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Southern Provincial Department of Education

Year End Test - 2018

Science Grade 08

Name / Index No.

Time - 2 hours

- Answer all questions.
- Underline the most Suitable Answer.
- After answering, attach paper I and answers for paper II together and submit.

- (01) Through which medium does sound travel in the highest speed?
 (1) Water (2) Air (3) Steel (4) Soil
- (02) What is the colour obtained when a drop of Iodine solution is added to a solution with starch?
 (1) dark blue (2) dark green (3) dark red (4) yellow
- (03) It is observed that a glowing splinter catches fire brightly when it is inserted to a boiling tube with a certain gas sample. The gas in the boiling tube is,
 (1) Nitrogen (2) Hydrogen (3) Carbon dioxide (4) Oxygen

Question No. 04 and 05 are based on the changes given below which are taken place in food due to the action of micro - organism on them.

A - Fermentation B - Putrefaction C - Rancidification

- (04) Which occurrence / occurrences is / are used in making bakery products?
 (1) A (2) A and B (3) C (4) A, B and C
- (05) The food items that the above changes taken place in sequence are,
 (1) protein, lipid and sugar (2) lipid, protein and sugar
 (3) sugar, lipid and protein (4) sugar, protein and lipid
- (06) The products produced due to the action of micro-organisms on food with much sugar are,
 (1) methane and ethyl alcohol (2) ethyl alcohol and nitric acid
 (3) Oxygen and acetic acid (4) Carbon dioxide and ethyl alcohol
- (07) Select the answer which contains only animals with a vertebral column.
 (1) snail, crab, spider (2) tuna, dog, snail
 (3) cock, python, butterfly (4) dog, python, salamander
- (08) Consider the following animal features.
- ♦ body is bilaterally symmetrical
 - ♦ body is segmented
- The animal groups that these features possessed are,
- (1) Cnidaria and Annelida (2) Annelida and Mollusca
 (3) Annelida and Arthropoda (4) Mollusca and Arthropoda

(09) Certain adaptations shown by plants are shown below.

- ◆ Leaves become thorns
- ◆ fine leaves
- ◆ Having a waxy cuticle

These adaptations,

- | | |
|---------------------------------|--------------------------------------|
| (1) increase the photosynthesis | (2) increase the absorption of water |
| (3) minimize the transpiration | (4) store the food |

(10) Which of the following gives the meaning of discontinuous nature of matter?

- (1) Matter exists in three physical states known as solid, liquid and gas.
- (2) Matter is made out of particles and there are spaces among these particles.
- (3) Matter has a mass.
- (4) Matter has a mass as well as a volume.

(11) Select the answer which contains only materials that can be compressed easily.

- | | |
|-------------------------------|--------------------------------|
| (1) water, iron, oxygen | (2) water, coconut oil, petrol |
| (3) air, oxygen, water vapour | (4) Aluminum, iron, mercury |

(12) Which of the following contains only metals that act as magnetic materials?

- | | |
|--------------------------|----------------------------|
| (1) iron, copper, nickel | (2) iron, cobalt, nickel |
| (3) iron, zinc, cobalt | (4) nickel, copper, cobalt |

(13) Which of the following instrument can be used to find the direction of a magnetic field?

- | | |
|------------------------------|-------------|
| (1) multi meter | (2) tester |
| (3) centre zero galvanometer | (4) compass |

(14) Certain effects of permanent magnets are shown below. The minimum influence for losing the magnetism is done by,

- | | |
|-------------------------|--|
| (1) often usage of them | (2) getting old |
| (3) catching fire | (4) storing in a strong magnetic field |

(15) Regarding chemical reactions, sir Antoine Lavoisier stated that,

- (1) Always the chemical reaction should be done in a closed system.
- (2) The total mass of products is higher than the total mass of reactants.
- (3) The total mass of reactants is equal to the total mass of products.
- (4) A gas is emitted by any chemical reaction.

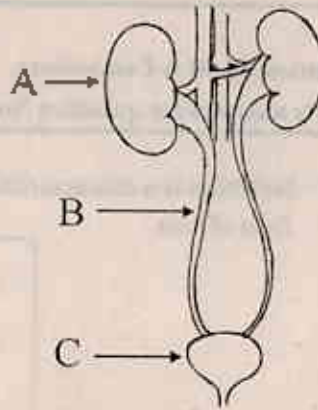
(16) Which of the following component does not contain in the urine of a healthy person?

