

NERDS EXAMINATION SERIES  
SCIENCE SET 2 MARKING GUIDE  
2024

SECTION A (40 MARKS)

1. the loss of nutrients in soil from farming the same crop over and over again

2. Lung diseases / heart diseases  
Stroke, cancer, mental health conditions

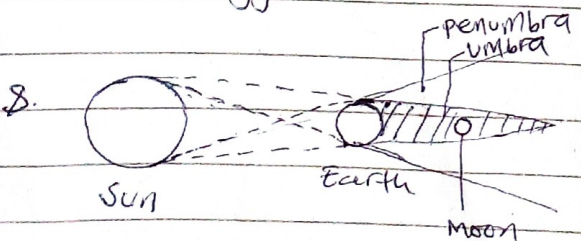
3. cools plants / changes osmotic pressure of cells / enables mass flow of mineral nutrients

4. the mechanical advantage decreases [Hint:  $MA = \frac{L_E}{L_F}$ ]

5. Monitor Lizards belong to reptiles / reptilia

6. To give enough space for expansion hence reducing short circuit

7. Avoiding crowd, immunization  
Good ventilation  
Good hygiene



- check the relative positions and sizes of sun, moon and earth

NERDS examination series

1. Any group of colours from which all other colours can be obtained by mixing

10. Water vapour

11. Hepatitis A, B, C / Influenza (flu)  
Novel coronavirus (Covid-19)  
Measles

12. provides an opportunity of combining the desirable characteristics of two or more breeds.  
Crossbreed animal mostly has a high productivity / resistance to diseases / growth rate / better appearance

13. Force of gravity / gravitational force / weight. Rej - Mass.

14. A movable joint where a bone is hooked into the hollow space of another bone. Accept similar points

15. uncontrolled urbanization / population pressure / etc

16. Because of high concentration / intensity of sunshine

17. Ureter

18. Excretory system

19. - Surface area / size of food particles

- Enzyme concentration

- Temperature

- Health of an individual

- exercise



20. Saprophytic form of feeding

21. produce a lot of pollen grains

- the anthers are loosely attached to the ovary
- pollen grains are light

22. Panting

- moving to the shed

23. Because most germs are being washed away

24. - Going into water when hot

- Going to outside water when feeling cold.

25. Jersey / brown swiss /  
Ayrshire cattle / et

26. Antibiotics

27. like poles attract while  
unlike poles repel each other

28. Being hollow reduces weight

29. A zygote is formed

30. Birds of prey - are birds that feed on animal flesh, distinguished by a hooked bill and sharp talons;

32. - leads to addiction

- Mental health retardation.

33. stapes bone - located in the middle ear.

34. myopia, Astigmatism, Presbyopia  
cataract.

NB. A teacher should know more about each defect.

35. To allow oxygen and Carbon dioxide to exchange.

→ carbon dioxide [2 words]

36. removal of the testicles of a male animal or man.

37. An infant is a very young child.

38. Frequency of vibration of the sound waves that produce them.

39. Wind erosion is common in deserts

40. Crafting

It needs a lot of care.

#### SECTION B:

41 a) Release of water vapour through transpiration

b) photosynthesis

c) food, herbs, raw materials, fuel,

42 a) is any bodily activity that enhances or maintains physical fitness and overall health.



42 c) Glucose boosts energy.  
(source of energy)

d) The application of manure or fertilizer to the surface layer of soil

43. a) The capacity of the body to defend itself against infections.

b) White blood cells

c) Physical exercise/Enough sleep/Avoid too much alcohol/Quit smoking/Eat well/maintain healthy weight.

47a) protects delicate organs

- Gives us shape

- Teeth used for chewing food and protection

- Helps in locomotion

- Bone marrow produces red blood cells

44a) Fulcrum

b) First class lever

[Fulcrum is the pivot in the middle and the force is applied with your hand at the end]

b) - Regular exercise

- medical checkups

- improved diet

c) - Sharpening

- Applying a suitable lubricant such as oil/grease

48 a) reptiles/ Reptilia

b) Venom

c) Clearing bushes

d) - Source of food

- sold for money

- For study purposes

- skins are raw material for textile industries.

45 cell division — Bacteria

vegetative propagation — cassava

Spore formation — fungi

Budding — Hydra

49 a) vertical section of the soil from the ground surface downwards to where the soil meets underlying rock

or → vertical section of soil that consists of all its horizons / layers.

46. a) Growing of different crops in succession on a piece of land.

b) growing two or more crops in the same piece of land.

c) distance between individual plants in a crop field.

b) - construction

- Agriculture

- Study and research

- Raw materials / minerals for various industries.



c) - mulching

- use of organic fertilizers
- crop rotation
- control of soil erosion

50. a) Volume is the space occupied by any three dimensional solid.

Volume is a measure of regions in three dimensional space.

b)  $m^3$ , (cubic meters)

c) - use of standard apparatus

- correct measurements
- samples to be measured should be pure.

d) to enable us make decisions on basis of the measurement result.

51. a) Swarming - movement of large number of bees, led by queen, leaving one hive to another to start a new colony.

Swimming - moving through water by moving the body or parts of the body.

b) Swarming

- Help in change of colonies
- Survival of many animal collectives

swimming

- recreational purposes

52. a) Bending of light rays as they move from one medium to another.

b) A change in speed of light rays

c) - Source of energy for photosynthesis

d) - Electric bulbs, lightning stars, fire, electricity.

53. a) - process of removal of waste products from our body

b) Reduces the accumulation of waste products that could become toxic to our body

c) - urea

- carbon dioxide

54. a) Electrocutation

b) Alternating current

c) Reaction of chemical energy to form electrical energy

d) Light, cooking, photocopy

55. a) A category in which something is put.

b) ~~odonata~~ Orthoptera } ignore out of syllabus

c) - wasps

- white ants

- bees.

End