

**DAV PUBLIC SCHOOL, EAST OF LONI ROAD  
HOLIDAYS HOMEWORK (2018-2019)  
CLASS X**

**ENGLISH**

*It is the time for fulfilled and relaxing summer break. However during the scorching summer month, whether you are at home or travelling ,the time must be spent meaningfully. So ,act now, value every moment and have enriching summer holidays.*

**NOVEL BASED QUESTIONS**

Ques1: Anne does not have a best friend, what role is played by the diary in her life?

Ques2 According to Anne's diary how savage was the war? Elaborate.

Ques3:Discuss Anne's relationship with Peter and how it underwent a complete change?

Ques4:How is Anne's diary a testimony to the victory of human spirit?

**VALUE BASED QUESTIONS**

Ques1:Love,Faith and Hope are the pillars of human life. Discuss with reference to the story 'The two gentlemen of Verona.

Ques2:In the modern world very often we come across many characters like the frog who are greedy

and money minded and commercialize all forms of art ,based on reading of the poem 'The Frog and

the Nightingale'. Write an article on the topic "ART FOR ART'S SAKE"(as per the class discussion),in 200words.

**CREATIVE WRITNG**

Ques1:Write any one self composed story in about 250-300 words by keeping the following ruberics as an assessment parameters:-

- Relevancy of content
- Creativity
- Fluency
- Accuracy

NOTE:- TRY TO GIVE SUITABLE RELEVANT HEADING TO YOUR STORY  
ALONG WITH MORAL / MESSAGE / LESSON

Ques2; Pick out two new words daily from the newspaper and write down their meanings and use the same in your own sentence.

## **SOCIAL SCIENCE**

(A) PROJECT WORK ON MONEY AND CREDIT ----ITS ALL ABOUT MONEY HONEY!



India has an illustrious history of coinage and currency notes. The diverse range with different types of motifs, shapes, metals gave Indian coins a distinct identity.

Indian coins also reflected political and economic changes over time. These coins depicted Indian trade patterns in ancient, medieval, and late pre-colonial times.

The earliest payment instruments used in India were COINS while now it is BITCOINS!

ALSO GIVE A BRIEF OUTLOOK ON DEMONITISATION IN INDIA.

Peeping into “The Journey Of Money” ,lets design a project of 25-30 pages with following keypoints

The project has to be carefully designed so as to –

- a) Create awareness.
- b) Enable them to understand and co-relate all aspects of selected topic
- c) Relate theory with practice
- d) Relation of different aspects with life
- e) Provide hands on experience

The distribution of marks over different aspects relating to Project Work is as follows:

S.NO.	ASPECTS	MARKS
1.	Content accuracy and originality	1
2.	Presentation and creativity	1
3.	Process of Project Completion : Initiative, cooperativeness, participation and punctuality	1
4.	Viva or written test for content assimilation	2

B) DISASTER MANAGEMENT has become a very important subject under social studies. The awareness of vulnerable areas and the mitigation policies always help you to take

preventive measures to survive the situation. Keeping this in mind, class 10, will do a project ON human disaster.

- Vehicle Accidents
- Fire accidents

The project must be done in the following manner:

- Cover page
- Content/index
- Chapter 1: General Introduction of the disaster
- Chapter 2: The causes for the disaster and the vulnerable areas.
- Chapter 3: any one case study of the disaster with relevant pictures.
- Chapter 4: The destruction caused by the disaster related to case study. (Can use numerical figures and graph and even the newspaper articles.)
- Chapter 5: Mitigation measures to keep alive in the situation.

. (If possible) You can use coloured A4 sheets to make this file report. The submission will be on the reopening day. Enjoy and do the project. IT MUST BE YOUR WORK. Happy holiday

(B) REVISE THE SYLLABUS COVERED

## MATHEMATICS

Solve the following worksheet in your Assignment register after revising the chapters done in the class.

### REAL NUMBERS WORKSHEET

Q1. Without actually performing the long division, state whether the following rational numbers will have a terminating or non-terminating Decimal expansion

- a.  $\frac{251}{1300}$
- b.  $\frac{32}{1250}$
- c.  $\frac{368}{1050}$
- d.  $\frac{39}{9375}$
- e.  $\frac{5824}{910}$

Q2. Prove that  $\sqrt{2}-\sqrt{5}$  is irrational.

Q3. If p, q are prime, then find H.C.F of (p, q).

Q4. After how many places the decimal form of  $\frac{125}{2^4 \cdot 5^3}$  will terminate?

Q5. Is the number  $(\sqrt{2}-\sqrt{3})(\sqrt{2}+\sqrt{3})$  rational or irrational? Justify.

Q6. The H.C.F of two numbers is 29 and their L.C.M is 1160. If one of the numbers is 145, then find other

Q7. Find the H.C.F of 570 and 1425 using Fundamental theorem of Arithmetic.

Q8. Find H.C.F of 128, 240 using Euclid's division algorithm.

Q9. Check whether the number  $15^n$ , where n is a natural number, can end with the digit 0.

Q10. If  $a = bq + r$  in division algorithm then write limits of r.

Q11. Given that  $L.C.M(26, 169) = 338$ , write H.C.F (26, 169).

- Q12. A merchant has 120 litres of oil of one kind, 180 litres of another kind and 240 litres of third kind. He wants to sell the oil by filling the three kinds of oil in tins of equal capacity. What should be the greatest capacity of such a tin
- Q13. Prove that square of any positive integer is of the form  $5q, 5q+1, 5q+4$  for some integer  $q$ .
- Q14. Find the least number which, when divided by 18, 24, 30 and 42 will leave in each case the same remainder 1.
- Q15. Show that the square of an odd positive integer is of the form  $8n+1$  where  $n$  is any integer.
- Q16. If  $\sqrt{5}-\sqrt{3}/\sqrt{5}+\sqrt{3}= 2x-\sqrt{15}$ , then determine whether  $x$  is a rational or irrational.
- Q17. Find the greatest possible length which can be used to measure exactly each of the lengths 7m, 3m 85cm, 12m 95cm.
- Q18. Show that only one of the numbers  $n, n + 2, n + 4$  is divisible by 3.
- Q19. Express the HCF of 65 and 117 in the form of  $65m + 117n$
- Q20. Find the largest positive integer that will divide 398, 436 and 542 leaving remainder 7, 11 and 15 respectively.
- Q21. Three sets of English, Hindi and Mathematics books have to be stacked in such a way that all the books are stored topic wise and height of each stack is the same. The number of English books is 96, the number of Hindi books is 240 and the number of Mathematics books is 336. Assuming that books are of same thickness, determine the number of stacks of English, Hindi and Mathematics books.

**POLYNOMIAL WORKSHEET**  
**CLASS X**

- Q1. If  $\alpha$  and  $\beta$  are the zeroes of  $p(x) = x^2 - 5x + k$  such that  $\alpha - \beta = 1$ , find the value of  $k$ ?
- Q2. If the sum of square of zeroes of the quadratic polynomial,  $f(x) = x^2 - 5x + k$  is 40, find  $k$ ?
- Q3. If one of the zeroes of the quadratic polynomial  $f(x) = 14x^2 - 42k^2x - 9$  is negative of the other, find the value of "k".
- Q4. If  $m$  and  $n$  are the zeroes of the polynomial  $3x^2 + 11x - 4$ , find the value of  $\frac{m}{n} + \frac{n}{m}$ .
- Q5. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $6y^2 - 7y + 2$ , find a quadratic polynomial whose zeroes are  $\frac{1}{\alpha}$  and  $\frac{1}{\beta}$ .
- Q6. Find the value of  $b$  for which  $(2x + 3)$  is a factor of  $2x^3 + 9x^2 - x - b$ .
- Q7. If  $\alpha$  and  $\beta$  are the zeroes of  $f(x) = ax^2 + bx + c$ , then evaluate:
- 1)  $\alpha^2 + \beta^2$
  - 2)  $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$
  - 3)  $\alpha^3 + \beta^3$
- Q8. Find a quadratic polynomial whose sum and product of the zeroes is 0 and  $\sqrt{5}$  respectively.
- Q9. If  $a$  and  $b$  are the zeroes of a polynomial  $f(x) = x^2 - x + 2$ , find a polynomial whose zeroes are  $2a+1$  and  $2b+1$ .
- Q10. If  $a$  and  $b$  are the zeroes of the quadratic polynomial  $p(x) = 4x^2 - 5x - 1$ , find the value of  $a^2b + ab^2$ .
- Q11. If the sum of the zeroes of a quadratic polynomial  $f(t) = kt^2 + 2t + 3k$  is equal to their product, find the value of  $k$ .

