

iii. C - separating funnel 1 mark

- iv. * First the tap of the funnel is closed 1 mark
- * The mixture is then poured into the funnel 1 mark
- * The separating funnel is then corked using stopper 1 mark
- * The mixture is then allowed to stand for sometime. 1 mark
- Observation: Two layers are formed, the oil on top of the water. 1 mark

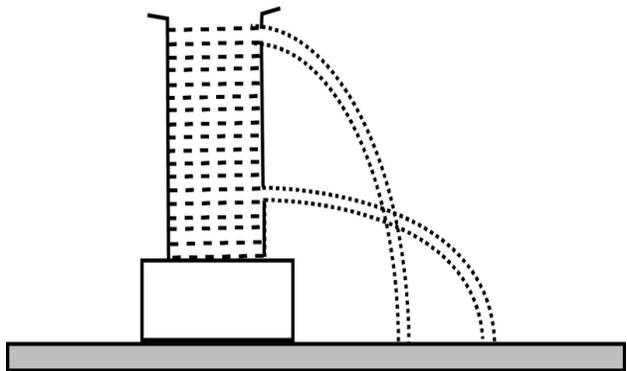
QUESTION 2 (a)

(i) Reflection of light refers to the bouncing of light when it falls on polished surface.

3 marks

(ii) Refraction of light is the change in direction of light as it travels from one medium to another at different densities. 3 marks

(b)



2 marks

(c)

Land rotation	Crop rotation
* Crops are cultivated on different farmlands	* Crops are cultivated on the same farmland
* Crops are grown in random manner	* Crops are grown in a definite order

4 marks

(d)

Fundamental units	S.I units
Mass	kilogram
Amount of substance	mole
Temperature	kelvin

3 marks

QUESTION 3

(a) i. Cultural practices refers to all activities that are performed or carried out on the farm after planting or transplanting of seedlings till they are harvested. 2 marks

- (ii) * Watering * Pest control
* Weeding * Staking
* Mulching * Earthing up
* Pruning * Disease control Any 3 x 1 = 3 marks

(b)

i. Rusting is the reaction of iron or iron containing substance with water or moisture and air or oxygen to form an oxide of iron. 2 marks

ii. When aluminum reacts with oxygen and water, a thin, continuous transparent layer of aluminum oxide forms on the surface of the metal. This oxide protects fresh parts of the aluminum metal from further rapid corrosion hence, protecting it from rusting. 3 marks

(c)

The law of conservation of energy states that, energy can neither be created nor destroyed but can be transformed from one form to another. 2 marks

(d)

Mass = 10 kg

Height = 1.5 m

Gravity = 10 ms^{-2}

$$\begin{aligned} \text{Potential Energy} &= 10\text{kg} \times 1.5\text{m} \times 10\text{ms}^{-2} \\ &= 750\text{J} \end{aligned} \quad \text{3 marks}$$

QUESTION 4

(a) i. Sedimentation is the process of separating soil into its various soil particles and humus. 2 marks

- ii. * Soil water is used by plants for photosynthesis
* Soil water is used by plants to transport food substances
* Soil water dissolves soil nutrients for easy absorption by roots of plants.
* Soil water cools the plant through transpiration. Any 3 x 1 = 3 marks

(b) i.

- * By boiling
* By addition of calculated amount of calcium hydroxide. 2 marks

ii.

When water evaporates from the surface of the earth, rises and condenses into the clouds, the clouds become saturated or filled with water droplets. Millions of water droplets bump into each other as they gather in the clouds. When a small water droplet bumps into a bigger one, it condenses or combines with the larger one. As this continues to happen, the droplets get heavier and heavier. When the water droplets become too heavy to continue floating around in the clouds, it falls back onto the earth rain. 3 marks

c. * Viscous liquids do not flow easily

* Materials move through viscous liquids slowly

* Viscous liquids are very thick hence become difficult to stir. 3 marks

d. * Friction reduces the efficiency of machines.

