

THE NERDS EXAMINATION SERIES

SCIENCE PRE-MOCK SET 1.

MARKING GUIDE

SECTION A (40 MARKS)

1. - Polio, Measles, Diphtheria, Tetanus, Influenza type B, Tuberculosis, Cholera etc.

2. In the stomach

3. The use of solar energy reduce the rate at which trees are cut.

4. Both change the direction of force.

- Both allow the use to apply a smaller force to overcome resistance hence making the work easier to perform.

5. Fungus / fungi (dermatophyte)

6. Both are caused by heat.

7. Reflection enables us to see our images in plane mirrors.

- Reflection helps spectators to watch football matches over the head of crowds using a periscope.

- Reflection enables submariners to see over the surface of the sea using a periscope.

8. Agro-forestry

9. The comb was positively charged hence able to attract pieces of paper.

10. Candidiasis / Thrust

11. Chemical energy

12. Radiation

13. Yellow leaves

- Curl leaves
- Holes in leaves.
- Stunted growth
- Rotting of plant parts eg leaves.

14. - Moisture
- Air (oxygen)
- Warmth.

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15. - Physical changes help in rainfall formation.

- Biological changes help in ripening of fruits, germination, flowering etc.

16. - By isolating sick animals from health animals.

- By carrying out hoof trimming.
- By imposing quarantine on animal movement from one farm to another.

17. Helps it to sense and detect temperature within the surrounding.

18. Bilharziasis

19. Both have soft bodies (Both are invertebrates)

- Both live in moist environment.

20. - For easy flowing of faeces and urine.

21. - Playing cassette tapes in cassette tape player

- Playing video tapes in a video deck
- Playing CDs in a CD player.
- Playing memory cards on mobile phones. etc

22



NB They prevent back flow of blood by enabling it to flow in one direction

23. - Poor sanitation.

- Poor feeding.

- Poor personal hygiene

24. - Fibrous root system.

25. - Ovary produce oestrogen hormone

- Ovary produce progesterone hormone.

26. The sweater prevent heat loss from the body.

27. Wool
- Mohair
- silk

28. North-South direction

29. Air occupies space.

30. Smelling / body sense of smell.

31. Photosynthesis provide oxygen to animals.

32. Evaporation

33. Scavenger birds

34. Oil blocks its breathing organs (spiracles)

35. The air we breathe out contains more carbon dioxide

- The air we breathe out is warmer than the one we breathe in.

36. Density = ?
Mass = 19g
Volume = 5cm³



$$D = \frac{M}{V}$$

$$D = \frac{19g}{5cm^3}$$

$$D = 3.8g/cm^3$$

$$5 \overline{) 19} \quad 3.8$$

$$3 \times 5 = \underline{15}$$

$$8 \times 5 = \underline{40}$$

37. Smoke is less dense than surrounding air.

38. To prevent a sick person from taking underdose

- To prevent a sick person from taking overdose.

- To prevent drug misuse.

39. Hairy bodies / Hair on its body.

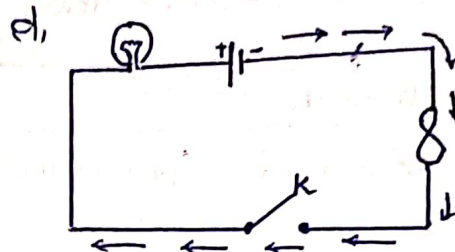
40. They produce scent.

SECTION B (60 MARKS)

41 a. Fuse

b. Produce electricity / source of electricity

c. Electrical energy changes to heat and light energy.



Electrons flow from negative terminal to positive terminal

42 a. Endoskeleton is the type of skeleton found inside the body of an organism while exoskeleton is the type of skeleton found outside the body of an organism.

b. The skull protects the brain.

c. Eases digestion of food.

- Improves flexibility and proper formation of bones

- Prevents backaches.

- Improves on proper blood circulation in the body.