Q12. If one zero of the polynomial  $f(x) = (k^2+4)x^2+13x+4k$  is reciprocal of the other, then find the value of  $k$ .

Q13. If  $\alpha$ ,  $\beta$  and  $\gamma$  are the zeros of cubic polynomials  $x^3 + 4x + 2$ , then find the value of  $1/(\alpha+\beta) + 1/(\beta+\gamma) + 1/(\gamma+\alpha)$ .

Q14. If  $\alpha$  and  $\beta$  are the zeros of the polynomial such that  $\alpha + \beta=24$  and  $\alpha - \beta=8$ . Find the Quadratic polynomial having  $\alpha$  and  $\beta$  as its zeroes. Verify the relationship between the zeroes and the coefficients of polynomial.

Q15. If the zeroes of polynomial  $x^2+px+q$  are double in the value to the zeroes of  $2x^2-5x-3$ , find the value of  $p$  &  $q$ .

### LINEAR EQUATIONS IN TWO VARIABLES WORKSHEET

Q1. Solve the following pair of linear equations for  $x$  and  $y$  using Elimination Method:

$$\sqrt{5}x - \sqrt{11} = 0; \sqrt{3}x + \sqrt{2}y = 0$$

Q2. Solve using substitution method:  $2(ax - by) + (a + 4b) = 0$ ;  $2(bx + ay) + (b - 4a) = 0$

Q3. Solve using cross multiplication method:  $ax+by=c$ ;  $bx+ay=1+c$

Q4. Find for what value of 'a', the following pair of linear equations has infinitely many solutions?  $2x + 5y = 8$ ;  $ax + (3a - 2)y = 4a$

Q5. 8 men and 12 boys can finish a piece of work in 10 days, while 6 men and 8 boys can finish it in 14 days. Find the time taken by one man alone and one boy alone to finish the work.

Q6. A woman has 60 notes in all of Rs 10 and Rs 20 denominations. If the total worth of the notes is Rs 850, find out how many notes of each kind does she have.

Q7. The annual incomes of A and B are in the ratio 3 : 4 and their annual expenditures are in the ratio 5 : 7. If each saves Rs 15000 annually, find their annual incomes.

Q8. A boat goes 24 km upstream and 28 km downstream in 6 hours. It goes 30 km upstream and 21 km downstream in 6 hours 30 minutes. Find the speed of the boat in still water.

Q9. Find the value of 'k' for which the following system of equations represents a pair of coincident lines:  $x + 2y = 3$ ;  $(k - 1)x + (k + 1)y = k + 3$ .

Q10. Draw the graph of  $2x + y = 6$  and  $2x - y + 2 = 0$ . Shade the region bounded by these lines and line  $y=0$ . Find the area of the shaded region.

Q11. The sum of two digits of a two digit number is 15. The number obtained by interchanging the digits exceeds the given number by 9. Find the number.

Q12. In a cyclic quadrilateral ABCD,  $\angle A = (x + 7)^\circ$ ,  $\angle B = (y + 8)^\circ$ ,  $\angle C = (3y + 23)^\circ$  and  $\angle D = (4x + 12)^\circ$ . Find all four angles of the cyclic quadrilateral.

Q13. A train moving with uniform speed for a certain distance takes 6 hours less, if its speed be increased by 6 km/hour. It would have taken 6 hours more, had its speed been decreased by 4 km/hour. Find the distance travelled and the speed of the train.

Q14. The present age of father is equal to twice the sum of ages of his two children. 22 years hence, the sum of the ages of his children will be the same as his age then. Find the present age of father.

Q15. In  $\triangle ABC$ ,  $\angle A = x^\circ$ ,  $\angle B = y^\circ$ . If  $3x - 5y = 30^\circ$  and the triangle is a right angled triangle, find  $x$  and  $y$ .

# **SCIENCE**

## **BIOLOGY**

### **CRITICAL LEARNING**

#### **Life Processes Worksheet**

1. Why is nutrition considered one of the most important life processes? **(2)**

**OR**

What are outside raw materials used for by an organism?

2. Sonu is a naughty boy who one day took a bottle of cold cream and rubbed it all over the leaves of a rose plant. Within a few days, he observed the leaves drooping and slowly the plant died even if it was watered well. Now answer why did the plant die? Which other substance can cause the same problem? **(2)**

**OR**

Leaves of a healthy potted plant were coated with Vaseline to block the stomata. Will this plant remain healthy for long? State three reasons for your answer.

3. Why is diffusion insufficient to meet the oxygen requirement of multicellular organism like humans? **(2)**
4. Why is rate of breathing different between terrestrial and aquatic animals? **(2)**

**OR**

What advantage over an aquatic organism does a terrestrial organism have with regard to obtaining oxygen for respiration?

5. What is translocation? Why is it essential for plants? Where in plants are the following synthesized?
- a. Sugars            b. Hormones
6. Write one function each of the following components of the transport system in human beings:
- a. Blood Vessels  
b. Blood Platelets  
c. Lymph  
d. Heart
7. How are fats digested in our body? Where does this process take place?
8. Differentiate between respiration and breathing.
9. What are the differences between aerobic and anaerobic respiration? Name some organisms which use the anaerobic mode of respiration.
10. How respiration in plants is different from that in animals?

## Worksheet

### ANSWER THE FOLLOWING:

1. What is the role of saliva in diagram of food?
2. Which groups of animals have double circulation? How is it related to their body temperature?
3. What is breathing?
4. Name the tissue which transports soluble products of photosynthesis in a plant?
5. Where does glycolysis occur in the cell?
6. How does exchange of gases occurs in flowering plants.
7. Write the chemical equation of anaerobic respiration in yeast.
8. Define translocation.
9. Mention the main components of urine.
10. Where does filtration occur in the nephron?
11. Name two elements of xylem through which water and dissolved minerals reach the leaves.
12. Name the tissue which transports water and mineral in a plant.
13. Name and define the process responsible for ascent of sap.
14. How do autotrophs obtain CO<sub>2</sub> and N<sub>2</sub> to make their food?
15. Write a balanced equation for photosynthesis.
16. What is respiration?
17. What is peristalsis?
18. Which is the universal source of energy in all cells?
19. Which pathway is common to both aerobic and anaerobic respiration?
20. State the function of digestive enzymes.
21. Name the two ways in which glucose is oxidized to provide energy in various organisms.
22. What are enzymes?
23. Why is the use of iodised salt advisable?
24. What would be the consequences of deficiency of hemoglobin in our bodies?
25. Where does photosynthesis occur?
26. What is the role of acid in stomach?

