NPET'S ENGLISH MEDIUM SCHOOL BELGAUM

SA-I RIVISION for Science

Class: VII

I. Mark 'T' if the statement is true and 'F' if it is false.

1The motion of a spinning top is rotational motion.

2. The smallest time interval that can be measured with commonly available clocks and watches is one minute.
3. The time period of simple pendulum is not constant.
4. Faster vehicle has a lower speed.
5. The basic unit of speed is km/h
6. The materials which do not allow heat to pass through them are known as insulators.
7. Temperature is measured in degree Celsius.

II. Fill in the blanks.

1. The hotness of an object is determined by its _____.
2. Clothes of _____ colours absorb heat better than clothes of light colours.
3. Temperature of boiling water cannot be measured by a _____.
4. Conductors are _____ conductor of heat.
5. Heat always flows from a hotter object to _____.
6. From the sun the heat comes to us by the process called _____.
7. The time taken for one complete oscillation of a pendulum is called the _____ period.
8. When measuring large distances such as between cities, the preferred unit is _____
9. _____ is the motion of a child on a see-saw.
10. The speed of an object is the distance travelled divided by the _____ taken to cover that distance

III. Answer the following questions.(short answers)

1. If a pan is removed from the fire, then why does it cool down?
2. Name the mode of transfer of heat in which medium is not required.
3. Mention any two examples of insulators and conductors.
4. Which device is used to measure temperature?
5. What is the normal temperature of a human being?
6. What is the range of a laboratory thermometer?
7. Which type of graph is used to represent motion of an object?
8. Name any two time measuring device used in ancient time.
9. Write the formula for calculating speed.
10. Mention the standard unit of distance and time.

IV. Short Answer Type Questions

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1. Differentiate between circular motion and periodic motion.
2. We are advised to use an umbrella when you go out in the sun.
3. Why do we wear dark coloured clothes I winter and light coloured clothes in summer?
4. Distinguish between uniform and non-uniform motion with examples.
5. Define speed. What is its basic unit?
6. Define the following terms.
   a. speedometer
   b. odometer
7. State similarities and differences between the laboratory and clinical thermometer.
8. Define periodic motion with examples.

V. Solve the following.

1. A simple pendulum takes 32 s to complete 20 oscillations. What is the time period of the pendulum?
2. Salma takes 15 minutes from her house to reach her school on a bicycle. If the bicycle has a speed of 2 m/s, calculate the distance between her house and the school.
3. The distance between two stations is 240 km. A train takes 4 hours to cover this distance. Calculate the speed of the train
4. Sumit covers a distance of 2.4 Km from his house to reach her college on a scooter. If the scooter has a speed of 6m/sec, calculate the time taken by her to reach the college.
5. If a car is moving with a speed of 5km/h on highway then find the distance travelled by the car in 4 hours.
6. A bus travels a distance of 480 km in 8 hours and a train covers a distance of 1200 km and in 10 hours which one of the two travels faster – car or train.

VI. Long Answer Type Questions

1. State different types of motion?
2. Difference between convection and conduction.
3. How can you say that motion and rest are relative?
4. Draw a neat labeled diagram of a simple pendulum showing its mean and extreme position.

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CHEMISTRY:

1. Mark 'T' if the statement is true and 'F' if it is false.

(i) Nitric acid turns red litmus blue. (T/F)

(ii) Sodium hydroxide turns blue litmus red. (T/F)

(iii) Sodium hydroxide and hydrochloric acid neutralise each other and form salt and water. (T/F)

(iv) Indicator is a substance which shows different colours in acidic and basic solutions. (T/F)

(v) Tooth decay is caused by the presence of a base. (T/F)

2. State differences between acids and bases.

3. Ammonia is found in many household products, such as window cleaners. It turns red litmus blue. What is its nature?

4. Name the source from which litmus solution is obtained. What is the use of this solution?

5. Is the distilled water acidic/basic/neutral? How would you verify it?

6. Describe the process of neutralisation with the help of an example.

7. Dorji has a few bottles of soft drinks in his restaurant. But, unfortunately, these are not labelled. He has to serve the drinks on the demand of customers. One customer wants an acidic drink, another wants a basic drink, and the third one wants a neutral drink. How will Dorji decide which drink is to be served to whom?

