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Time : 3 Hours

**GENERAL SCIENCE (E)**

**(For Children With Special Needs)**

Subject Code

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Total No. of Questions : 13 (Printed Pages : 24)

Maximum Marks : 65

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- INSTRUCTIONS :**
- (i) All questions are compulsory.
  - (ii) All the answers are to be entered in the space provided in the question paper.
  - (iii) Figures to the right indicate full marks.

1. (A) Select the most appropriate word from those given below. Tick the right answer.

(a) Respiration is an ..... . 1/2

(i) endothermic reaction

(ii) exothermic reaction

(iii) combination reaction

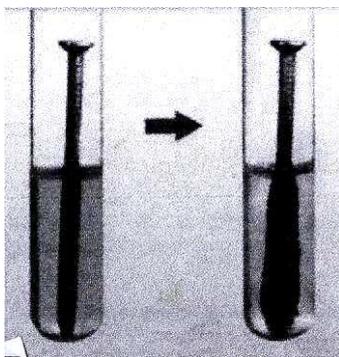
(b) The reaction in which one reactant gets oxidised while the other gets reduced is ..... . 1/2

(i) decomposition reaction

(ii) redox reaction

(iii) combination reaction

(B) An iron nail is put in a solution of copper sulphate :



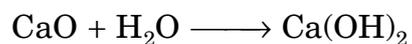
(a) The iron nail gets coated with a reddish brown substance. Name the reddish brown substance formed. 1/2

.....

(b) What is the above type of reaction called ? 1/2

.....

(C) Observe the following chemical equation and answer the questions given below :



(a) Name the reactant/reactants in the above equation. 1/2

(b) Name the above type of reaction : 1/2

.....

2. (A) Select the most appropriate word from those given below. Tick the right one :

(a) Bile juice is secreted by the ..... 1/2

(i) pancreas

(ii) liver

(iii) intestine

(b) A sphygmomanometer is an instrument that measures ..... 1/2

(i) blood pressure

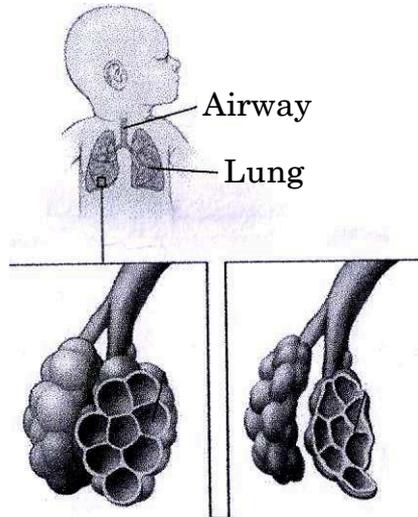
(ii) heart rate

(iii) pulse rate

(B) Match the type of nutrition in Column 'A' with the organism in Column 'B' and write the correct answer in Column 'C' :

| Column 'A'    | Column 'B'      | Column 'C' |
|---------------|-----------------|------------|
| (a) Autotroph | (i) Bread mould | ..... 1/2  |
| (b) Parasite  | (ii) Orchid     | ..... 1/2  |
|               | (iii) Hibiscus  |            |

(C) Many balloon like structures are present in the lungs :



(a) Name the balloon like structure present in the lungs. 1

.....

(b) What is the function of these balloon like structures ? 1

.....

.....

3. (A) Select the most appropriate word from those given below. Tick the right answer :

(a) The filtration unit in the kidneys is called :  $\frac{1}{2}$

(i) tubule

(ii) nephron

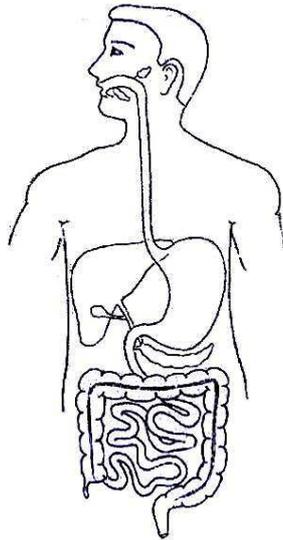
(iii) urethra

(b) The removal of nitrogenous waste through an artificial kidney is called ..... 1/2