## Worksheet

### TICK THE CORRECT OPTIONS:

1. **The autotrophic mode of nutrition requires**
  - a. **Carbon dioxide**
  - b. **Chlorophyll**
  - c. **Sunlight**
  - d. **All of these**
2. **The enzyme responsible for fat digestion is**
  - a. **Trypsin**
  - b. **Lipase**
  - c. **Amylase**

- d. Pepsin
- 3. Which pancreatic enzyme is effective in digesting proteins?
  - a. Trypsin
  - b. Lipase
  - c. Pepsin
  - d. Pancreatic amylase
- 4. The kidneys in human beings are a part of the system for
  - a. Nutrition
  - b. Respiration
  - c. Excretion
  - d. Transportation
- 5. The xylem in plants are responsible for
  - a. Transport of water
  - b. Transport of food
  - c. Transport of amino acid
  - d. Transport oxygen
- 6. The breakdown of pyruvate to give carbon dioxide, water and energy takes place in
  - a. Cytoplasm
  - b. Mitochondrion
  - c. Chloroplast
  - d. Nucleus
- 7. The thinnest blood vessels taking the materials to each part of body are
  - a. Arteries
  - b. Capillaries
  - c. Veins
  - d. All of these
- 8. The heart in fish has
  - a. One chamber
  - b. Two Chambers
  - c. Three Chambers
  - d. Four Chambers
- 9. Which enzyme present in saliva breaks down starch?
  - a. Trypsin
  - b. Lipase
  - c. Pepsin
  - d. Salivary amylase
- 10. Potassium hydroxide is used in an activity related to photosynthesis to
  - a. Produce oxygen
  - b. Absorb oxygen
  - c. Absorb carbon dioxide
  - d. Keep stomata open
- 11. Salivary amylase acts upon



- a. Fats
- b. Proteins
- c. Starch
- d. Glucose

12. The right atrium receives blood from the vena cava and pumps the blood into

- a. Right ventricle
- b. Left ventricle
- c. Left atrium
- d. Pulmonary veins

13. A plant kept in polythene sheet gives water droplets because of

- a. Translocation
- b. Respiration
- c. Transpiration
- d. Photosynthesis

14. Platelets in our blood are concerned with

- a. Clothing
- b. Transport
- c. Fights infection
- d. Exchange of gases

15. The part of respiratory system concerned with exchange of gases is

- a. Trachea
- b. Bronchi
- c. Alveoli
- d. Pharynx

16. List some characteristics of living beings.

OR

What criteria do we use to decide whether something is alive?

Ans.

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17. Define life processes.

OR

What processes would you consider essential for maintaining life?

Ans.

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18. Name the type of blood vessels, which carry blood from organs to the heart.

Ans.

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19. What are the end products of photosynthesis?

Ans.

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**20. How does nutrition in a fungus differ from that in a tapeworm?**

**Ans.**

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**21. What is the stored form of carbohydrates in plants and animals respectively?**

**Ans.**

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**22. How is the passage of food regulated from stomach onwards?**

**Ans.**

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**23. What is the role of platelet cells present in blood?**

**Ans.**

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**24. Name mode of nutrition in the following organisms:**

- a. Fungi
- b. Amoeba

**Ans.**

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**25. Which is the longest part of alimentary canal?**

**Ans.**

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**26. What process in the plants is known as transpiration?**

**Ans.**

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**27. Name the term for the transport of food from the leaves to other parts of the plant.**

**Ans.**

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**28. What is the role of large intestine?**

**Ans.**

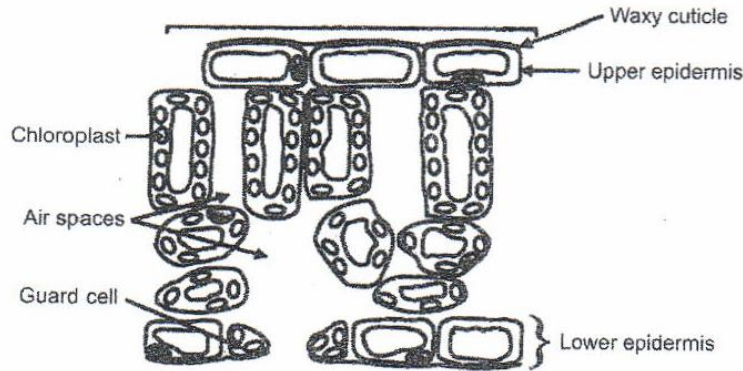
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**Assignment**

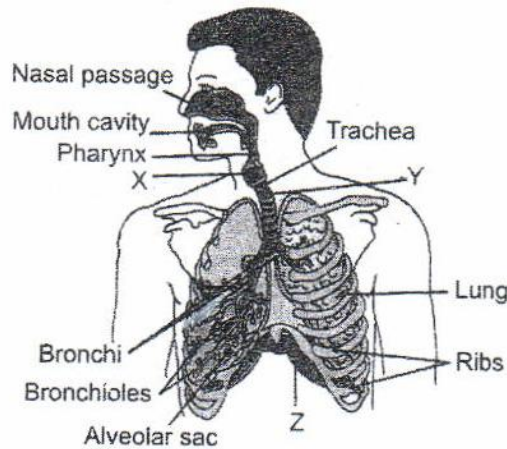
**ANSWER THE FOLLOWING:**

**1. What is Lymph? How is it different from blood?**

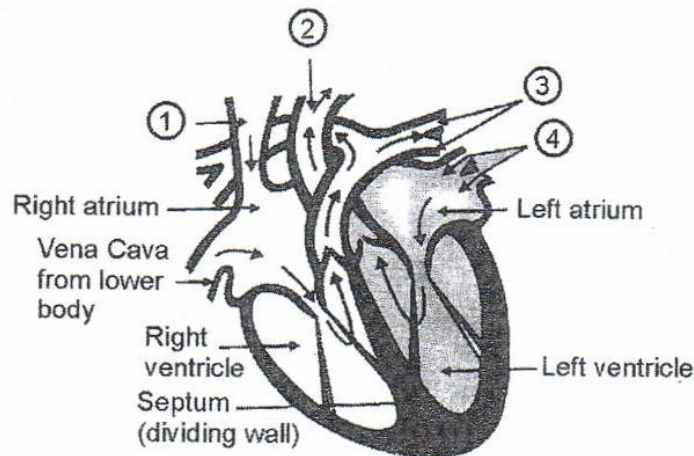
- Which digestive secretion does not contain any enzyme but is important? Discuss.
- Which is the site of photosynthesis? In the given figure showing a section of leaf as seen under microscope. What is the role of waxy layer on upper epidermis?



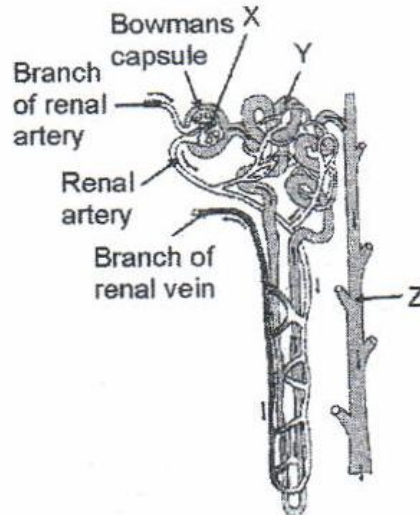
- Identify X, Y and Z in the given figure. What is their role in the process of breathing or respiration? What role do trachea and diaphragm perform in it?



- Identify 1-4 in given figure. Make a flow diagram to show flow of blood through the blood vessels and chambers of heart. What do you call such a flow?



6. Provide missing labels X, Y and Z in the given diagram of nephron. Describe the role played by them in the process of urine formation.



7. Provide labels in place of A, B and C in the given diagram. What is the role of A and our body?

8. What is the fate of glucose molecule in

(a) Anaerobic respiration in yeast and lactobacillus bacteria?

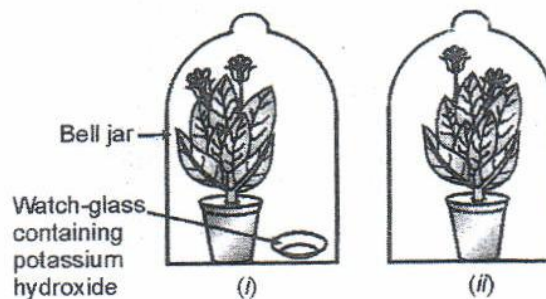
(b) Aerobic respiration in human cells. Write chemical equation for each type.

OR

What are the different ways in which glucose is oxidized to provide energy in various organisms?

9. Look at the figure. Answer the following questions:

- What is the need to use potassium hydroxide?
- Why do we need two plants?
- Why do we cover both plants with polythene sheets or bell jars?
- What observation do you expect at the end of experiment and why?
- What is the aim of activity?



