If both assertion and reason are true but reason is not the correct explanation of assertion.
(c) If assertion is true but reason is false.
(d) If both assertion and reason are false.
Q. 8 Assertion: Apart from the Central and the State Government, there is a third kind of government in Belgium.

Reason: 'Community government' is not elected by people belonging to one language community.

Q.9 Assertion: Power is shared among different organs of government, such as the legislature, executive and judiciary
Reason: Horizontal distribution of power allows different organs of government placed at the same level to exercise different powers.
Q. 10 Assertion: Power sharing is desirable.
Reason: It leads to violence and political instability.
Q. 11 Assertion: The ethnic composition of Belgium is very complex.
Reason: Dutch speaking people constituted a minority in the country, but a majority in the capital.
Q.12 Assertion: Srilanka has a diverse population.
Reason: The major social groups are the Sinhala speakers and the Tamil speakers.

Q.13 Assertion: In Srilanka among Tamils there are two sub groups.
Reason: Tamil natives of the country are called 'Indian Tamil.
Q.14 Assertion: Sinhala community sought to secure dominance over government by virtue of their community.
Reason: Sri Lankan Tamils are concentrated in the north and east of Sri Lanka.
Q.15 Assertion: In 1956, an Act was passed to recognize Sinhala as the only official language.
Reason: Government give equal representation to both communities.
Q.16 Assertion: The governments followed preferential policies that favoured Sinhala applicants for university positions and government jobs.
Reason: Government measures not increased the feeling of alienation among the Sri Lankan Tamils.
Q. 17 Assertion: Government adopted a series of majoritarian measures to establish Sinhala supremacy.
Reason: The Sri lankan Tamils launched parties and struggles for the recognition of Tamil as an official language.

Economics Chapter 1 - DEVELOPMENT

DIRECTION: Mark the option which is most suitable:

(a) If Both assertion and reason are true, and reason is the correct explanation of assertion.

(b) If Both assertion and reason are true, but reason is not the correct explanation of assertion.

(c) If Assertion is true, but reason is false.

(d) If Both assertion and reason are false.

Q. 18 Assertion: The crude oil reserves are going down for the entire world, and the countries need to find substitute fuel for crude oil.

Reason: A country that is dependent on imports for crude oil will demand more crude oil in the future.

Q. 19 Assertion: The average income of a country is about USS 12,056; however, the country is still not a developed country.

Reason: The income levels are highly skewed for the country.

Q. 20 Assertion: Sustainable development is essential for economic growth of the countries.

Reason: Sustainable development ensures that environment friendly measures are adopted for carrying out production processes.

Q. 21 Assertion: Suppose the literacy rate in a state is 78% and the net attendance ratio in secondary stage is 47%.

Reason: More than half of the students are going to other states for elementary education.

Q.22 Assertion: A state has a per capita income of Rs. 2, 25, 000 per annum. The infant mortality rate in the state is 2%. So, the state cannot be considered a developed state.

Reason: There are medical facilities in the state, but people fail to take their children to hospital in time.

Q. 23 Assertion: A small town has a high rate of robbery; however, a locality in this town has well- maintained law and order.
Reason: The people in the locality are aware of the importance of having security guards, and they collectively pay to have the security guards in the locality.
Q.24 Assertion: A high average income is not indicative of the overall well-being or human development in a country.
Reason: Average income does not cover indicators like level of literacy rate, health facilities and public facilities in a country.
Q 25. Assertion: Money in your pocket cannot buy all the goods and services that you may need to live well.
Reason: So, income by itself is not a completely adequate indicator of material goods and services that citizens are able to use.

COMPUTER
HOME ASSIGNMENT
GRADE X

1. Create a Digital poster on the SDG's mentioned below as a team. (You can use Canva app on your mobile phone).

ROLL NOS.		SDG GOAL NO.
1.	1-3	1
2.	4-6	2
3.	7-9	3
4.	10-12	4
5.	13-15	5
6.	16-18	6
7.	19-20	7
8.	21-22	8
9.	23-24	9
10.	25-26	10
11.	27-28	11
12.	29-30	12
13.	31-32	13
14.	33-34	14
15.	35-36	15
16.	37-38	16
17.	39,40	17

2. Sunita wants to create a flowchart to provide a solution of a problem, in a Writer document. Suggest a suitable option that she can use to create different shapes of a flowchart.

3. Jyoti has created an invitation card to invite people on her parents' anniversary. She has included different drawing objects in the card. Suggest some steps to her for grouping all the objects together so that they can be treated as a single object.

4. Anand has made his annual report using Writer. He is facing difficulty in positioning the images within the text. Guide him how to adjust the text around the image.

IMPORTANT INSTRUCTIONS:

- Take colorful loose sheets for making the assignment.
- Assignment should be neat and clean
- The front page must mention: Name, Class, Section, Roll no