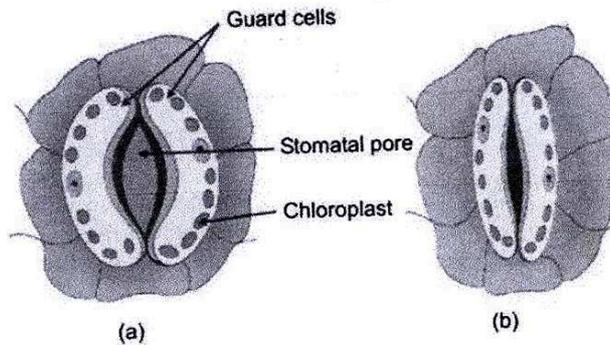
- (i) respiration
- (ii) transportation
- (iii) hemodialysis

(B) Observe the following picture and label the following parts : 1

- (a) stomach
- (b) oesophagus



(C) Observe the diagrams (a) open stomatal pore (b) closed stomatal pore :



Answer the following questions :

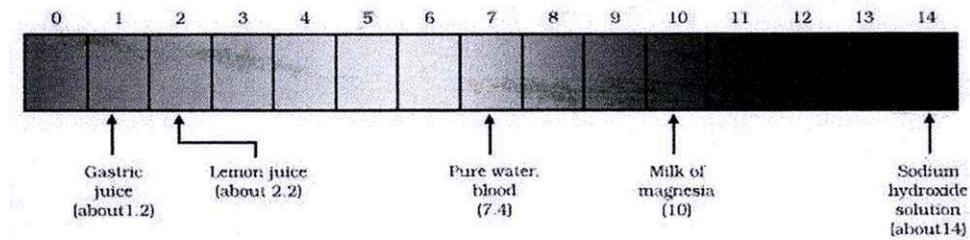
(i) Which case do you think that the plant has excess water  
(a) or (b) ? 1

.....

(ii) What is the function of the chloroplasts ? 1

.....

4. (A) Look at the diagram of a pH scale given below :



(a) Is lemon juice acidic, basic or neutral ? 1/2

.....

(b) Which of the substance mentioned above is neutral ? 1/2

.....

(B) The pH of soil and rain water are important for nature :



(a) What is acid rain ? 1

.....

(b) How does acid rain affect aquatic life ? 1

.....

(C) Observe the picture and answer the questions given below :



(a) Name the salt that is used in fire extinguisher. 1

.....

(b) Which gas given out extinguishes the fire ? 1

.....

5. (A) In the villages wood is a common fuel used for cooking. This is harmful for our environment.



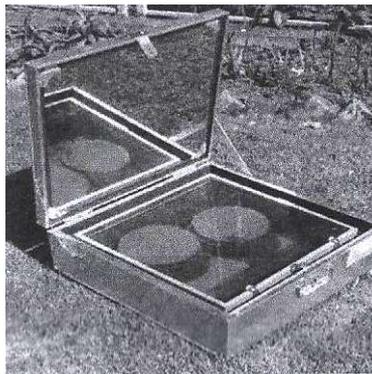
(a) Why is burning of wood harmful for our environment ? (any one point) 1

.....

(b) Name a fuel used for cooking that is not harmful for our environment. 1

.....

(B) Observe the picture and answer the questions given below :



(a) Identify the appliance shown in the above picture. 1

.....

(b) State the function of the mirror. 1

.....

(C) Observe the picture and answer the question given below :



(a) What is the energy conversion takes place in a calculator ? 1

.....

6. (A) Select the most appropriate word from those given below. Tick the right answer :

(a) The non-metal that has lustre is : 1/2

(i) carbon

(ii) sulphur

(iii) iodine

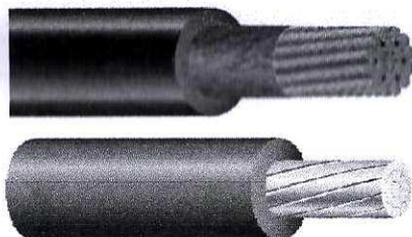
(b) The hardest allotropic form of carbon is : 1/2

(i) iron

(ii) graphite

(iii) diamond

(B) Observe the picture and answer the questions given below :



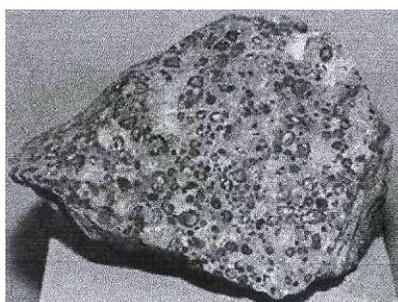
(a) Name the metal used to make electrical wires. 1

.....

