TAPOVAN INTERNATIONAL SCHOOL

Worksheet (2018-19)

Sub: Biology **Class: X**

Chapter/Topic: Nutrition and Respiration

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1. Give the appropriate terms to the following statements
   a. Any substance taken into the body for purpose of providing nutrition.
   b. Conversion of complex food particles into simpler food particles in presence of enzymes.
2. Name the enzymes found in the pancreatic juice.
3. What are the raw materials used in photosynthesis.
4. What is the role of gastric HCl?
5. What are life processes? Give some examples for life processes?
6. Name the type of nutrition
   a. Fungi like bread mould, yeast, mushroom breakdown the food materials outside the body and absorb it.
   b. Cuscuta, lices and ticks derive nutrition from plants or animals without killing them
7. How does Amoeba intake food? Briefly mention.
8. Which digestive secretion does not contain any enzyme but is very important in the process of digestion. Comment on it.
9. a) What are the major events occurring during the process of photosynthesis?
   b) Name the energy transformation taking place in the process of photosynthesis.
10. Write the name / terms associated with the following a) the natural phenomenon involved in autotrophic nutrition b) the organelle of the leaf in which photosynthesis takes place c) the photosynthetic pigment which absorb light energy d) the structures associated with vascular bundle
11. How is the small intestine designed to absorb food?
12. 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.
13. How are fat digested in our bodies? Where does this process take place?
15. What is peristalsis? Explain both mechanical as well as the chemical part of digestion of food in the mouth of man.
16. Parwati collected his saliva and mixed it with liquid A in the test tube. In another test tube, he took only liquid A. After 10 minutes, she added a few drops of iodine solution in 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 – a) What is the aim of this activity? b) What is liquid A? c) Why did the first test tube not shown any colour change with iodine while the second one did? d) Which enzyme is responsible for such a result?
17. a) Explain the process of digestion of food in the stomach.
    b) How passage of food from the stomach is regulated onwards?
    c) Explain the process of fat digestion in the gut of man.
19. Name the intermediate and the end product of glucose break down in aerobic respiration
20. a) Draw the respiratory system of human beings. Label the following in the diagram drawn
Larynx , Trachea , Primary bronchus , Lungs.

21.Draw well labeled diagram of Human Alimentary canal.

TAPOVAN INTERNATIONAL SCHOOL

Worksheet (2018-19)

Sub: Physics **Class: 10th**

Chapter/Topic: Electricity

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1. How does use of fuse wire protect electrical appliances?
2. Calculate the resistance of an electric bulb which allows a 10A current when connected to a 220V power source?
3. Define the term “volt”?
4. Draw a schematic diagram of a circuit consisting of 3V battery, 5 ohm, 3 ohm and 1 ohm resistor, an ammeter and a plug key, all connected in series.
5. Alloys are used in electrical heating devices rather than pure metals. Give reason.
6. On what factor does the resistance of a conductor depend?
7. Calculate the number of electron consisting one coulomb of charge?
8. Define the unit of current.
9. Calculate the number of electrons constituting one coulomb of charge.
10. What happens to the current in a circuit if its resistance is doubled?
11. Should the heating element of an electric iron be made of iron, silver or nichrome wire? Justify giving three reasons?(a) Define electric resistance of a conductor? (b)A wire of length L and resistance R is stretched so that its length is double and the area of cross section is halved. How will it’s a)resistance change b)resistivity change?
12. Two conducting wires of the same material and of equal lengths and equal diameters are first connected in series and then in parallel in an electric circuit. the ratio of heat produced in series and parallel combinations would be?
13. A copper wire has diameter 0.5 mm and resistivity of 1.6 x 10-8 m. what will be the length of this wire to make its resistance 10? How much does the resistance change if the diameter is doubled?
14. Show how you would connect three resistors, each of resistance 6 Ω so that the combination has resistance of (i) 9Ω (ii) 4Ω.
15. A wire of length L and resistance R is stretched so that its length its doubled. How will its (a) Resistance change (b) Resistively change?
16. (a) Define electrical energy with S.I. unit?
    (b) A house hold uses the following electric appliance;
    Refrigerator of rating 400w for ten hour each day.
    Two electric fans of rating 80w each for twelve hours each day.
    Six electric tubes of rating 18w each for 6hours each day.
    Calculate the electricity bill of the household for the month of June if the cost per unit of electric energy is Rs. 3.00.
17. What are the advantages of connecting electrical devices in parallel with the battery instead of connecting them in series?
18. . Explain the following:
    a) Why is the tungsten used almost exclusively for filament of electric lamps?
    b) Why are the conductors of electric heating devices, such as bread-toasters and electric irons, made of an alloy rather than a pure metal?
    c) Why is the series arrangement not used for domestic circuits?
    d) How does the resistance of wire vary with its area of cross-section?
    e) Why copper and aluminum wires are usually employed for electric transmission?