- | | | | |
|-----------|----------|---------------------|-------------|
| (1) water | (2) urea | (3) sodium chloride | (4) glucose |
|-----------|----------|---------------------|-------------|

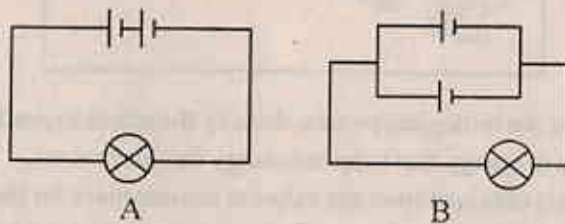
(17) The diagram of a human urinary system is shown below.

Select the answer which shows the parts of A, B, C in sequence.

- (1) bladder, ureter, right kidney
- (2) right kidney, ureter, bladder
- (3) left kidney, ureter, bladder
- (4) right kidney, ureter, bladder



(18) These diagrams show two circuits prepared by using identical bulbs and identical cells. Select the correct statement regarding the brightness of A and B bulbs.



- (1) Both A and B bulbs light up with equal brightness
- (2) The brightness of bulb A is higher than the brightness of bulb B
- (3) The brightness of bulb A is less than the brightness of bulb B
- (4) Anything cannot be expressed about the brightness of bulbs

(19) Several statements regarding extra accessories connected to an electric circuit are given below.

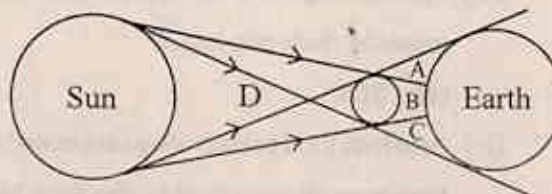
- A - The amount of current flowing through a circuit is decreased when a resistor is connected to it.
- B - The resistance of a light dependant resistor is increased when the intensity of light falls on it is high.
- C - The amount of current flowing through a circuit can be changed to a value that we require using a rheostat.

The correct statement / statements is / are

- (1) Only A
- (2) Only A and B
- (3) Only A and C
- (4) Only B

(20) A certain position of the sun, the moon and the earth are shown below. Which letter shows the area that a total solar eclipse can be seen?

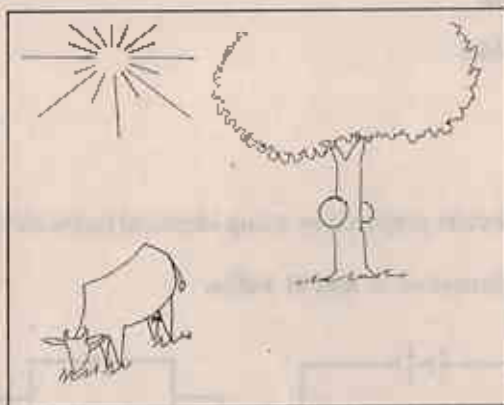
- (1) B
- (2) A
- (3) D
- (4) C



Paper - II

- ❖ Question No. 01 is Compulsory.
- ❖ Write answers for question No. 01 and 04 more questions.

(Q1) (A) Nutrition is a characteristic of organism. This cow depends on plants and milk given by cow is the food of man.

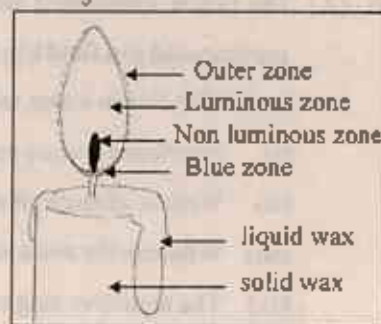


- (i) What is known as the biological process done by the plants to produce food?
 - (ii) Name the source of energy that supplied energy for this process.
 - (iii) The raw materials obtained from the external environment for this process are obtained from the given media below. Write separately the materials obtained from them.
 - (a) from soil
 - (b) from the atmosphere
 - (iv) What is the factor present in leaves which is important for this process.
 - (v) Food produced in plants are stored in fruits. In some other instances this food is stored in various other parts of the plant. Such 2 places are shown below. Write an example for each of them
 - (a) in under ground stems
 - (b) in roots
- (B) (i) The nutritive value of milk is increased as well as decreased due to the action of microorganisms on milk. Write a suitable example for each of these instances.
- (a) an instance that nutritive value of milk is increased
 - (b) an instance that nutritive value of milk is decreased
- (ii) Food preservative methods are used to maintain the nutritive value of food for a long time. In these method one factor or several factors that affect the growth of microorganisms are controlled. Mention which factor is controlled in these instances to preserve food.
- (a) drying
 - (b) keeping under sand
 - (c) freezing
- (iii) The SLS logo or ISO logo can be seen on them packaged food. Mention respectively what are meant by these two logos?
- (a) SLS
 - (b) ISO
- (iv) Artificial food preservatives are coded under the E number. The preservatives from E 200 - E 299 have been allowed to add to the food. Mention such 2 chemical substances?

