

DINDIGUL DISTRICT**HALF YEARLY EXAMINATIONS – DEC 2024****STD: VIII****SUB: SCIENCE****I. Multiple Choice Questions**

1. d) Visible light
2. b) 20 cm
3. d) a protective device for breaking an electric current
4. a) Carbon
5. a) Sodium sulphate (or) Sodium Chloride.
6. b) Negatively charged particle
7. b) Virus
8. d) Volvox
9. c) Cartilage
10. d) Calcium

II. Fill in the Blanks

11. Pascal's principle
12. specific amount of heat
13. Lightning arrester
14. semi-conductor or metalloids
15. Trinitrotoluene or explosive
16. food preservation
17. prions
18. ostrich egg
19. Radial
20. menarche

III. True or False

21. False quartz
22. False: Electroscope is a device used to detect static electricity.

23. **False:** Humans can typically hear sounds within the frequency range of 20 Hz to 20,000 Hz.

24. **False:** Formation of slaked lime from quick lime is an exothermic reaction.

25. **False:** Soap does not lather well in hard water.

26. **False:** Toothpaste is generally alkaline in nature.

27. **False:** Female Anopheles mosquitoes are carriers of malaria, not dengue virus.

28. True

29. **False:** Cardiac muscle is an involuntary muscle.

30. **False:** The release of ovum from the ovary is called ovulation.

IV. Match the Following

31. Conduction - Solid
32. Convection - Liquid
33. Radiation - Vacuum
34. Sublimation - Solid to gas
35. Condensation - Gas to liquid
36. Cyanophyceae - Blue green algae
37. Chlorophyceae - Green algae
38. Phaeophyceae - Brown algae
39. Rhodophyceae - Red algae
40. Haustoria - Parasite

V. Short Answer Questions

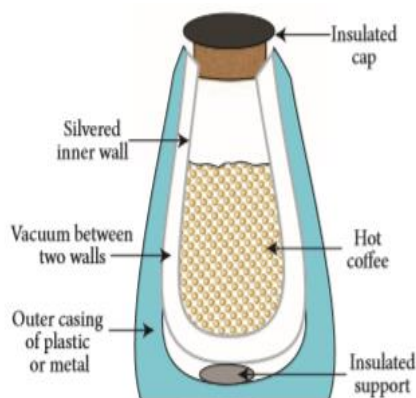
41. Celsius, Fahrenheit, and Kelvin.
42. To distribute the weight evenly and reduce pressure on the shoulder.
43. The laws of reflection state that the angle of incidence is equal to the angle of reflection, and the incident ray, reflected ray, and normal lie in the same plane.
44. Convection is the transfer of heat through the movement of fluids.
45. Electroplating is the process of depositing a thin layer of a material, usually a metal, onto the surface of another material using electricity.
46. Planting trees helps reduce noise pollution by absorbing sound waves and creating a natural barrier.
47. Metals like gold, silver, and platinum are commonly used in jewellery.
48. During electrolysis, brine (sodium chloride solution) is broken down into sodium hydroxide and chlorine gas.
49. Dry ice is the solid form of carbon dioxide. It's used for cooling, preserving food, and creating special effects.
50. Anode rays are streams of positively charged particles (ions) emitted from the anode during electrolysis.
51. Ice floats on water because it's less dense than liquid water.
52. The specific latent heat of vaporization of water is approximately 2257 kJ/kg.
53. A neutralization reaction is a chemical reaction in which an acid and a base react to form a salt and water.
54. Rhizobium is a nitrogen-fixing bacteria.
55. Characters of Pteridophytes include vascular tissues, sporophylls, and homosporous or heterosporous spores.
56. Binomial nomenclature is a system of naming species using a two-part name consisting of genus and species. Example: Homo sapiens.
57. Metabolism is the set of chemical reactions that occur within an organism to maintain life.
58. Aerobic respiration: occurs in the presence of oxygen, produces more ATP, and releases carbon dioxide and water. Anaerobic respiration: occurs in the absence of oxygen, produces less ATP, and releases lactic acid or ethanol.
59. A ligament is a type of connective tissue that connects bones to other bones.
60. Suggestions for staying healthy include regular exercise, balanced diet, adequate sleep, stress management, and regular check-ups.