TAPOVAN INTERNATIONAL SCHOOL

Worksheet (2018-19)

Sub: Social Science **Class: X**

Chapter/Topic:

Chapter -1 . Resources and Development

QI. Answer the following questions. Answer of these questions should not exceed 100words

1. Why is conservation of resources is essential? List out three methods of soil conservation.
2. Distinguish between Khadar and Bhangar. Name any two states where alluvial soils are found.
3. What is soil erosion? Write any two human activities that lead to soil erosion.
4. Explain the role of human in resource development.
5. What are the main advantages of India's land under a variety of relief features?
6. Explain the relationship between nature, technology and institutions.
7. Discuss the problems which have been caused due to over utilizations of resources
8. 'India has enormous diversity in the availability of resources'. Explain.
9. How does the soil of the Ganga Yamuna Plain differ from that of central Maharashtra?
10. Explain the major types soil erosions prevailing in India.

Chapter – 1. Power Sharing

QI. Answer the following questions. Answer of these questions should not exceed 100 words

1. Describe with examples the way in which power can be shared among different social and linguistic groups?
2. What were the reasons for the alienations of Sri Lankan Tamils? What was the effect of this on the country?
3. What is meant by Horizontal distribution of power? Explain by giving examples from India?.
4. What is the difference between the policies adopted by Belgium and Sri Lanka regarding power sharing arrangement?
5. What were the consequences of the Majoritarianism adopted to establish Sinha dominance over the Sri Lankan Tamils?
6. Explain Vertical power sharing in democracies. Give examples with reference to India.
7. How many times was the Belgium Constitution amended between 1970 and 1993? Mention any two positive effects of power arrangements in Belgium.
8. What were the main causes of tension between the two linguistic communities of Belgium? How was this conflict solved?

Chapter – 2. Federalism

QI. Answer the following questions. Answer of these questions should not exceed 100 words

1. Explain any four advantages of decentralization.
2. What are the difference between a federal form of government and unitary one?
3. Explain how the federal experiment has been successful in the matter of formation of states in India?
4. How has federal power sharing in India become more effective than in early years after the constitution came into force ?
5. What is meant by decentralization of powers? Explain the importance of local self government in the light of decentralization.
6. Describe any four constitutional steps taken in 1992 towards decentralization in India.

   OR

   Explain any four constitutional provisions of the Amendment Act of 1992 towards decentralization.
7. Describe the threefold distribution of legislative powers between the Union government and the state government . Who can make laws on the subjects which are not covered under these lists and what name has been given to such subjects?
8. The exact balance of power between the central and state government varies from one federation to another. Explain with the help of suitable examples.

TAPOVAN INTERNATIONAL SCHOOL

Worksheet (2018-19)

Sub: MATHEMATICS **Class:X**

Chapter/Topic: Ch:1 Real Numbers , Ch :2 Polynomials Ch : 3 linear equation in two variables

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Solve the following:

(1) The LCM of two numbers is 760 and their product is 6080. Find their HCF.

(2) Prove that $\sqrt{2}$ is a irrational.

(3) Three people go for a morning walk together. Their steps measure 45 cm, 70 cm and 80 cm respectively. What is the minimum distance travelled when their steps will exactly match after starting the walk assuming that their walking speed is same?