(b) Cooking vessels are made up of Aluminium. Give scientific reason. 1

.....

(C) Metals are found as minerals like oxides, sulphides and carbonates :



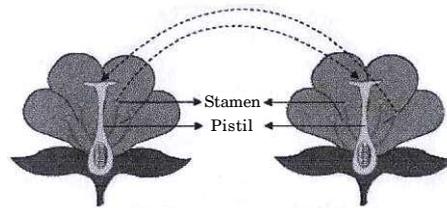
(a) What are rocks that contain large quantities of minerals from which metals can be extracted called ? 1

.....

(b) Name the reducing agent used to obtain metals from their oxides. 1

.....

7. (A) The picture shows transfer of pollen grain from anther to stigma :



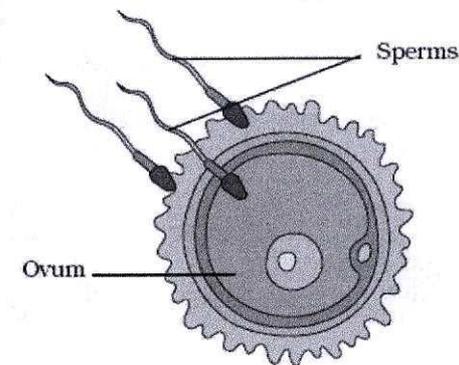
(a) What is the transfer of pollen grains from anther to stigma called ? 1

.....

(b) Name any *two* agents that are important for transfer of pollen grains. 1

.....

(B) Fusion of the male and female gamete is necessary for sexual reproduction in animals :



(a) What is fusion of the male and female gamete called ? 1

.....

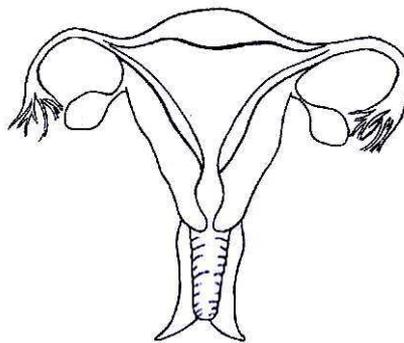
(b) Where is the male gamete or sperm produced ? 1

.....

(C) Observe the diagram showing the female reproductive system. Label the following parts :

(a) (i) uterus 1

(ii) ovary



(b) Write one change seen in girls during puberty (early teen years). 1

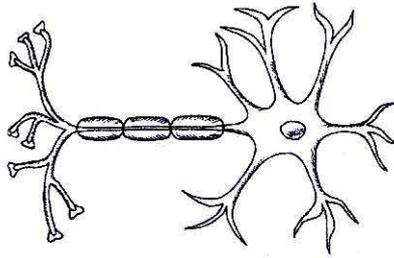
.....

(c) How many eggs are released by the ovaries every month ? 1

.....

8. (A) Observe the diagram and label the following parts : 1

- (a) (i) axon
- (ii) nerve ending.



(b) The receptors in the cell body that receive information are (tick the right answer) :  $\frac{1}{2}$

- (i) dendrite
- (ii) axon
- (iii) nerve ending

(B) Select the most correct answer from the following. Tick the *correct* answer :

- (a) Salivation and vomiting are controlled by ..... .  $\frac{1}{2}$ 
  - (i) The cerebrum
  - (ii) The cerebellum
  - (iii) The medulla

- (b) The spinal cord is protected by the ..... . 1/2
- (i) skull
  - (ii) ribs
  - (iii) vertebral column
- (c) Deficiency of Iodine in our diet causes ..... . 1/2
- (i) Diabetes
  - (ii) Goitre
  - (iii) Dwarfism
- (d) Gland that produces insulin is : 1/2
- (i) intestine
  - (ii) stomach
  - (iii) pancreas

(C) Rita accidentally touched the candle flame and she immediately moved her hand from the flame :

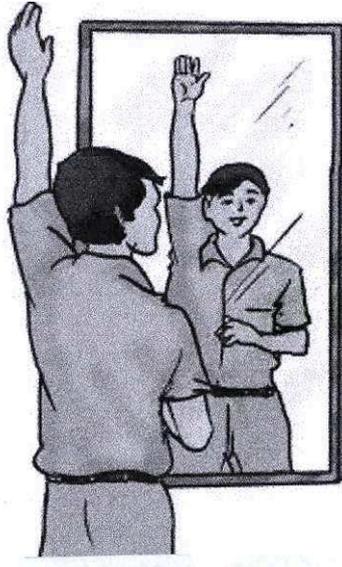


- (a) Identify the type of response. 1
- .....