* Friction wears of machine parts 2 marks

QUESTION 5 (a)

i. Birth control methods are methods used especially by couples or parents to prevent unwanted pregnancy in order to have a reasonable gap between each child and to reduce the size of the family. 2 marks

ii. * Tubal ligation * Vasectomy 2 marks

b. (i) ovaries release the female hormones estrogen and progesterone . These hormones cause the lining of the uterus (or womb) to build up. The built-up lining is ready for a fertilized egg to attach to and start developing. If there is no fertilized egg, the lining breaks down and bleeds. 3 marks

(ii) A suspension is defined as a heterogeneous mixture in which the solid particles are spread throughout the liquid without dissolving in it. 2 marks

c.

Solute	Solvent
Oil paint	Turpentine, Petrol, Kerosene
Rubber	Benzene
Grease	Alcohol
Milk	Water

1 mark each x 4 = 4 marks

d. * Rusting weakens magnetic attraction

* Rusting causes damage to mechanical parts.

* Rusting causes poor appearance of materials

Any 2 x1=2 marks

QUESTION 6

a. (i)



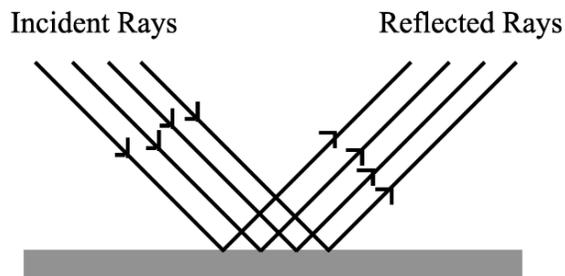
2 marks

- (ii) * Fishing rod
* Broom
* Bow and arrow
* Shovel

2 marks

- b. (i) Shadows are formed when an opaque object or material is placed in the path of rays of light. The opaque material does not let the light pass through it. The light rays that go past the edges of the material make an outline for the shadow. 2 marks

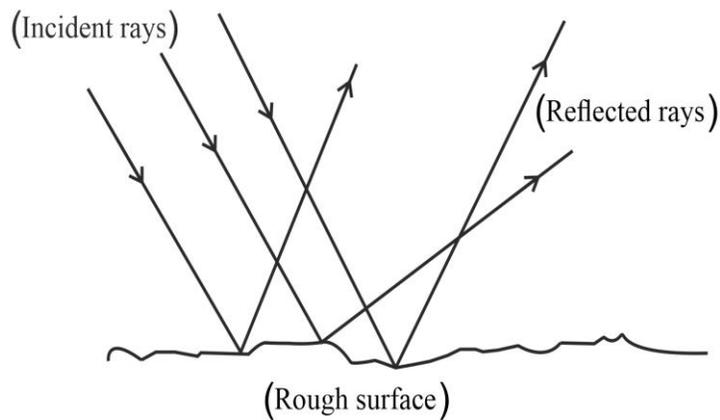
(ii) Regular reflection



The regular reflection is the reflection of light rays when they meet (fall on) a smooth (uniform) and glistening surface, where the incident light rays are reflected in one direction, When a beam of parallel light rays is incident on a smooth and plane surface, the reflected rays will also be parallel, and it is called the regular reflection.

The regular reflection takes place when the light rays are incident on a polished smooth surface like a plane mirror, a stainless steel sheet and a thin sheet of aluminum, so, the reflected rays of light move only in a fixed direction. 2 marks

Irregular reflection



Irregular reflection occurs when parallel rays of light are incident on an irregular or rough surface and after reflection emerge in different directions. This type of reflection. 2 marks

- c. (i) * Seed dispersal promotes the survival of plant species.
 * Seed dispersal helps to avoid overcrowding and competition for food and resources.
 * Seed dispersal helps seed escape from mortality near the parent plants due to predation by animals or diseases. 3 marks
- (ii) * Insect pollinated flowers are brightly colored to attract insects.
 * Insect pollinated flowers are large, so they can be easily spotted by insects.
 * Small insect pollinated flowers form groups to become more prominent. 2 marks

SECTION A

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|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. A | 2. B | 3. B | 4. C | 5. B | 6. A | 7. B | 8. B | 9. B | 10. D |
| 11. B | 12. B | 13. C | 14. B | 15. A | 16. A | 17. B | 18. C | 19. C | 20. C |
| 21. C | 22. D | 23. B | 24. D | 25. D | 26. D | 27. D | 28. A | 29. B | 30. D |
| 31. C | 32. A | 33. B | 34. B | 35. D | 36. A | 37. A | 38. A | 39. C | 40. C |