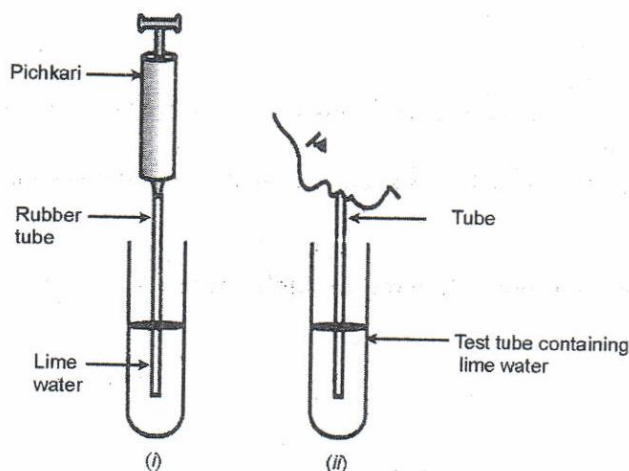
10. If a plant is kept covered with a polythene sheet, we notice some water drops on the inner side of the sheet after some time. What are they due to? Name and define process. What is the significance of this process in plants and nature? How does transpiration help in upward movement of water from roots to leaves?

11. Suman collected her saliva and mixed with liquid A in the test tube. In another test tube, she took only liquid A. After about 10 minutes, she added few drops of iodine solution to the mixture in the first test tube. It did not show any colour but when she treated the other test tube with iodine, a blue black colour appeared. Now answer the following questions:

- What is the aim of this activity?
- What is liquid A?
- Why did the first test tube not show any colour change with iodine while the second one did?
- Which enzyme is responsible for such a result?
- Why does a piece of bread chewed for a long time tastes sweet?

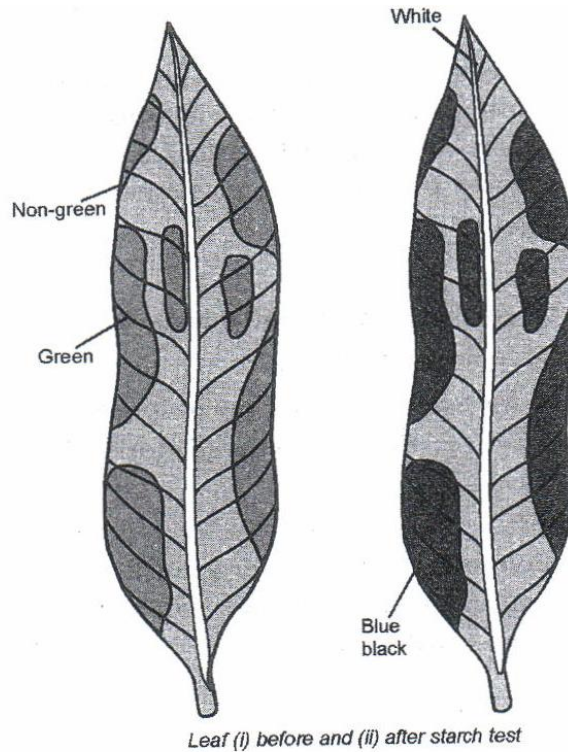
12. Look at the figure which show that CO<sub>2</sub> is produced during breathing and answer the following questions:

- What is the aim of activity?
- What will be the observation in test tube (i) after 5 minutes?
- What will be the observation in test tube (ii) after 5 minutes?
- State reasons for observations stated above.



13. An activity was performed in the laboratory to 'show that chlorophyll is necessary for photosynthesis'. Now answer the following questions:

- What kind of leaf has been used in this activity?
- How do we de-starch a plant?
- Why is the leaf heated in alcohol?
- What precautions should be taken while heating the alcohol and why?
- State reason for observation as shown in (ii).



14. Compare the functioning of alveoli in the lungs and nephrons in the kidneys with respect to their structure and functioning.
15. How does the structure of heart help to keep oxygenated and deoxygenated blood separate in human body?

OR

What differences are there in blood flowing through left and right side of heart?

### LIFE PROCESSES

ANSWER THE FOLLOWING:

1. What is the difference between Xylem and Phloem?

OR

What are the components of transport system in highly organized plants?

2. Differentiate between Artery and Veins.
3. Draw a labelled diagram of the structure which opens and close to facilitate gas exchange in plants.
4. What is pulse? How do we measure it?
5. List two ways in which plants get rid of their waste.
6. What is blood pressure? Which instrument is used to measure it?
7. What is ECG? How is it recorded?
8. List two factors on which amount of urine produced by human being depend?

OR

How the amount of urine is produced regulated?

9. What is renal failure and what technology is employed for survival under such circumstances?
10. What raw materials are needed during the process of photosynthesis? How do plants procure them?

**OR**

Where do plants get each of the raw materials required for photosynthesis?

11. What kind of nutrition is present in animals?
12. How does chemical coordination occur in animals?

**OR**

How does our body respond when adrenaline is secreted in our blood?

13. How does chemical coordination occur in plants?
14. What is a reflex action? Describe the steps involved in a reflex action.
15. (a) Draw a diagram of human brain.  
(b) Label on it Cerebrum, Cerebellum.  
(c) What is the role of Cerebellum?
16. What are the changes brought about due to secretion of oestrogen and testosterone? What is the feedback mechanism with respect to production of hormones?

#### Assignments (TOPIC – LIFE PROCESSES)

**ANSWER THE FOLLOWING:**

1. What are the necessary conditions for autotrophic nutrition and what are its products?
2. What are the outside raw materials used by an organism?
3. How do plants exchange gases?
4. Why is it advisable to breathe through nose?
5. Differentiate between auricles and ventricles.
6. What do the following transport?  
(a) Xylem, (b) phloem (c) pulmonary vein, (d) vena cava  
(I) (a) Name the blood vessel that brings oxygenated blood to the human heart  
(b) Which chamber of human heart receives oxygenated blood?  
(c) Explain how oxygenated blood from this chamber is sent to all parts of the Body.
7. Describe the mechanism of gaseous exchange in tissues and lungs.

**OR**

How is oxygen and carbon dioxide transported in human being?

8. How are water and minerals absorbed and transported in the plants?
9. What are the important features of all respiratory structures in animals?

**OR**

How are alveoli in lungs designed to maximize the exchange of gases?

10. How are fats digested in our bodies? Where does this process take place?

11. How is food transported in a Plant?
12. List any three digestive glands in our digestive system enzyme/juice produced by them and their respective roles in the process of digestion.
13. (a) Name the blood vessel that brings deoxygenated blood to the human heart.  
(b) Which chamber of the human heart receives deoxygenated blood?  
(c) Describe how deoxygenated blood for this chamber is Bent to lungs for oxygenation.
14. What are the different components of blood? Give the function of each of them.
15. Describe the way of procuring food by an amoeba with the help of a diagram.
16. Draw human digestive system.
17. Describe the structure of human respiratory system with the help of a diagram.
18. Draw neat and labelled diagram of human heart and describe double circulation.
19. Explain briefly how the air is inhaled and exhaled during breathing in humans.
20. What are the components of transport system in human beings? What are the function of these components?
21. What role does heart play in our body?
22. Discuss the sequence of blood flow from heart b various organs with the help of a diagram and flow diagram.
23. (a) Write two difference between .autotrophic nutrition and heterotrophic nutrition"  
(b) Draw a diagram showing cross-section of a leaf and label on it  
Phloem, Xylem, Vascular Bundle, Lamina
24. Describe structure and functioning of nephron with the help of a diagram.
25. Where are kidneys located in our body? Show the location of different parts of urinary what system in man. is the importance of kidneys in our body?
26. Plants absorb water from the soil. How does this water reach the tree tops? Explain in detail.

**ANSWER THE FOLLOWING:**

1. Differentiate between Phototropism and Geotropism.
2. What are receptors? Write the receptor which detect taste and smell stimuli respectively.
3. Differentiate between Plant movements dependent on growth and independent of it.
4. Why is it advisable to consume iodized salt in our food?
5. Why are patients with severe diabetes treated by giving injections of insulin?
6. Give examples of tropic movement in plants.
7. How does level of growth hormone during childhood affect a person?
8. What is reflex action? Explain the mechanism of reflex action with a suitable example.
9. Name the three major regions (or parts)of the human brain. Which part of the brain maintains posture and equilibrium of the body?
10. What is the need for a system of control and coordination in an organism?