(b) Removal of hand is controlled at the level of the (tick the right answer) : 1/2

- (i) brain
- (ii) spinal cord
- (iii) peripheral nerve

9. (A) Observe the diagram given below and answer the following questions :



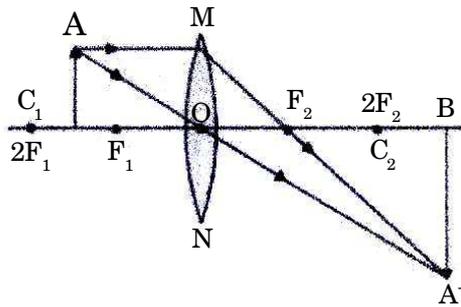
(a) What kind of mirror is shown in the picture ? Tick the correct answer : 1

- (i) plane mirror
- (ii) convex mirror
- (iii) concave mirror

- (b) Write one characteristics of the image formed by the above mirror. 1

.....

- (B) Study the ray diagram given below and answer the following questions :



- (a) Where is the image formed ? 1

.....

- (b) Describe the image formed. 1

.....

- (c) What does 'O' represent in the figure ? 1

.....

- (C) Dentists use mirrors to observe our teeth :



(a) Name the type of mirror used by the dentist. 1

.....

(b) The image of the teeth that the dentist sees is (tick the correct answer) : 1

(i) diminished and erect

(ii) enlarged and erect

(iii) enlarged and inverted

10. (A) Select the most correct alternative from those given below. Tick the right answer :

(a) The size of the pupil is control by :  $\frac{1}{2}$

(i) iris

(ii) ciliary muscles

(iii) lens

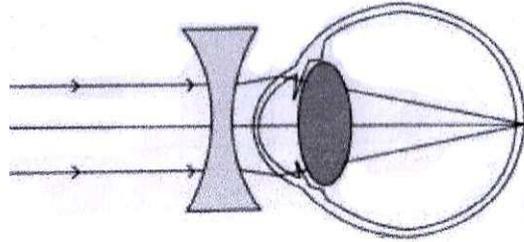
(b) Twinkling of stars is due to :  $\frac{1}{2}$

(i) reflection

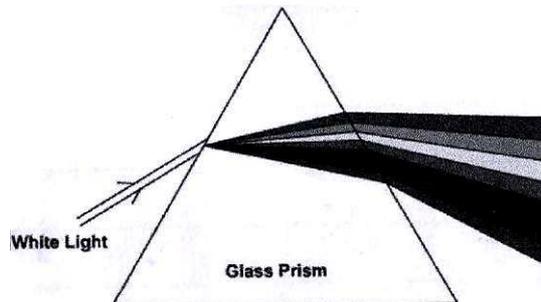
(ii) atmospheric refraction

(iii) dispersion

- (B) Observe the diagram of correction of eye defect given below and answer the following questions :



- (a) Name the type of lens that is used to correct the defect. 1
- (b) The person with this defect can see (tick the right one) :  $\frac{1}{2}$
- (i) near objects clearly
- (ii) distant objects clearly
- (c) The eyeball in this defect may be (tick the right one) :  $\frac{1}{2}$
- (i) too long
- (ii) too short
- (C) Observe the picture and answer the questions given below :



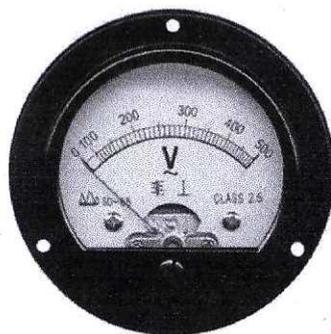
(a) What is this band of colours called ? 1

.....

(b) Name the colour that bends the most. 1

.....