8. Explain why

(a) An antacid tablet is taken when you suffer from acidity

(b) Calamine solution is applied on the skin when an ant bites.

(c) Factory waste is neutralised before disposing it into the water bodies.

9. Three liquids are given to you. One is hydrochloric acid, another is sodium hydroxide, and the third is a sugar solution. How will you identify them? You have only turmeric indicator.

10. Blue litmus paper is dipped in a solution. It remains blue. What is the nature of the solution? Explain.

11. Consider the following statements:

(a) Both acids and bases change colour of all indicators.

(b) If an indicator gives a colour change with an acid, it does not give a change with a base.

(c) If an indicator changes colour with a base, it does not change colour with an acid.

(d) Change of colour in an acid and a base depends on the type of the indicator.

Which of these statements are correct?

(i) All four

(ii) a and d

(iii) b, c and d

(iv) only d

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1. Classify the changes involved in the following processes as physical or chemical changes.
(a) Photosynthesis
(b) Dissolving sugar in water
(c) Burning of coal
(d) Melting of wax
(e) Beating aluminium to make aluminium foil
(f) Digestion of food

2. State whether the following statements are true or false. In case a statement is false, write the corrected statement in your notebook.
(a) Cutting a log of wood into pieces is a chemical change. (True/False)
(b) Formation of manure from leaves is a physical change. (True/False)
(c) Iron pipes coated with zinc do not get rusted easily. (True/False)
(d) Iron and rust are the same substances. (True/False)
(e) Condensation of steam is not a chemical change. (True/False)

3. Fill in the blanks in the following statements:
(a) When carbon dioxide is passed through lime water, it turns milky due to the formation of _____
(b) The chemical name of baking soda is _____.
(c) Two methods by which rusting of iron can be prevented are _____ and _____.
(d) Changes in which only _____ properties of a substance change are called physical changes.
(e) Changes in which new substances are formed are called _____ changes.

4. When baking soda is mixed with lemon juice, bubbles are formed with the evolution of a gas. What type of change is it? Explain.

5. When a candle burns, both physical and chemical changes take place. Identify these changes. Give another example of a familiar process in which both chemical and physical changes take place.

6. How would you show that the setting of curd is a chemical change?

7. Explain why burning wood and cutting it into small pieces are considered two different types of changes.

8. Describe how crystals of copper sulphate are prepared.

9. Explain how painting an iron gate prevents it from rusting.

10.Explain why rusting of iron objects is faster in coastal areas than in deserts.

11. The gas we use in the kitchen is called liquified petroleum gas (LPG). In the cylinder, it exists as a liquid. When it comes out from the cylinder, it becomes a gas (Change – A) then it burns (Change – B). The following statements pertain to these changes. Choose the correct one.
(i) Process – A is a chemical change.
(ii) Process – B is a chemical change.
(iii) Both processes A and B are chemical changes.
(iv) None of these processes is a chemical change.

12. Anaerobic bacteria digest animal waste and produce biogas (Change – A). The biogas is then burnt as fuel (Change – B). The following statements pertain to these changes. Choose the correct one.
(i) Process – A is a chemical change.
(ii) Process – B is a chemical change
(iii) Both processes A and B are chemical changes.
(iv) None of these processes is a chemical change.

BIOLOGY:

1. Why do organisms take food?
2. Distinguish between a parasite and a saprophyte.
3. How would you test the presence of starch in leaves?
4. Give a brief description of the process of synthesis of food in green plants.
5. Show with the help of a sketch that plants are the ultimate source of food.
6. Fill in the blanks.
(a) Green plants are called _____ since they synthesise their own food.
(b) The food synthesised by plants is stored as _____.
(c) In photosynthesis, solar energy is absorbed by the pigment called _____.
(d) During photosynthesis, plants take in _____ and release _____ gas.

