



SAMPLE PAPER 1

Class 10 - Science

Time Allowed: 1 hour and 30 minutes

Maximum Marks: 40

General Instructions:

1. The Question Paper contains three sections.
2. Section A has 24 questions. Attempt any 20 questions.
3. Section B has 24 questions. Attempt any 20 questions.
4. Section C has 12 questions. Attempt any 10 questions.
5. All questions carry equal marks.
6. There is no negative marking.

Section A

Attempt any 20 questions

1. $\text{BaCl}_2 + \text{Na}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{NaCl}$. It is type of: **[0.8]**
- a) Both Precipitation reaction and Double displacement reaction
b) Double displacement reaction
c) Decomposition reaction
d) Precipitation reaction
2. Before setting up an experiment to show that seeds release carbon dioxide during respiration, the seeds should be **[0.8]**
- a) boiled to make them soft
b) kept moist till they germinate
c) soaked in vinegar
d) dried completely
3. $2\text{FeSO}_4 \xrightarrow{\text{heat}} \text{Fe}_2\text{O}_3 + \text{SO}_2 + \text{SO}_3$ **[0.8]**
- The above reaction is
- a) Double displacement reaction
b) Combination reaction
c) Displacement reaction
d) Decomposition reaction
4. Match the following with the correct response: **[0.8]**
- | | |
|---------------------------------------|---------------|
| (1) Most reactive | (A) Copper |
| (2) Least reactive | (B) Potassium |
| (3) Metal less reactive than hydrogen | (C) Bromine |
| (4) Non-metal | (D) Gold |
- a) 1-B, 2-D, 3-A, 4-C
b) 1-A, 2-C, 3-B, 4-D
c) 1-C, 2-B, 3-D, 4-A
d) 1-D, 2-A, 3-C, 4-B

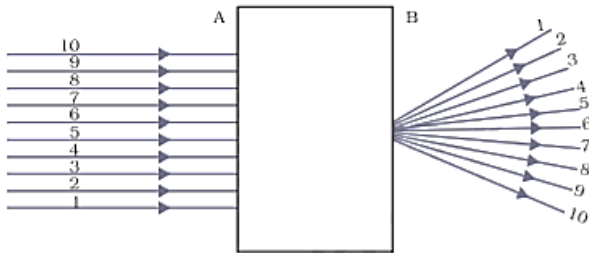
5. Match the following with correct response

[0.8]

Column A	Column B
(i) Insects	(a) Gills
(ii) Earthworm	(b) Trachea
(iii) Fishes	(c) Lungs
(iv) Mammals	(d) Skin

- a) (i) - (a), (ii) - (c), (iii) - (b), (iv) - (d) b) (i) - (d), (ii) - (a), (iii) - (c), (iv) - (b)
 c) (i) - (c), (ii) - (b), (iii) - (d), (iv) - (a) d) (i) - (b), (ii) - (d), (iii) - (a), (iv) - (c)

6. A beam of light is incident through the holes on side A and emerges out of the holes on the other face of the box as shown in the Figure. Which of the following could be inside the box? [0.8]



- a) Prism b) Concave lens
 c) Convex lens d) Rectangular glass slab

7. When a light passes through a prism, it splits into its component colours. This phenomenon is called. [0.8]

- a) Reflection b) Spectrum
 c) Dispersion d) Refraction

8. In which part of the alimentary canal food is finally digested? [0.8]

- a) Stomach b) Mouth cavity
 c) Small intestine d) Large intestine

9. Instead of water, we use glycerine as a mounting medium: [0.8]

- a) To enlarge the material b) To clean the material
 c) To colour the material d) To prevent the material from drying

10. Which of the following is an exothermic reaction? [0.8]

- a) Reactants \times heat \rightarrow Products b) Reactants \rightarrow Products + heat
 c) Reactants \rightarrow Products - heat d) Reactants - heat \rightarrow Products

11. Which is the vestigial part of the human alimentary canal? [0.8]

- a) Epiglottis b) Pineal gland
 c) Thymus gland d) Vermiform appendix

12. Match the following with the correct response: [0.8]

(i) Bronze	(a) Iron
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(ii) Stainless steel	(b) Aluminium
(iii) Solder	(c) Tin and lead
(iv) Duralumin	(d) Copper

- a) (i) - (d), (ii) - (a), (iii) - (c), (iv) - (b) b) (i) - (a), (ii) - (c), (iii) - (b), (iv) - (d)
c) (i) - (b), (ii) - (d), (iii) - (a), (d) - (c) d) (i) - (c), (ii) - (b), (iii) - (d), (iv) - (a)

13. Which of the following phenomena of light are involved in the formation of a rainbow? **[0.8]**

- a) Reflection, refraction and dispersion b) Dispersion, scattering and total internal reflection
c) Refraction, dispersion and total internal reflection d) Refraction, dispersion and internal reflection