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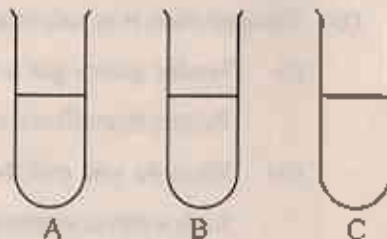
(02) (A) This diagram shows a lighted candle.

- Mention a physical change that can be seen in combustion of a candle.
- Due to what type of energy does this change take place?
- What is the other factor needed for combustion of a candle other than the type of energy mentioned above?
- What physical state of wax is subjected for combustion?
- According to the diagram what is the zone that shows the above mentioned state?



(B) Three test tubes named as A, B, C contain equal amount of diluted hydrochloric acid, diluted sodium hydroxide and sodium chloride solution. (not in the correct order) The experiments done to identify them and their observations are shown below. According to them come to conclusions.

- When some amount of phenolphthalein is added to the test tube A, solution turns in to pink. Name the solution present in A
- When the solution in (B) is added to the pink coloured solution in A, it becomes colourless. According to it, what could be the solution in B?
- According to the above observations, identify the solution in C?
- How can you name the reaction taken place in between the solutions A and B?
- Write two instances that the above mentioned reaction is used in day today life.



(03) (A) A circuit prepared by connecting a resistor, a voltmeter and an ammeter is shown in this diagram.

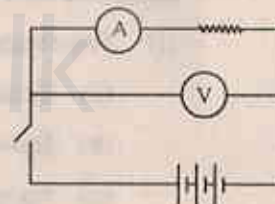
- Show respectively how the resistor, ammeter and voltmeter are connected to the circuit in series or parallel.

(a) ammeter (b) voltmeter

- Write the standard units used to measure the quantities given below.

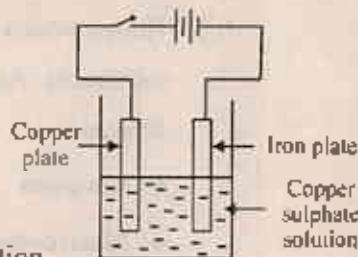
(a) electric current. (b) potential difference

- If three normal dry cells are connected to the circuit. What will be the voltmeter reading when the switch is closed?



(B) This diagram shows a set-up prepared to observe the electroplating process.

- Write the observations obtained in these things after few minutes of passing electricity.
 - Copper plate
 - Iron plate
 - Copper sulphate solution
- Conversion of electric energy into what kind of energy is shown by this activity?
- The instruments that produce heat energy are known as heating appliances. Mention 2 such heating appliances used in homes.
- Name a suitable material that can be used to make the heating element in these heating appliances.
- What property of the above material make it suitable to use it for this function?



(04) (A) The below mentioned substances were in the observations obtained by a group of children who participated in a field trip in an aquatic environment.

(small fish live in water, tadpoles, eggs of frogs, terrestrial plants grown on the edge of the pond, Frogs)

- (i) Mention a feature possessed by tadpoles which is similar to fish.
- (ii) Write a change taken place in the body of tadpole when it grows to be an adult.
- (iii) What are the most sensitive stages of the life cycle of the frog?
- (iv) The sensitive stages of certain animals are used for the conservation of bio diversity. write an example for such an instance.
- (v) What do you call showing different external features in different stages in a life cycle of a certain organism?

(B) Transpiration is an important process taken place in plants.

- (i) Tender plants get wilted quickly under dry climate condition due to transpiration. Write 2 factors that affect transpiration.
- (ii) What do you call the process of traveling water through a semi permeable membrane from high water concentrated place to low water concentrated place?
- (iii) What is the service rendered by mechanism known as mass flow to a plant?
- (iv) Through what tissue does the above action take place?

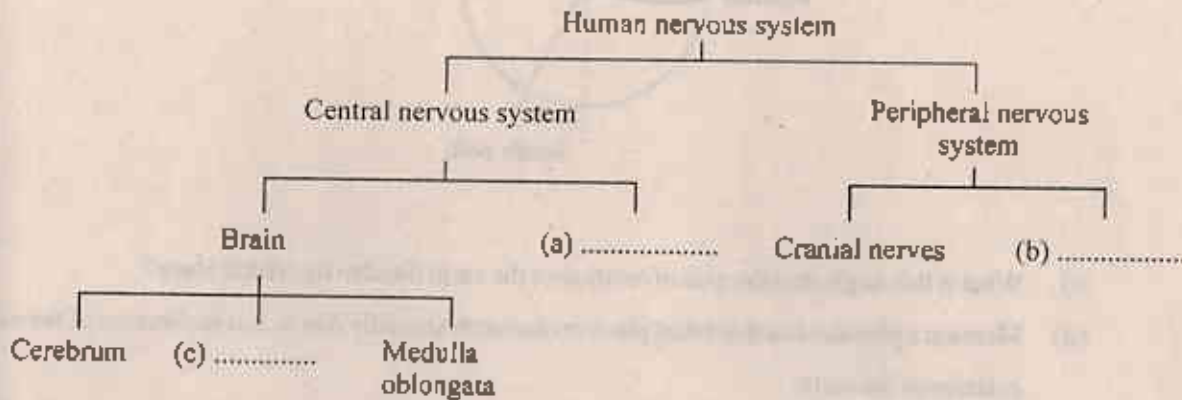
(05) (A) The features of discontinuous nature, brittle ness, electric conductivity, elasticity, malleability of matter are used in various activities in day to day life.