**ANSWER THE FOLLOWING:**

1. Draw a diagram of human brain and label on it the following of its parts-forebrain, midbrain and hindbrain.  
(a) Cerebrum (b) Meninges (c) Medulla oblongata (d) Cerebellum
2. List three major parts of human brain and explain their functions.
3. Which hormone is released into blood when its sugar level rises? Name the organ which produce the hormone end its effect on blood sugar level. Also name one digestive enzyme that this organ secretes and the function of this enzyme.
4. How do hormones promote growth of a tendril around a support?
5. What is feedback mechanism? Explain it in relation to hormonal action?

**ANSWER THE FOLLOWING:**

1. List and describe the functions of any three plant hormones.
2. Define synapse. What happens at the synapse during transmission of a nerve impulse from one neuron to the other?
3. What is a reflex arc? Draw a diagram to show the reflex arc.
4. What are plant hormones? List two examples

**ANSWER THE FOLLOWING:**

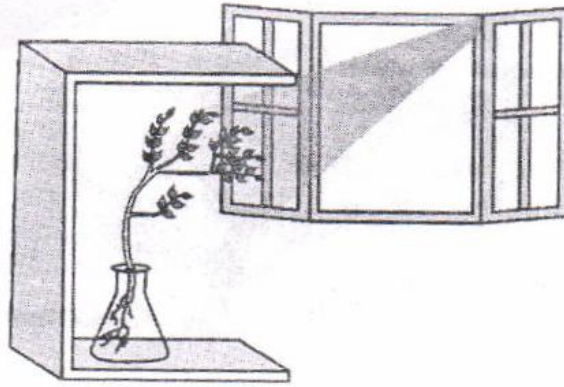
1. (a) What is (i) phototropism and (ii) geotropism? With labelled diagrams describe an activity to show that light and gravity change the direction that Plant Parts grow in.  
(b) Mention the role of each of the following plant hormones:  
(i) Auxin  
(ii) Abscisic acid
2. Draw the structure of a neuron and explain how it functions.

**OR**

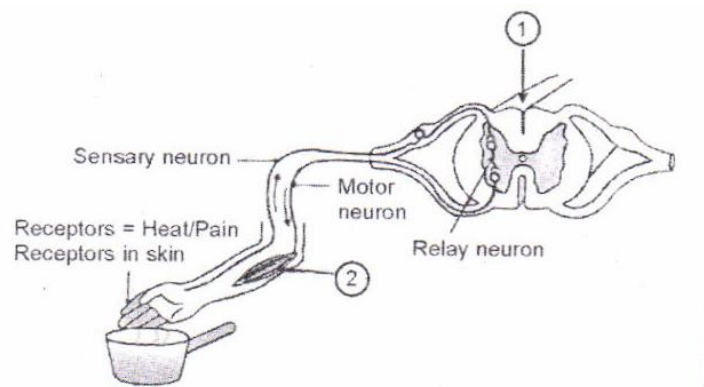
- (a) Draw the structure of a neuron and label the following on it:  
Nucleus, Dendrite, Cell body and Axon
- (b) Name the part of neuron:  
(i) Where information is received.  
(ii) Through which information travels as an electrical impulse.

**HIGHER ORDER THINKING SKILLS (HOTS) QUESTIONS**

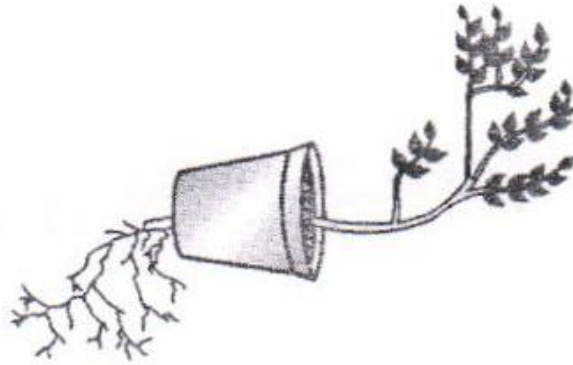
1. We suddenly withdraw our hand when a pin pricks. Name the type of response involved in this action.
2. What is the role of brain in reflex action?
3. Name the mechanism which regulates the timing and amount of hormone released in our body while controlling an activity.
4. Give an example of a plant responding to a chemical stimulus.
5. What does the given experimental set-up demonstrate?



6. What is the difference between reflex action and walking?
7. How are involuntary actions and reflex actions different from each other?
8. How is the movement of leaves of the sensitive plant (touch-me-not plant) different from movement of a shoot towards light?
9. Compare and contrast nervous and hormonal mechanisms for control and coordination in animals.
10. What is the difference between the manner in which movement takes place in a sensitive plant and the movement in our legs?
11. Why can a person suffering from common cold not enjoy his food?
12. Which signals will get disrupted in case of spinal cord injury?
13. (a) Label the two parts indicated by question marks and labeled 1 and 2 in the following diagram  
 (b) Suggest a suitable caption or heading for the following diagram.



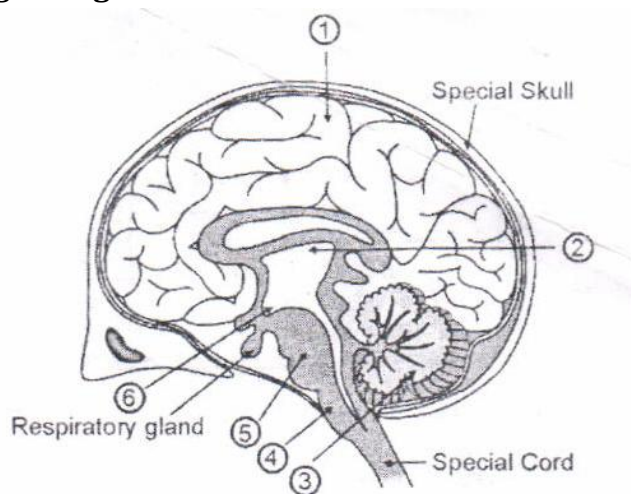
14. The given experimental set up tests the response of different parts of plant towards gravity. Use scientific terms for the conclusions.



15. How do we detect the smell of an agarbatti? Explain.

16. There are certain activities which we perform involuntarily-like without thinking like vomiting, mouth watering on smelling tasty food. What term do we use to explain them? Which part of our nervous system controls them?

17. Label Parts 1 to 5 in the given figure of the brain.



18. How do muscles respond to the nerve impulse?

19. What was the need to evolve chemical coordination apart from nervous coordination in animals?

20. "Chemical coordination in our body is under the control of our nervous system." Justify.

21. "Reflex action cannot be controlled by thinking part of the brain." Justify.

22. "A plant kept in a dark box with a hole on one side responds by bending towards the hole." Explain the phenomenon involved.

OR

How does phototropism occur in plants?

23. What are the functions of receptors in our body? Think of a situation where receptors do not work properly. What problems are likely to arise?

24. Design an experiment to demonstrate hydrotropism.

## **CHEMISTRY**

### **Chapter 1. Chemical Reaction and Equations ASSIGNMENT - 1**

1. Write a chemical equation for each of the following reactions
  - (i) Zinc metal reacts with aqueous solution of hydrochloric acid to form zinc chloride solution and hydrogen gas.
  - (ii) When solid mercury (II) oxide is heated, liquid mercury and oxygen gas are produced.
2. Give two examples from daily life where redox reactions are taking place.
3. State any two methods to prevent or retard the development of rancidity in fat and oil containing foods.
  - i. Why articles made of aluminium do not corrode?
5. Giving examples explain the difference between balanced and unbalanced chemical equation

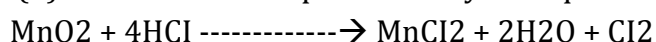
What is the difference between displacement and double displacement reactions? Write equations for these reactions.

What are the three essentials of a chemical equation?

What is corrosion? What are its effects? State two conditions necessary for the rusting of iron.

9 (i) What is meant by 'oxidation' in terms of oxygen?