14. Name a body part where anaerobic respiration takes place. **[0.8]**

- a) Mitochondria b) Chloroplast
c) Protoplasm d) Cytoplasm

15. Which of the following metals exist in their native state in nature? **[0.8]**

- i. Cu
ii. Au
iii. Zn
iv. Ag

- a) (ii) and (iii) b) (iii) and (iv)
c) (i) and (ii) d) (ii) and (iv)

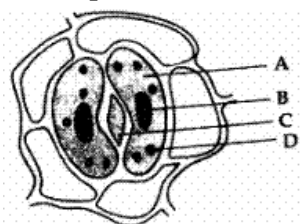
16. When calcium oxide reacts with water, it forms a product named **[0.8]**

- a) Ammonia b) Quick lime
c) Lime stone d) Slaked lime

17. If parallel beams, non-parallel to principal axis fall on the convex lens, they converge at a point: **[0.8]**

- a) away from principal axis b) called focus on the axis
c) on principal axis d) centre of curvature

18. In the diagram of the stomatal pore given below, the marking corresponding to the chloroplast is : **[0.8]**



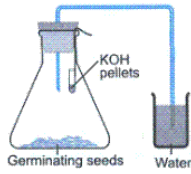
- a) B b) C
c) D d) A

19. What is the value of refractive index of the medium if the critical angle of incidence in a **[0.8]**

denser – rarer inter face is equal to 45° ?

- a) 3.25
- b) 2.0
- c) 1.414
- d) 2.414

20.



[0.8]

In the above experiment, water will rise in the tube because :

- A. oxygen of air in the flask will be taken up by the germinating seeds.
- B. carbon dioxide given out by the germinating seeds will be absorbed by KOH.
- C. carbon dioxide given out will go through the glass tube and push water up into the tube.
- D. Moisture in the germinating seeds will reach the water in the beaker through the delivery tube.

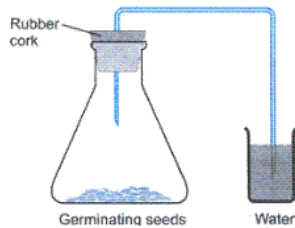
The correct reason of water to rise in the tube is

- a) C
- b) D
- c) B
- d) A

21. What happens when silver chloride is placed in sunlight? [0.8]

- a) Silver chloride turns black
- b) Silver chloride turns grey
- c) Silver chloride turns blue
- d) Silver chloride show no change

22. The following experiment was set-up to show that gas is given out during respiration. But there was no rise in the level of water. this was because [0.8]



- a) no substance is kept in the flask to absorb the gas given out by the seeds
- b) germinating seeds have not been kept under water in the flask
- c) water is kept in the beaker instead of limewater
- d) the cork on the flask is made of rubber

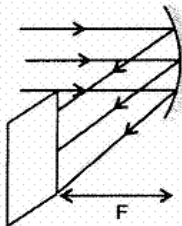
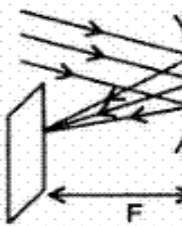
23. Which of the following oxide(s) of iron would be obtained on prolonged reaction of iron with steam? [0.8]

- a) Fe_2O_3 and Fe_3O_4
- b) FeO
- c) Fe_2O_3
- d) Fe_3O_4

24. What is the mode of nutrition seen in Amoeba? [0.8]

- a) Parasitic
- b) Holozoic
- c) Saprotrophic
- d) Autotrophic

Section B

34. **Assertion (A):** If both the object and plane mirror are moved through a distance of x then the image moves through a distance of $2x$. **[0.8]**
Reason (R): If the object is fixed and plane mirror is moved through a distance x then the image also moves through a distance of $2x$.
- a) Both A and R are true and R is the correct explanation of the assertion. 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.
35. **Assertion (A):** A white light passing through a prism splits into its component colours as such that the red light emerges nearest to the base of the prism. **[0.8]**
Reason (R): The wavelength of red light is more than other component colors and hence, red light deviates least.
- a) Both 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.
36. Calcium phosphate is present in tooth enamel. Its nature is **[0.8]**
- a) Acidic b) Neutral
c) Amphoteric d) Basic
37. Which of the following non-metals is a liquid? **[0.8]**
- a) Carbon b) Phosphorus
c) Sulphur d) Bromine
38. Which component of blood transports, carbon dioxide, and nitrogenous wastes in dissolved form? **[0.8]**
- a) RBC b) Plasma
c) Platelets d) WBC
39. The opening and closing of the stomatal pore depends upon **[0.8]**
- a) Oxygen b) Water in guard cells
c) Concentration of CO_2 in stomatal d) Temperature
40. The drying agent used for ammonia gas is **[0.8]**
- a) P_2O_5 b) Slaked lime
c) Quick lime d) Conc. H_2SO_4
41. Which of the following pictures depict the correct image formation **[0.8]**
- a)  b) 
- c) d)

