



Roll No.....

Total No. of Questions : 18]

[Total No. of Printed Pages : 8

XBAKDF18

17505-C

SCIENCE

(Physics, Chemistry & Life Science)

Time : 3 Hours]

[Maximum Marks : 84

Section-A

(PHYSICS)

(Long Answer Type Questions)

1. State and explain Ohm's Law and how can Ohm's Law be verified experimently.

Or

Derive an expression for the equivalent resistance in case of three resistance connected in series.

6

(Short Answer Type Questions)

4 each

2. Explain law of refraction of light with suitable diagram.

Or

Write down the uses of spherical mirror (any *four*).

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Turn Over

~~F-5-C~~

(2)

3. Explain Myopia or short sightedness. Give its causes and how is it corrected.

Or

Draw a labelled sketch of Human Eye.

4. Write any *four* uses of convex mirror.

Or

What is the power of lens and give its S.I. Unit.

(Very Short Answer Type Questions)

2 each

5. (i) Define the terms :
- (a) Focal length
 - (b) Principal axis
- (ii) Name any *two* devices in which electric motor is used.
- (iii) Name the colour of insulation of :
- (a) Live wire
 - (b) Earth wire used in electrical appliances

(Multiple Choice Questions)

1 each

6. (i) Hypermetropia or long sightedness can be corrected by using :
- (a) Convex lens
 - (b) Concave lens
 - (c) Convex mirror
 - (d) Concave mirror

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(ii) Which of the following is not an example of biomass energy sources ?

- (a) Wood
- (b) Gobar Gas
- ~~(c)~~ Nuclear Energy
- (d) Coal

(iii) Sources of Sun energy is :

- (a) Burning of Coal
- (b) Burning of Hydrogen
- (c) Nuclear fission
- (d) Nuclear fusion

(iv) The fuel having the highest calorific value is :

- (a) Hydrogen
- (b) Alcohol
- (c) Petrol
- ~~(d)~~ Kerosene

Section-B

(CHEMISTRY)

(Long Answer Type Questions)

7. How can ethanol and ethanoic acid be differentiated on the basis of their physical and chemical properties ?

(4)

Or

Write down the chemical properties of carbon compounds. 6

(Short Answer Type Questions) 4 each

8. What do you mean by a Decomposition reaction ? Give two examples.

Or

What are the steps in writing a chemical equation with an example ?

9. How could the Modern Periodic Table remove various anomalies of Mandeleev's Periodic Table ?

Or

What were the limitations of New Land's Law of Octaves ?

10. Write down the properties of Ionic compounds (any four).

Or

Write any two methods for obtaining a metal from its oxide ore.

(Very Short Answer Type Questions) 2 each

11. (i) What is homologous series ? Explain with an example.
(ii) Give uses of Bleaching Powder.
(iii) Why should curd and sour substances not be kept in brass and copper vessels ?

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J.K.B.
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(Multiple Choice Questions)

1 each

12. (i) A solution reacts with crushed egg shell to give a gas that turns lime water milky. The solution contain :

(a) NaCl

(b) HCl

~~(c)~~ LiCl

(d) KCl

(ii) Damage of metallic articles due to long exposure to moisture and air is termed as :

(a) Rancidity

(b) Reduction

~~(c)~~ Corrosion

(d) None of the above

(iii) Pure Gold is known as :

(a) 22 carat

~~(b)~~ 24 carat

(c) 20 carat

(d) 18 carat

(iv) Aqua regia (Latin for royal water) is a freshly prepared mixture of concentrated hydrochloric acid and concentrated Nitric acid in the ratio of :

~~(a)~~ 3 : 1

(b) 4 : 1

(c) 5 : 1

(d) 6 : 1

Section-C

(LIFE SCIENCE)

(Long Answer Type Questions)

13. What are the differences between autotrophic nutrition and heterotrophic nutrition ? <https://www.jkboseonline.com>

Or

What is the role of nephron in kidneys of human being ? Draw a labelled diagram of nephron.

6

(Short Answer Type Questions)

4 each

14. Draw a labelled diagram of human brain.

Or

What are plant hormones ? Explain the role of auxins to promote the growth of a tendril around a support.

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15. Describe the various types of vegetative reproduction (any *four*)

Or

What is the role of seminal vesicles and prostate glands ?

16. How is the sex of the child determined in human being ?

Or

What are Fossils ? What do they tell us about the process of evolution ?

(Very Short Answer Type Questions)

2 each

17. (i) Define regeneration with an example.

(ii) What do you mean by Water Harvesting ?

(iii) Explain the term ecosystem.

(Multiple Choice Questions)

1 each

18. (i) Nature's cleanliness are :

(a) Producers

(b) Consumers

(c) Decomposers

(d) Carnivores

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- (ii) Which of the following constitute a food chain ?
- (a) Grass, Wheat and Mango
 - (b) Grass, Goat and Mango
 - (c) Goat, Cow and elephant
 - (d) Grass, fish and goat
- (iii) Non-conventional sources of energy is :
- (a) Coal
 - (b) Wood
 - (c) Petroleum
 - (d) Biogas and solar energy
- (iv) Amrita Devi Bishnoi sacrificed her life to protect the tree :
- (a) Deodar tree
 - (b) Khejri tree
 - (c) Mango tree
 - (d) Orange tree

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