(ii) In the reaction represented by the equation:



- |                                 |                              |
|---------------------------------|------------------------------|
| (a) Name the substance oxidised | (b) Name the oxidizing agent |
| (c) Name the substance reduced  | (d) Name the reducing agent  |

Or

Write one activity to show the decomposition of a chemical compound with the evolution of a gas.

10 (i) Explain the term 'corrosion' with an example.

(ii) Which chemical reaction is involved in the corrosion of iron?

(iii) Name any two objects (or structures) which are gradually damaged by the corrosion of iron and steel?

(iv) Name two metals which corrode easily and two metals which do not corrode easily.

(v) Aluminium corrodes in moist air but it is widely used for making cooking vessels and other cutlery. Explain.

#### **Assignment 2**

### **Chapter 1. Chemical Reaction and Equations**

1. When iron is heated with sulphur iron sulphide is formed. What is the reaction called?
2. What type of reaction is represented by the digestion of food in our body?
3. What is that reaction called in which one element takes the place of another element in a compound?
4. What happens to copper sulphate solution when a piece of iron metal is placed in it?
5. A reaction takes place with the evolution of heat energy. What is this reaction called?

6. Write the balanced equation for the following chemical reactions.

(i) Hydrogen + Chlorine ----- Hydrogen chloride

(ii) Barium chloride + Aluminium sulphate ----- Barium sulphate + Aluminium chloride

(iii) Sodium + Water ----- Sodium hydroxide + Hydrogen.

7. Write a balanced chemical equations with state symbols for the following reactions:

(i) Solutions of barium chloride and sodium sulphate in water react to give insoluble barium sulphate and the solution of sodium chloride.

(ii) Sodium hydrogen solution (in water) reacts with hydrochloric acid solution (in water) to produce sodium chloride solution and water.

8. A solution for a substance 'X' is used for white - washing.

(i) Name the substance 'X' and write its formula.

(ii) Write the reaction of the substance 'X' named in (i) above with water.

9. What way the two reactions in each of the following pairs are different from each other?

(i) (a)  $\text{NH}_3 (\text{g}) + \text{H}_2\text{O} (\text{l}) \rightarrow \text{NH}_4\text{OH} (\text{aq})$

(b)  $2 \text{Mg} (\text{s}) + \text{O}_2 (\text{g}) \rightarrow 2 \text{MgO} (\text{s})$

(ii) (a)  $\text{Zn} (\text{s}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{ZnSO}_4 (\text{aq}) + \text{Cu} (\text{s})$

(b)  $\text{H}_2\text{S} (\text{aq}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{CuS} (\text{s}) + \text{H}_2\text{SO}_4 (\text{aq})$

(iii) (a)  $\text{CaCO}_3 \rightarrow \text{CaO} (\text{s}) + \text{CO}_2 (\text{g})$

(b)  $2\text{H}_2\text{O} (\text{l}) \rightarrow 2\text{H}_2 (\text{g}) + \text{O}_2 (\text{g})$

10. What is meant by a displacement reaction? Give two examples.

11. What are the advantages of using a chemical equation for the representation of a chemical Reaction?

### ASSIGNMENT - 3

1. A reaction takes place with the absorption of heat energy. What is this reaction called?

2. Name 2 anti-oxidants used in fat & oil containing foods to prevent rancidity.

3. What is chemical equation?

4. Calcium oxide reacts with water to form calcium hydroxide. Name chemical reaction?

5. Why the colour of copper sulphate solution change when an iron nail is dipped in it?

6. Identify the substance that are oxidized and the substances which are reduced in the following

reactions.

i)  $4\text{Na} (\text{s}) + \text{O}_2 (\text{g}) \rightarrow 2\text{Na}_2\text{O} (\text{s})$

ii)  $\text{CuO} (\text{s}) + \text{H}_2 (\text{g}) \rightarrow \text{Cu} (\text{s}) + \text{H}_2\text{O} (\text{l})$

What is a balanced chemical equation? Why should chemical equations be balanced?

1. Why is respiration considered an exothermic reaction? Explain.

Write the balanced chemical equations for the following and identify the type of reaction in each

case:

(i) Barium chloride (aq) + potassium sulphate (aq)  $\rightarrow$  Barium sulphate (s) + Potassium chloride (aq)

(ii) Zinc carbonate (s)  $\rightarrow$  Zinc oxide (s) + Carbon dioxide (g)

(iii) Magnesium (s) + Hydrochloric acid (aq)  $\rightarrow$  Magnesium chloride (aq) + Hydrogen(g)

### ACID, BASES AND SALTS

1 What will be the action of the following substances on litmus paper?

Dry HCl gas, Moistened NH<sub>3</sub> gas, Lemon juice, Carbonated soft drink, Curd, Soap solution.

2 Name the acid present in ant sting and give its chemical formula. Also give the common method to get relief from the discomfort caused by the ant sting.

3 What happens when nitric acid is added to egg shell?

4 A student prepared solutions of (i) an acid and (ii) a base in two separate beakers. She forgot to label the solutions and litmus paper is not available in the laboratory. Since both the solutions are colourless, how will she distinguish between the two?

5 How would you distinguish between baking powder and washing soda by heating?

6 Salt A commonly used in bakery products on heating gets converted into another salt B which itself is used for removal of hardness of water and a gas C is evolved. The gas C when passed through lime water, turns it milky. Identify A, B and C.

7 In one of the industrial processes used for manufacture of sodium hydroxide, a gas X is formed as by product. The gas X reacts with lime water to give a compound Y which is used as a bleaching agent in chemical industry. Identify X and Y giving the chemical equation of the reactions involved.

8 What are strong and weak acids? In the following list of acids, separate strong acids from weak acids. Hydrochloric acid, citric acid, acetic acid, nitric acid, formic acid, sulphuric acid.

9 When zinc metal is treated with a dilute solution of a strong acid, a gas is evolved, which is utilised in the hydrogenation of oil. Name the gas evolved. Write the chemical equation of the reaction involved and also write a test to detect the gas formed.

10 Why does tooth decay start when the pH of mouth is lower than 5.5?

11 What is baking powder? How does it make the cake soft and spongy?

12 Give Arrhenius definition of an acid and a base. Choose strong acid and strong base from the following: CH<sub>3</sub>COOH, NH<sub>4</sub>OH, KOH, HCl

13 Given below are the pH values of different liquids. 7.0, 14.0, 4.0, and 2.0. Which of these could be that of (a) lemon juice (b) distilled water (c) sodium hydroxide solution (d) tomato juice.

14 For making cake, baking powder is taken. If at home your mother uses baking soda instead of baking powder in cake,

(a) how will it affect the taste of the cake and why?

(b) how can baking soda be converted into baking powder?

(c) what is the role of tartaric acid added to baking soda?

15 A metal carbonate X on reacting with an acid gives a gas which when passed through a solution Y gives the carbonate back. On

the other hand, a gas G that is obtained at anode during electrolysis of brine is passed on dry Y, it gives a compound Z, used for disinfecting drinking water. Identify X, Y, G and Z.

16 A dry pellet of a common base B, when kept in open absorbs moisture and turns sticky. The compound is also a by-product of

chloralkali process. Identify B. What type of reaction occurs when B is treated with an acidic oxide? Write a balanced chemical equation for one such solution.

17A sulphate salt of Group 2 element of the Periodic Table is a white, soft substance, which can be moulded into different shapes by making its dough. When this compound is left in open for some time, it becomes a solid mass and cannot be used for moulding purposes. Identify the sulphate salt and why does it show such a behaviour? Give the reaction involved.

18 Explain the preparation of washing soda.

19 Name the gas formed when sodium hydroxide reacts with zinc.

20 Write the chemical name of baking soda.

21 What happens when gypsum is heated at 373K?

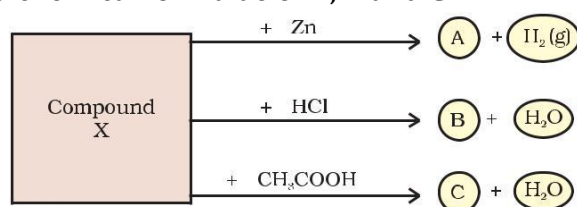
22 Which has a higher pH value 1M HCl or 1M NaOH solution?