(a) Prism	(i) A medium bounded by two plane refracting surfaces at an angle
(b) Spectrum	(ii) Scattering of beam of light, when it passes through colloidal solution
(c) Tyndall effect	(iii) Splitting up of white light into its components
(d) Rainbow	(iv) It is a spectrum of white light when it passes through small rain drops

- a) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii) b) (a) - (i), (b) - (iii), (c) - (ii), (d) - (iv)
c) (a) - (iii), (b) - (ii), (c) - (iv), (d) - (i) d) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)

48. Food cans are coated with tin and not with zinc because: [0.8]

- a) Zinc is costlier than tin. b) Zinc has a higher melting point than that of tin.
c) Zinc is more reactive than tin. d) Zinc is less reactive than tin.

Section C

Attempt any 10 questions

Question No. 49 to 52 are based on the given text. Read the text carefully and answer the questions:

Salt of a strong acid and strong base is neutral with a pH value of 7. NaCl common salt is formed by a combination of hydrochloride and sodium hydroxide solution. This is the salt that is used in food. Some salt is called rock salts bed of rack salt were formed when seas of bygone ages dried up. The common salt thus obtained is an important raw material for various materials of daily use, such as sodium hydroxide, baking soda, washing soda, bleaching powder.

49. Which of the following does not form an acidic salt? [0.8]

- a) Phosphoric acid b) Hydrochloric acid
c) Carbonic acid d) Sulphuric acid

50. Which of the following salts has no water of crystallization? [0.8]

- a) Blue vitriol b) Washing soda
c) Baking soda d) Gypsum

51. The formula of baking soda is [0.8]

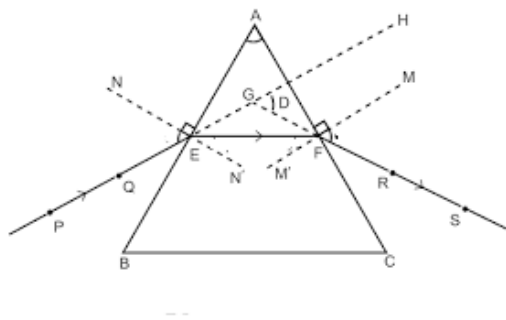
- a) K_2CO b) $KHCO_3$
c) Na_2CO_3 d) $NaHCO_3$

52. Which of the following is treated with chlorine to obtain bleaching powder [0.8]

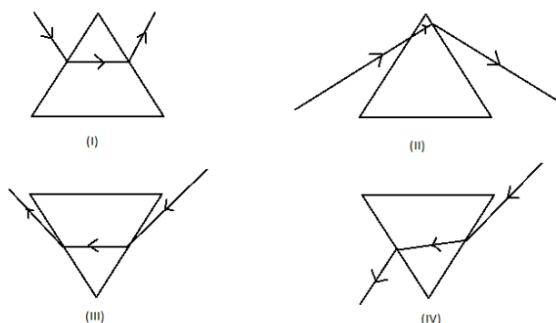
- a) KOH b) $Mg(OH)_2$
c) $CaSO_4$ d) $Ca(OH)_2$

Question No. 53 to 56 are based on the given text. Read the text carefully and answer the questions:

Light gets refracted through the transparent prism. Issac Newton uses a glass prism to obtain the spectrum of sunlight. He tried to split the colours of the spectrum of white light.



53. The splitting of light into its component colours is called [0.8]
- a) Tyndall effect b) Dispersion
 c) Refraction d) Spectrum
54. Which of the following statements is correct regarding the propagation of light of different colours of white light in air? [0.8]
- i. Red light moves fastest.
 ii. Blue light moves faster than green light.
 iii. All the colours of the white light move at the same speed.
 iv. Yellow light moves with the mean speed as that of the red and the violet light
- a) Option (ii) b) Option (i)
 c) Option (iv) d) Option (iii)
55. In the above diagram the angle of incidence, the angle of emergence and the angle of deviation respectively are (select the correct option): [0.8]
- a) Y, Q and P b) X, Q and P
 c) Y, Q and T d) X, R and T
56. While performing the experiment to trace the path of a ray of light passing through a glass prism, four students marked the incident ray and the emergent ray in their diagrams in the manner shown below. [0.8]



The correct path of the rays has been shown by:

- a) I b) II
 c) III d) IV

Question No. 57 to 60 are based on the given text. Read the text carefully and answer the