(4) Lovleen and Aditya are racing on a circular track. If Lovleen takes 20 minutes and Aditya takes 24minutes to complete the round. If they both start at the same point at the same time and go in same direction, after how many minutes will they meet again at the start point?

(5) Prove that 6 + 10$\sqrt{11}$ is an irrational number.

(6) Find the LCM of 986 and 374.

(7) Two tankers contain 522 litres and 252 litres of petrol respectively. Find the maximum capacity of the container which can measure the petrol of either tanker in exact number of litres.

(8) How many prime factors are there in the prime factorization of 18150 ?

(9) Show that the square of any positive integer is of the form 3m or 3m +1 for some integer m.

(10) Find the HCF of 7792 and 288 .

(11) State Euclid's Division Lemma .

(12) In a school annual day f unction parade, a group of 232 students need to march behind the band of 92 members. The two groups have to march in the same number of columns. What is the maximum number of columns in which they can march?

(13) If one of the zeroes of the quadratic polynomial (k - 1) x^2 + 1 is -3, then find the value of k

(14) If α and $\beta$are the roots of the quadratic polynomial p (x) = x^2 - (k + 6)x + 2 (2k - 1). Find the value of k, if If $\alpha + \beta = 1/2\ \alpha\beta$.

(15) Find the zeroes of the polynomial f(x) = 4 $\sqrt{3}$ x^2 +5x -2$\sqrt{3}$, verify the relationship between the zeroes and its coefficients.

(16) If α and β are the roots of the quadratic polynomial f(x) = x^2 –x – 2 , find a polynomial whose zeroes are $2\alpha + 1$ and $2\beta + 1$.

(17) If the polynomial $6x^4$ +8x^3 +17x^2 +21x +7 is divided by another polynomial 3x^2 +4x +1 , the remainder comes out to be ax +b , find a and b.

(18) Find all zeroes of the polynomial f(x) =x^4 - 3x^3 - x^2 +9x -6 , if two of its zeroes are –$\sqrt{3}$ and $\sqrt{3}$

(19) What must be added to the polynomial f(x) = x^4 +2x^3 - 2x^2 +x -1 , so that the resulting polynomial is exactly divisible by(x) = x^2 +2x - 3 ?

(20) What must be subtracted from the polynomial f(x) = x^4 +2x^3 - 13x^2 -12x +21 , so that the resulting polynomial is exactly divisible by(x) = x^2 -4x +3 ?

(21). Find the values of p and q for which the following system of equations has infinite number of solutions:

$2x + 3y = 7$

$(p+q)\,x + (2p - q)\,y = 21$

(22). Points A and B are 90 km apart from each other on a highway. A car starts from A and another from B at same time. If they go in the same direction they meet in 9 hours and if they go in opposite directions they meet in 9 / 7 hours. Find their speeds.

(23). The perimeter of a rectangle is 44 cm. If its length is increased by 4 cm and its breadth is increased by 2cm, its area is increased by 72 sq cm. Find the dimensions of the rectangle.

(24). 2 women and 5 men can together finished a piece of work in 4 days, while 3 women and 6 men can finish it in 3 days. Find the time taken by 1 woman alone to finish the work, and that taken by 1 man alone.

(25). Find the value(s) of k for which the pair of linear equations $k x + 3y = k - 2$ and $12x + k y = k$ has no solution .

(26). Find the value of k, for which the pair of equations $3x + 5y = 0$, $k x + 10y = 0$, has a non zero solution.

(27).Draw the graph of the equation $x - y + 1 = 0$ and $3x + 2y - 12 = 0$. Determine the coordinates of the vertices of the triangle formed by these lines and the x – axis, and shade the triangular region.

(28). Solve $2x + 3y = 11$ and $2x - 4y = -24$ and hence find the value of m for which $y = mx + 3$.

(29). Solve for x and y

$(a - b)x + (a+b)y = a^2 - 2ab - b^2$

$(a+ b)(x + y) = a^2 + b^2$

(30). Solve the following pair of equations :

$$\frac{2}{\sqrt{x}} + \frac{3}{\sqrt{y}} = 2 \quad \text{and} \quad \frac{4}{\sqrt{x}} - \frac{9}{\sqrt{y}} = -1$$