23 Write the chemical name of Plaster of Paris. Write a chemical equation to show the reaction between Plaster of Paris and water. Name the compound produced in this reaction.

24 A gas X reacts with lime water and forms a compound Y which is used as bleaching agent in the chemical industry. Identify X and Y. Give the chemical equation of the reaction involved.

25 Identify the compound X on the basis of the reactions given below.

Also, write the name and chemical formulae of A, B and C.



## PHYSICS

### Practice worksheet “Electricity”

Q1. Write the value of charge and mass of electron.

Q2. How many electrons constitute a charge of three coulombs?

Q3. Define potential difference. Give its units.

Q4. Does ammeter have high resistance?

Q1. How is the potential difference maintained across the ends of a conductor?

Q2. State ohm's law. What are non-ohmic conductors?

Q3. A current of 2A flows through a 12V car headlight bulb for 6 minutes. How much energy transfer occurs during this time?

Q5. An electric iron is used on a 240V supply and draws a current of 4 Ampere?

(a) What is its power?

(b) What is its resistance?

(c) What is the cost of using the iron for the month of January 10 hours a day if 1 kwh costs Rs.3.40?

Q6. Define resistivity of material.

Q7. What is the power of torch bulb rated at 2.5V and 500mA?

Q8. Why series arrangement not used for connecting domestic electrical appliances in a circuit?

Q9. Which has higher resistance – a 50W bulb or a 2.5W bulb and how many times?

- Q 10. What is the direction of flow of conventional current?
- Q.11. Why is it not advisable to handle electrical appliances with wet hands?
- Q 12. Two electric bulbs marked 100W 220V and 200W 200V have tungsten filament of same length. Which of the two bulbs will have thicker filament?
- Q.13. How does the resistance of a wire vary with its area of cross section?
- Q.14. Draw the following symbols  
 i) Battery ii) Switch closed  
 iii) Resistor of resistance R iv) Voltmeter
- Q 15. A geyser is rated 1500W, 250V. This geyser is connected to 250V mains. Calculate –  
 i) The current drawn  
 ii) The energy consumed in 50hrs.  
 iii) The cost of energy consumed at Rs. 2.20 per kWh.
- Q 16 What is the function of an electric fuse? Name the material used for making fuse. In household circuit where is fuse connected?
- Q.18.. Write one important advantage of using alternative current. How alternating current differ from direct current?
- Q 19. What is the difference between short circuiting and overloading?
- Q 20. . a) Draw diagram showing three resistors R1, R2 and R3 in series.  
 b) Two resistors of resistance  $4\Omega$  and  $12\Omega$   
 i) In parallel  
 ii) In series
- Calculate the values of effective resistance in each case.

### **SOURCES OF ENERGY**

1. What is energy?
2. What do you mean by 'source of energy'?
3. What should be the characteristics of a good source of energy?
4. Name a few sources of energy used in our daily life.
5. What are renewable and non-renewable sources of energy? Give examples of each.
6. Name some of the sources of energy used in ancient times.
7. Give 2 advantages and 2 disadvantages, each of renewable and non-renewable sources of energy.
8. What are fossil fuels? Give a few examples.
9. Name a gaseous fossil fuel.
10. Which of the following is not derived from solar energy: - geothermal, wind energy, fossil fuels, biomass.
11. What are the limitations of extracting energy from (a) the wind (b) the waves (c) the tides.
12. What are the environmental consequences of the increasing demand for energy? What steps would you suggest to reduce energy consumption?
13. Name two indirect ways of using solar energy.
14. give the transformation of energy (sequence) taking place in  
 (a) Thermal power plant (b) hydro power plant (c) solar cell
15. Give advantages and disadvantages of constructing dams.
16. Name the plant and animal products that are used as fuel.
17. What is biomass?
18. How do we get charcoal?



19. What is bio-gas?
20. What are the advantages of using bio-gas as fuel?
21. Why is burning of firewood in traditional chulhas considered disadvantageous?
22. Give the constituents of bio-gas.
23. What are the advantages of bio-gas over traditional fuels?
24. Describe the process of bio-gas production in a bio-gas plant.
25. Name the type of energy possessed by wind.
26. What is a (a) windmill (b) wind energy farm?
27. How does a windmill help in generating electricity?
28. How can wind be used for lifting or pumping up water?
29. Give the advantages and disadvantages of using wind as a source of energy.
30. What should be the minimum wind velocity for a windmill to function?
31. What is India's wind power potential? Where in India is the largest wind energy farm?
32. Electricity generated with (a) windmill (b) water stored in dam can be considered another form of solar energy. Explain.
33. What is Tidal energy? How can it be harnessed?
34. Can tidal energy be considered a potential source of energy? Explain giving reasons.
35. Name the forms in which energy from oceans is made available to us for use.
36. What is meant by 'alternative sources of energy'? Give examples.
37. What are OTEC power plants? How do these operate?
38. What is geothermal energy? What is its advantage?
39. Name the source (s) of energy (non-conventional) that can directly be used 24 hours a day.
40. What should be difference in temp of water at surface and depth of about 2 km for harnessing ocean thermal energy?
41. Name the ultimate source of all other sources of energy.
42. Name two appliances that use solar energy directly.
43. Name two indirect ways of using solar energy.
44. What is solar constant? What is its value?
45. Name the form (s) in which we receive sun's energy.
46. In spite of exposure of many modern forms & ways of using energy, we are going back to use of solar energy. Why?
47. Name a few solar energy devices that are being used extensively these days.
48. Can we completely depend on solar energy for our energy requirements? Give reasons.
49. How can we overcome the limitation of using solar energy?
50. Why are solar heating devices painted black from inside?
51. What is the use of glass sheet in a solar heating device?
52. Why do we use mirror in a solar cooker? What type of mirror is used in solar heating devices?
53. What is a solar cell?
54. Give the transformation of energy taking place in a solar cell.
55. What is a solar cell panel?
56. Name the material used for making solar cell.
57. What are the advantages of solar cells over solar heating devices?

58. Solar cells, inspite of many advantages are not used on a large scale for power production or for large scale power production. Why?
59. Give some of the uses or areas where solar cell / panels are being used.
60. What is nuclear energy?
61. Name two ways of obtaining nuclear energy.
62. Define nuclear fission.
63. Give examples of heavy atoms.
64. Name some elements that undergo nuclear fission.
65. Is nuclear energy considered a renewable or a non-renewable source of energy? Give reason.
66. Name the process of large energy production in (a) the sun (b) nuclear reactor.
67. What is a nuclear reactor?
68. What is a nuclear chain reaction?
69. Give advantages and disadvantages of using nuclear energy.
70. Give one example each of:-  
 (a) constructive use of nuclear energy  
 (b) Destructive use of nuclear energy.
- INSTRUCTIONS:**

- I. Answer all the questions in your notebooks.
- II. Complete your practical file.
- III. Revise the syllabus for periodic test-

**ELECTRICITY WORKSHEET NO 1**


**Section A**

8	Why are electric bulbs filled with chemically inactive nitrogen or argon?	1
9	Derive an expression for the equivalent resistance of three resistors $R_1$ , $R_2$ and $R_3$ connected in series.	3
	a) Conductor ----- i) $10^{-6} \Omega m$	3
	b) Alloys ----- ii) $10^{12}$ to $10^{17} \Omega m$	
	c) Insulators ----- iii) $10^{-6}$ to $10^{-8} \Omega m$	
11	Derive an expression for Joule's law of heating.  Give two examples for applications of heating effect of electric current.	3
12	A wire of resistivity is stretched to double of its length. Find its new resistance and resistivity.	3