VI. Long Answer Questions

61. Types of friction: static, kinetic, and rolling friction. Example: Static friction prevents a book from sliding off a table.

62. A thermos flask works by reducing heat transfer through conduction, convection, and radiation.

Working of Thermos flask A thermos flask has double walls, which are evacuated. It is silvered on the inside. The vacuum between the two walls prevents heat being transferred from the inside to the outside by conduction and convection.



63. Electroplating involves depositing a thin layer of a material onto the surface of another material using electricity.

Electroplating is one of the most common applications of chemical effects of electric current. The process of depositing a layer of one metal over the surface of another metal by passing electric current is called electroplating.

64. Environmental effects of chemical reactions include pollution, climate change, and resource depletion.

Environmental Effects

a. Pollution b. Rusting c. Tarnishing of metal articles

65. Carbon dioxide reacts with sodium hydroxide to form sodium carbonate and water. It reacts with lime water to form calcium carbonate.

Reaction with Lime water (Calcium hydroxide) When a limited amount of CO_2 is passed through lime water, it turns milky due to the formation of insoluble calcium carbonate. $\text{Ca}(\text{OH})_2 + \text{CO}_2 \rightarrow \text{CaCO}_3 + \text{H}_2\text{O}$

66. Uses of bases include soap-making, paper production, and textile manufacturing.

i) Potassium hydroxide is used to make bathing soaps. ii) Sodium hydroxide is used to make washing soaps. iii) Sodium hydroxide is also used in paper industries, textile industries and in the preparation of medicines. iv) Calcium hydroxide is used for white washing. v) Aluminum hydroxide and magnesium hydroxides are

used in antacids to cure acidity problems. vi) Ammonium hydroxide is used to manufacture fertilizers, nylon, plastics and rubber.

67. Human diseases caused by microorganisms include **tuberculosis, malaria, and influenza.**

Diseases caused by microorganisms in humans

Human diseases	Causative microorganisms	Mode of transmission	Symptoms	Preventive measures/ Treatment
Tuberculosis	<i>Mycobacterium tuberculosis</i> (Bacteria)	Through air and sputum of infected person	Persistent cough, blood mucus, loss of weight, breathlessness	BCG Vaccine
Cholera	<i>Vibrio cholera</i> (Bacteria)	By flies and contaminated food and water	Watery diarrhoea, vomiting, rapid dehydration.	Anticholera vaccine, maintaining personal hygiene.
Common cold	<i>Influenza</i> (virus)	Through air	Running nose, sneezing	Isolation of patient
Rabies	<i>Rhabdo viridae</i> (Virus)	Animal bite	Fever, hallucination, paralysis, inability to swallow	Anti-rabies vaccine
Amoebic dysentery	<i>Entamoeba histolytica</i> (Protozoa)	Food water and flies	Severe diarrhea and blood in stool	Proper sanitation to be followed and metronidazole antibiotic to be administered
Malaria	<i>Plasmodium</i> (Protozoa)	Female anopheles mosquito	Nausea, vomiting, high fever	Antimalarial drugs like quinine and chloroquine to be taken and usage

68. Differences between monocot and dicot plants include **leaf venation, stem structure, and root system.**

Characteristic features of Dicotyledons • Seed has two cotyledons. • Plants have tap root system and leaves are with reticulate venation. • Flowers are tetramerous or pentamerous. Calyx and corolla are well differentiated. • Pollination occurs mostly by insects. • Examples are: Bean, Mango, Neem

Characteristic features of Monocotyledons • Seed has only one cotyledon. • Plants have fibrous root system, and leaves are with parallel venation. • Flowers are trimerous and not differentiated into calyx and corolla. • Pollination occurs mostly by wind. • Examples are: Grass, Paddy, Banana

69. Types of movements in living organisms include

Amoeboid movement : Ciliary movement Muscular movement

70. Hormones play a crucial role in reproduction by regulating the reproductive

Follicle Stimulating Hormone (FSH)

Luteinizing Hormone (LH)

Estrogen is not a single hormone but a collection of related steroid hormones.

Prolactin (PRL) or Lactogenic Hormone The main function of this hormone is milk secretion during lactation.

Oxytocin Hormone Oxytocin causes expulsion of milk from the breast and it is also involved in the contraction of smooth muscles of uterus during child birth

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