7. Name the following.
i) A parasitic plant with a yellow, slender and branched stem.
ii) A plant that is partially autotrophic.
iii) The pores through which leaves exchange gases.

8. Tick the correct answer.
(a) Cuscuta is an example of:
(i) autotroph
(ii) parasite
(iii) saprotroph
(iv) host
(b) The plant which traps and feeds on insects is:
(i) Cuscuta
(ii) China rose
(iii) pitcher plant
(iv) rose

9. Match the items given in Column I with those in Column II.

Column-I	Column-II
Chlorophyll	Rhizobium
Nitrogen	Heterotrophs

Cuscuta	Pitcher plant
Animals	Leaf
Insects	Parasite

10. Mark 'T' if the statement is true and 'F' if it is false.

(i) Carbon dioxide is released during photosynthesis. (T/F)

(ii) Plants which synthesise their food are called saprotrophs. (T/F)

(iii) The product of photosynthesis is not a protein. (T/F)

(iv) Solar energy is converted into chemical energy during photosynthesis. (T/F)

11. Choose the correct option from the following:

Which part of the plant takes in carbon dioxide from the air for photosynthesis?

(i) Root hair (ii) Stomata (iii) Leaf veins (iv) Petals

12. Choose the correct option from the following:

Plants take carbon dioxide from the atmosphere mainly through their:

(i) roots (ii) stem (iii) flowers (iv) leaves

13. Why do farmers grow many fruits and vegetable crops inside large greenhouses? What are the advantages to the farmers?

1. Fill in the blanks:

(a) The main steps of nutrition in humans are _____, _____, _____, _____ and _____.

(b) The largest gland in the human body is _____.

(c) The stomach releases hydrochloric acid and _____ juices which act on food.

(d) The inner wall of the small intestine has many finger-like outgrowths called _____.

(e) Amoeba digests its food in the _____ .

2.Mark 'T' if the statement is true and 'F' if it is false:

(a) Digestion of starch starts in the stomach. (T/F)

(b) The tongue helps in mixing food with saliva. (T/F)

(c) The gall bladder temporarily stores bile. (T/F)

(d) The ruminants bring back swallowed grass into their mouth and chew it for some time. (T/F)

3. Tick (✓) mark the correct answer in each of the following:

(a) Fat is completely digested in the

(i) stomach (ii) mouth (iii) small intestine (iv) large intestine

(b) Water from the undigested food is absorbed mainly in the

(i) stomach (ii) food pipe (iii) small intestine (iv) large intestine

4. Match the items of Column I with those given in Column II:

Column- I	Column- II
Food components	Product(s) of digestion
Carbohydrates	Fatty acids and glycerol
Proteins	Sugar

Fats	Amino acids

5. What are villi? What is their location and function?
6. Where is the bile produced? Which component of the food does it help to digest?
7. Name the type of carbohydrate that can be digested by ruminants but not by humans. Give the reason also.
8. Why do we get instant energy from glucose?
9. Which part of the digestive canal is involved in:
   (i) absorption of food _____.
   (ii) chewing of food _____.
   (iii) killing of bacteria _____.
   (iv) complete digestion of food _____.
   (v) formation of faeces _____.
10. Write one similarity and one difference between nutrition in amoeba and human beings.
11. Match the items of Column I with suitable items in Column II

Column-I	Column-II
a) Salivary gland	(i) Bile juice secretion
b) Stomach	(ii) Storage of undigested food
c) Liver	(iii) Saliva secretion
d) Rectum	(iv) Acid release
e) Small intestine	(v) Digestion is completed
f) Large intestine	(vi) Absorption of water
	(vii) Release of faeces

12. Draw a neat labelled diagram of digestive system.
13. Can we survive only on raw, leafy vegetables/grass? Discuss.