43 a. To get oxygen.

b. Earthworms help to aerate the soil

- Helps in soil drainage

c. Invertebrates (Annelida as a class)

44 a. Heat transfer in solids

b. It melts to show that heat is traveling through the copper rod.

c. It will melt.

d. It will have received heat (first)

45 a. - Nutrition education

- Counselling and guidance

b. Production of reproductive cells by gonads

- Production of reproductive hormones by the gonads.

45.c, - Sensitizing people about the dangers of AIDS.

- Mobilizing people to go ^{and} test blood.
- Sensitizing people about the effects of AIDS in a community

46.a, bronchus

b, The volume of the balloon increases

c, More carbon dioxide is produced during respiration.

d, To trap dust particles
- To trap bacteria

47.a, Silting

b, Uncontrolled burning lead to soil erosion hence destroying the upper layer of the soil.

- Uncontrolled bush burning lead to loss of fertility in the soil.

- Leads to death of important soil organisms like earthworms which help in soil aeration.

- Uncontrolled bush burning cause the soil to become compacted hence reducing its ability to absorb air and water.

- Uncontrolled bush burning leads to loss of important soil nutrients like nitrogen, phosphorus and potassium which are crucial for plant growth and development.

c, Silting destroys the breeding places for fish.

- Exposes fish to predators
- Destroys the habitat for fish.

48.a, Tethering method.

b, An animal feeds on a balanced diet (best pasture)

- Eases manure collection by the farmer.

- Reduces pasture wastage

- Reduces animal movement ~~help~~ hence preventing them from destroying crops.

c, Paddock grazing starves ticks to death hence breaking their lifecycle.

d, Colostrum opens the digestive tract of a newly borne calf.

49.a, Both are propagated by means of suckers.

b, Vegetative propagation involves one plant to produce the offspring while seed propagation involves more than one part.

- Vegetative propagation produce high yields while seed propagation produce low yields

- Vegetative propagation enables plants to maintain their genetic characteristics.

c, Explosive mechanism/
Self explosion.

50. a, Leaves - Manufacture food for the plant

b, Roots - Absorb plant nutrients from the soil.

c, Stem - Transports water and mineral salts

d, Flower. Develop into fruits and seeds

51 a, Bile pigment.

b, - Melanin helps to determine the skin colour.

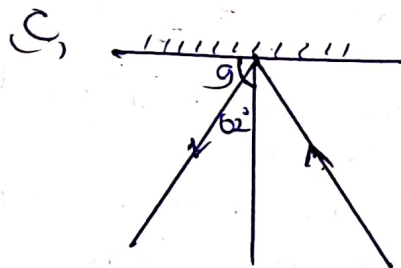
- Melanin protect the skin against radiations from the sun.
- Melanin helps the skin to regulate body temperature.

c, - Corns

- Cuts
- Wounds
- Burns
- Scalds.

52 a, - Light enables us to see

b, Opaque objects block light rays hence forming shadows.



2 marks

$$g + 62^\circ = 90^\circ$$

$$g + 62^\circ - 62^\circ = 90^\circ - 62^\circ$$

$$g = 28^\circ$$

53 a, - Fighting - Defilement

- Stealing - Smoking
- Abortion - Drug abuse
- Alcoholism

b, - Lead to school drop out.

May lead to destruction of property eg arson.

It lead to unwanted pregnancies

It leads to lung cancer eg smoking

May lead to death.

54 a, ~~Boxer~~ ~~top bar~~ ~~hive~~

Modern bee hive (Top bar hive)

b, Honey harvesting refers to the process of collecting honey-filled honey combs from the beehive while honey extraction is the process of removing the honey from the honey comb.

- Honey harvesting involves physical removal of the honey filled combs from the beehive while honey extraction involves mechanical process of separating the honey from the comb.

c, - Floating the wax method

- Pressing honey comb
- Solar melter method.

55 a, - Milk set of teeth.

b, - They have broad, flat surface for grinding and crushing food.

c, - Cracked teeth

- Broken teeth

- Improper formation of teeth.

- Impacted teeth

END

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