11. (A) Select the most correct alternative from given below. Tick the right answer :



(a) The instrument used to measure electrical potential difference is .....  $\frac{1}{2}$

(i) ammeter

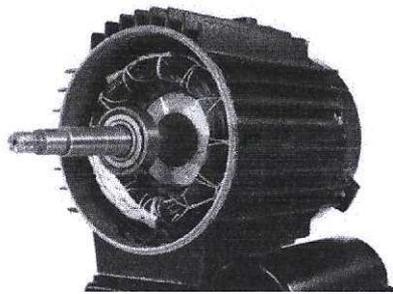
(ii) galvanometer

(iii) voltmeter

(b) The unit used to measure electrical potential difference is ..... 1/2

- (i) volt
- (ii) watt
- (iii) ampere

(B) An electric motor is used as an important component in some electric appliances :



(a) The energy conversion in an electric motor is (tick the correct answer) : 1/2

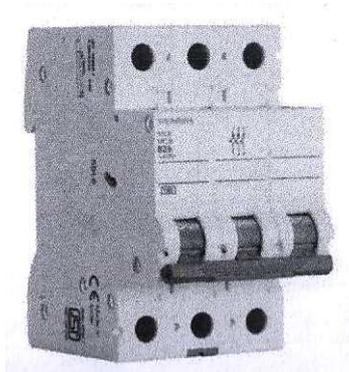
- (i) Electrical energy to light energy
- (ii) Electrical energy to chemical energy
- (iii) Electrical energy to mechanical energy

(b) Name *one* appliance that uses an electric motor. 1/2  
.....

(c) The commercial unit of electrical energy is (tick the correct answer) : 1/2

- (i) ampere
- (ii) watt
- (iii) kilowatt hour

(C) Observe the picture and answer the questions :



(a) Identify the device in the above picture. 1

.....

(b) State *one* advantage of the above device. 1

.....

12. (A) Match the electrical wires in Column 'A' with their colour of insulation in Column 'B'. Write the correct answer in Column 'C' :

| Column 'A'       | Column 'B'         | Column 'C' |
|------------------|--------------------|------------|
| (a) Live wire    | (i) Green          | ..... 1/2  |
| (b) Neutral wire | (ii) Black or Blue | ..... 1/2  |
| (c) Earth wire   | (iii) Orange       | ..... 1/2  |
|                  | (iv) Red           |            |

(B) Many industries use forest produce as raw materials :



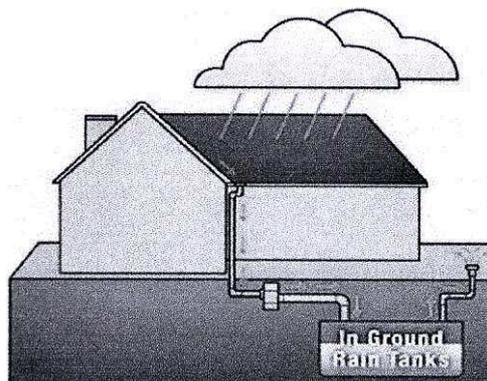
(a) Name a forest produce which is a source of raw material for industries. 1

.....

(b) Name any *one* stakeholder who want to conserve nature. 1

.....

(C) Observe the picture and answer the questions given below :



(a) Write *one* method of rainwater harvesting used in olden days. 1

.....

(b) Write one advantage of storing water underground. 1

.....

13. (A) Observe the picture and answer the questions given below :



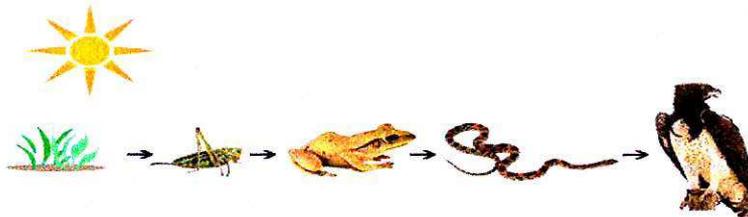
(a) Name one biotic component of a garden. 1/2

.....

(b) Name one abiotic component of a garden. 1/2

.....

(B) Observe the example of a food chain given below :



(a) Name the primary consumer in above food chain. 1

.....

(b) Why does the last trophic level receive less amount of energy ? 1

.....

(C) The ozone layer surrounding the earth is extremely important for the life on earth :

(a) The formula of ozone is (tick the right answer) : 1

(i) O

(ii) O<sub>2</sub>

(iii) O<sub>3</sub>

(b) The ozone layer is very important. Give scientific reason. 1

.....