**Section B**

**NUMERICAL PROBLEMS**

13	100J of work is done in transferring 20C of charge between two points in a conductor. Find the resistance offered by the conductor, if a current of 2A flows through it.	2
14	Calculate the resistance of a metal wire of length 2m and area of cross section $1.55 \times 10^{-6} \text{m}^2$ , if the resistivity of the metal be $2.8 \times 10^{-8} \Omega \text{m}$ ? ( )	2
15	A battery of 12V is connected to a series combination of resistors 3 $\Omega$ , 4 $\Omega$ , 5 $\Omega$ and 12 $\Omega$ . How much current would flow through the 12 $\Omega$ resistor?	3
16	Nichrome wire of length l and radius 'r' has resistance of 10 $\Omega$ . How would the resistance of the wire change when (i) only the diameter is doubled? (ii) only length of the wire is doubled?	3
17	Two devices of rating 44W, 220V and 11W, 220V are connected in series. The combination is connected across a 440V main. The fuse of which of the two devices is likely to burn when the switch is ON? Justify your answer	3
19	A wire of resistance 10 $\Omega$ is bent in the form of a closed circle. What is the effective resistance between the two points at the ends of any diameter of the circle?	2
20	Two resistors with resistances 5 $\Omega$ and 10 $\Omega$ are to be connected to a battery of 6V so as to obtain  (i) Minimum current (ii) Maximum current. How will you connect the resistances in each case?	3

21	Two identical resistors are first connected in series and then in parallel to a source of supply. Find the ratio of heat produced in two cases.	3
22	A torch bulb is rated 5V and 500mA. Calculate its (i) power, (ii) resistance, (iii) energy consumed when it is lighted for 4 hours.	3
23	An electric heater rated 880W operates 6h/day. Find the cost of energy to operate it for 30 days at Rs 3.00 per unit.	
24	Calculate the net resistance between the points a and b in the circuit diagram shown.   From the above diagram, determine i) The equivalent resistance of the entire circuit ii) The current through each resistor iii) The total current from the power supply iv) The voltage drop across each resistor	3

## हिन्दी

निर्देश- ग्रीष्मावकाश कार्य स्वच्छता से तथा अलग से छोटी कार्य पुस्तिका में करें।

1.छः पृष्ठ सुलेख लिखिए ।

2 .दो आकर्षक विज्ञापन बनाइए- (ए 3 साइज शीट में )

क) नागरिकों में स्वदेश प्रेम जाग्रत करने हेतु

ख) विद्यालय में गर्मियों की छुट्टियों में समर कैंप हेतु

ग) भारत का क्षुंगार- हिंदी

3.दिए गए विषयों से संबन्धित चार सूक्तियाँ लिखिए -

क)अनुक्रमांक 1-10 हिंदी भाषा से संबन्धित

ख) अनुक्रमांक 11-20. अनुशासन से संबन्धित

ग) अनुक्रमांक 21-30. प्रकृति प्रेम से संबन्धित

घ) अनुक्रमांक 31-40 मित्रता से संबन्धित

ड) अनुक्रमांक 41-55. आत्मनिर्भरता से संबन्धित

4. हिंदी हमारी राष्ट्रभाषा है। इसका अधिक से अधिक प्रयोग करने के बारे में दो मित्रों के बीच संवाद लिखिए । (ए

4 साइज शीट में )

5.हकीकत फिल्म देखिए तथा उसमें निहित संदेश लिखिए ।

6. साहित्यिक परिचय लिखिए - (ए 4 साइज शीट में )

प्रेमचंद महादेवी वर्मा सुमित्रानंदन पंत मैथिलीशरण गुप्त

1.कक्षा में करवाए गए कार्य की पुनरावृत्ति कीजिए ।

## FOUNDATION IN INFORMATION TECHNOLOGY (FIT)

1. Name the technologies based upon which the World Wide Web is created.
2. Explain the significance of the text before and after @ an email address.
3. Mr Deepak has designed a website for a school which constantly updates the contents by adding new pages and contents. This result in a difficulty for keeping track of changes of the files in the server and the local computer where he does the development work. He wants a software through which he can automatically update the site whenever changes are made and when he is connected to the internet. Suggest the protocol and a software that Mr Deepak requires.
4. State the difference between 'Cc' and 'Bcc' in a mailbox.
5. Dr Saptark a neurosurgeon at Denkin's Hospital Cochin is very popular among patients. Each day he sees almost hundreds of patient, so much so he hardly gets time to relax and sometimes even do not get time to have his lunch. Even though life is difficult he enjoys his work to the fullest extent. Recently the medical Council of India (MCI) wanted to felicitate him at Delhi by the President of India, for his selfless work and invited him. Being so busy he is unable to go to the airlines booking office to book a ticket. Neither does he comprise on middlemen.
  - a. Suggest a method by which he will be able to book a ticket without physically standing in a queue.
  - b. State two advantages and disadvantages of such a method.

What is a Database?

6. What is a DBMS? Give few examples of DBMS.
7. State the difference between a record and a field in a table.
8. State the difference between Candidate and Alternate keys in a Table.
9. State two functions of a Database Wizard.
10. Study the given table and answer the following questions:

Roll Numbers	Names	Addresses
1	Aditi Sharma	Kolkata
2	Trilok Dewan	Mumbai
3	Aswin Thakur	Delhi
4	Ashis Karmakar	Chennai
5	Saurav Agarwal	Mathura

- a. What is the cardinality the above table?
- b. What is the degree of the above table?

- c. What will be the change in cardinality and degree if 4 more records are added and 2 more fields are added to the table?
- d. Identify the primary key in the table.
11. The management of a medical store, GetWellSoon Medicos, decides to computerise its inventory.
- a. Suggest any two tables which must be present in the database. You also have to suggest fields of the Tables along with their datatypes.
- b. Mention any two benefits that the management will have by computerising the inventory.

### PRACTICAL ASSIGNMENT

1. Design a Database in open office base for a school library. Create a table Books with the following fields:

1. Book id
2. Book Name
3. Author Name
4. Book Cost
5. Date of Publishing

Set the book id as primary key and set the field Author name as 'entry required'

2. Answer the following questions on the basis of table given below:

Teacher

No	Name	Age	Department	Date of Join	Salary	Sex
1.	Jugal	34	Computer	10/01/97	12000	M
2.	Sharmila	31	History	24/03/98	20000	F
3.	Sandeep	32	Maths	12/12/96	30000	M
4.	Sangeeta	35	History	01/07/99	40000	F
5.	Rakesh	42	Maths	05/09/97	25000	M
6.	Shyam	50	History	27/02/97	30000	M
7.	Shiv Om	44	Computer	25/02/97	21000	M
8.	Shalakra	33	Maths	31/07/97	20000	F

- a. How many fields are there in the Teacher table?
- b. Give the data type of the Department Date of Joining and salary
- c. Which field set as a primary key field? What is the purpose of setting the primary

key?

d. Sort the table in the descending order as per the date of Joining.

e. Create a query to show the Name of teachers whose date of joining is between 05/09/97 to 01/07/99.

f. Mr. Jugal, the head of the department, wants a list of the higher paid employees. For this, sort the table in the descending order based on the Salary field and print the list

### 3. Patient

No	Name	Age	Department	Dateofadmin	Charge	Sex
1	Arpit	62	Surgery	01/21/2016	1500	M
2	Zayana	18	ENT	12/12/2015	1250	F
3	Kareem	22	Orthopedic	02/19/2016	1450	M
4	Abhilash	26	Surgery	11/24/2016	1500	M
5	Dhanya	24	ENT	10/20/2016	1350	F
6	Siju	23	Cardiology	10/10/2016	1800	M
7	Ankita	66	ENT	04/13/2016	1001	F
8	Divya	55	Cardiology	11/10/2016	1500	F
9	Nitin	25	Orthopedic	05/12/2016	1700	M
10	Hari	28	Surgery	03/19/2016	1450	M

a. Identify the primary key field.

b. Identify the field which can not have null value.

c. How many records does the Patient table contain?

d. Identify the fields that have the same data types.

e. Sort the table in ascending order of age.

f. Display the name of the patient whose department is = " ENT "

Note : Take the printout of the screenshot of table and query window, and place them in Practical file.

## ART

Note:-Submit your Holidays Homework in a presentable manner as per the nature of the work e.g. a work which is two dimensional should be properly laminated) with name slip.

Topic-Role of NGT (National Green Tribunal)

(Size A-3 Ivory Sheet)

Use bright colors composition with related slogan 'Reflecting Positive message for our Society'

Browse internet and collect innovative ideas. This will stimulate your imagination.