- (i) What feature out of them is used in the instances below.
 - (a) Crushing salt crystals to obtain salt powder.
 - (b) Blowing a rubber balloon.
 - (c) Sponging a density bottle using a filter paper.
 - (d) Using copper wires to make a simple circuit.
 - (e) Thining an Aluminum paper by hammering.
- (ii) Things which contain only one component with specific properties are known as pure substances. According to it, classify the substances below as pure substances and impure substances.

◆ Sea water	◆ Metal mercury	◆ Normal air
◆ Metal copper	◆ Nitrogen gas	◆ Soft drinks
- (iii) The density of a substance can be used to find whether the substance is pure. If one factor considered is volume, what is the other factor that should be known to measure the density of the substance?
- (iv) write the standard unit used to measure the density.

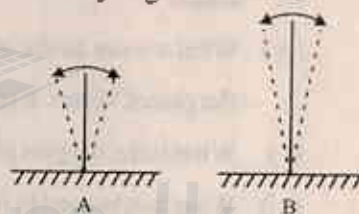
(B) The texture of a substance can be found out by touching it. In this instance the human skin acts as a sense organ.

- (i) Write 2 other functions done by the skin other than acting as a sense organ.
- (ii) The sensory action of the skin is done by coordinating nerves. The nervous system is responsible for this purpose. The human nervous system can be divided into two parts. Write the suitable answer for the blank with the relevant letter.



(A) These diagrams show two hacksaw blades which are clamped. They differ from each other only due to their height. When a similar force is applied to the hacksaw blades they begin to vibrate.

- (i) Which hacksaw blade seems to be vibrated fast?
- (ii) Which hacksaw blade creates a very sharp sound?
- (iii) What is known as frequency?
- (iv) What is the standard unit used to measure the frequency?



(v) The above activity shows that sound is produced as a result of vibrations. Mention what parts are vibrated to produce the sound in the instances below.

- (a) buzzing sound of bees.
- (b) sound of a flute.
- (c) sound of drums.

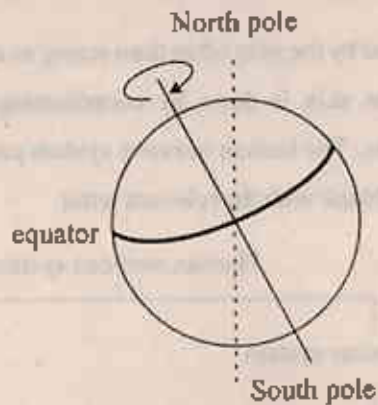
(B) Sound is produced with an instant light even due to discharging electric charges. Thunder is such a big electric discharge.

- (i) Three types of lightning are identified according to the way of discharging of electricity takes place. What are they?
- (ii) Mention two places that are easily subjected to hazard of lightning.
- (iii) Though lightning and thundering take place simultaneously, we hear the sound of thunder after seeing light. What conclusion can be made if the time duration between the above two is very small?
- (iv) Write one thing each that should be done and not to be done to prevent from accidents due to thunder.

(a) things that should be done

(b) things not to be done.

(07) This diagram shows that the rotation of the earth takes place in a certain angle to its orbital plane.



- (i) What is this angle that the axis of rotation of the earth tilted to its orbital plane?
- (ii) Mention a phenomena that takes place on the earth annually due to this inclination of the axis of rotation of the earth.
- (iii) The moon is the only sub planet belongs to the earth. One half of the moon is always illuminated by the sunlight. On what day this illuminated half of the moon can be seen to the earth?
- (iv) What we see as the morning star in the morning sky and as the evening star in the night sky is the planet Venus. Explain the reason for appearing the planet Venus in this way.
- (v) What is the biggest planet belonging to the solar system?
- (vi) What unit is used to measure the distance for a certain star from the earth?
- (vii) The apparent time of the star, direction and the altitude are very important for a student who observes the night sky to express the location of a star on a certain day. What is the instrument used for measuring the altitude to a star.