

Total No. of Questions : 40]

[Total No. of Printed Pages : 10

10th AROKD(W/Z) JKLUT-2026

2005-A

SCIENCE

Time : 3 Hours]

[Maximum Marks : 80

SECTION-A

Note:- Question No.'s 1 to 18 are Very Short Answer Type Questions of 1 mark each.

1. The refractive Index of Diamond is : 1

(a) 1.77

(b) 1.65

(c) 2.42

(d) 2.13

2. The blue colour of sky is due to : 1

(a) Refraction

(b) Dispersion

(c) Diffraction

(d) Scattering

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Turn Over

3. The Human Eye forms the image of an object at its :

1

(a) Cornea

(b) Iris

(c) Pupil

(d) Retina

4. Which property of a proton can change while it moves freely in a magnetic field :

1

(a) Mass and speed

(b) Speed and velocity

(c) Mass and momentum

(d) Velocity and momentum

5. The direction of current in the coil at one end of the electromagnet is clockwise. This end will be :

1

(a) North Pole

(b) East Pole

(c) South Pole

(d) West Pole

6. The general formula of Alkynes is :

1

(a) $C_nH_{2n} + 2$ (b) C_nH_{2n} (c) $C_nH_{2n} - 2$

(d) None of these

7. Metals can be drawn into thin wires. This property is called : 1
- (a) Metallic Luster (b) Malleability
- (c) Ductility (d) Conductivity
8. Which of the following Metals can be obtained from Haematite Ore? 1
- (a) Copper (b) Iron
- (c) Zinc (d) Sodium
9. Which of the following types of medicine is used for treating Acidity in stomach ? 1
- (a) Antibiotic (b) Antacid
- (c) Analgesic (d) Antiseptic
10. The Salt whose Aqueous solution will turn Blue litmus to Red is : 1
- (a) Ammonium sulphate (b) Sodium acetate
- (c) Sodium nitrate (d) Potassium carbonate

11. The kidneys in Human beings are a part of the system for : 1
- (a) Nutrition (b) Respiration
- (c) Excretion (d) Transpiration
12. Which of the following is Plant Hormone? 1
- (a) Insulin (b) Thyroxin
- (c) Estrogen (d) Cytokinin
13. The number of pairs of sex chromosome in the Zygote of a Human beings is : 1
- (a) 1 (b) 2
- (c) 3 (d) 4
14. Nature's cleaners are : 1
- (a) Producers (b) Consumers
- (c) Decomposers (d) Carnivores

15. The flow of energy in an ecosystem is always : 1

- (a) Unidirectional (b) Bidirectional
(c) Cyclic (d) Multi directional

Note:- From Q. No's 16 to 18 two statements (Assertion-A and Reason-R) are given. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below :

Codes :

- (a) A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

16. Assertion(A) : If a graph is plotted between the current flowing and potential difference, the graph is straight line passing through the origin. 1

Reason (R) : The current is directly proportional to the potential difference.

17. Assertion (A): In a reaction of copper with Oxygen, Copper serves as a reducing agent. 1

Reason (R): The substance which gains Oxygen in a chemical reaction acts as a reducing agent.

18. Assertion (A): Gametogenesis is the process of formation of gametes. 1

Reason (R): Gametes are formed through mitosis in the reproductive Organs.

SECTION-B

Note :- There will be Ten Questions in this section (Q.No's 19 to 28) each carrying 2 marks.

19. What is power of Lens? Define one Diopetre of Power of Lens. 2
20. Calculate the Amount of charge passed through any area of cross section of the conductor when a current of 10A flows through a conductor for two minutes. $1.2 \times 10^3 \text{ C}$ 2
21. What precautions should be taken to avoid the overloading of domestic electric circuits? 2

22. Why does the colour of copper sulphate solution change when an iron nail is dipped in it? 2
23. Give any two differences between soaps and detergents. 2
24. Give an example of each of a Metal that : 2
- (a) is a liquid at room temperature Hg
- (b) can be easily cut with a knife Na
25. What are Autotrophs and Heterotrophs? 2
26. Write down two differences between Reflex Action and Walking. 2
27. How does regeneration differ from fragmentation? 2
28. What do you understand by term variation? Name two Human traits which show variation. 2

SECTION-C

Note :- In this section from Q.No's 29 to 37, there will be Nine Questions with internal choice carrying 3 marks each.

29. What is power of Accommodation of the Eye? What is the Far point and Near point of Human Eye with normal vision? 3

OR

Define Myopia. Give its causes and how is it corrected.

- ✓ 30. An electric motor takes 5A current from a 220 volt line, determine the power and energy consumed in 2 hours. 2.2 KWh 3

OR

An electric Iron of resistance 20 ohm Ω takes a current of 5A. Calculate the heat developed in 30 seconds.

31. Draw magnetic field lines around a bar magnet. 3

OR

✓ How does an Electromagnet differ from a permanent magnet?

32. What is the difference between Exothermic and Endothermic reactions? Give examples. 3

OR

✓ What is Rancidity? How rancidity of food is prevented?

- ✓ 33. Define the terms. 3

(i) Mineral

(ii) Ore

(iii) Gangue

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OR

Differentiate between Metals and Non Metals on the basis of their physical properties.

34. What is an Alkali? Write down two properties of Alkalies. 3

OR

✓ Give three important properties of Acids.

35. Why is the use of Iodised salt advisable? 3

OR

How does Chemical Co-ordination occur in plants?

36. How does Binary Fission differ from Multiple Fission? 3

OR

✓ How is the process of Pollination different from fertilisation?

- ✓ 37. What is Biological Magnification? Will the levels of this magnification be different at different levels of the ecosystem? 3

OR

Give two differences between Food Chain and Food Web. Write down a Food Chain in the sea.

SECTION-D

Note :- In this section from Q.No's 38 to 40, there will be Three Long Answer Type Questions each carrying 5 marks.

38. What is Refraction of Light? Explain the laws of Refraction of Light with the help of labelled diagram. 5

Or

✓ An object 5cm in length is held 25cm away from a convex lens of focal length 10cm. Draw a ray diagram and find the position size and nature of the Image formed. 16.67, 3.34, 0.66

39. ✓ (a) What is a Homologous Series? Explain with an example. 5

✓ (b) State two characteristics of a Homologous series.

OR

Explain the mechanism of the cleansing action of soaps.

40. ✓ What are the components of Transport system in plants? What are the functions of these components? 5

OR

Describe the structure of Nephron with functioning.
