

साधना देवी विद्यापीठ

Punjabi Colony (Dharampur) Samastipur. 848101 (Bihar)
Final Examination- 2019-20

Class :- IX
Sub :- Science

Time :- 3hrs
F.M. :-100

Chemistry

1. What are canal rays ? 1
2. Name the three sub - atomic particles of an atom. 1
3. What are polyatomic ions ? Give examples. 1
4. Why is it not possible to see an atom with naked eyes ? 1
5. How many atoms are present in a : 1
- (i) H_2S molecule, and (ii) PO_4^{3-} ion ?
6. State the various postulates of Dalton atomic theory of matter. 2
7. Calculate the formula mass of potassium carbonate (K_2CO_3)
(Given Atomic masses $k = 39u$, $c = 12u$, $o = 16u$) 2
8. What are (i) ionic compound, and (ii) Molecular compounds ? Give two examples of each type of compounds ? 2
9. What are radioactive isotopes ? 2
10. How does a proton differ from an electron ? 2
11. Write down the names of compounds represented by the following formula. Also show the ions present in them. 2
- (i) $Al_2(SO_4)_3$ (ii) $CaCl_2$ (iii) K_2SO_4 (iv) KNO_3 (v) $CaCO_3$
12. Describe the Rutherford's model of an atom. 3
13. Explain with examples. 3
- (i) Atomic number (ii) Mass number (iii) Isotopes and (iv) Isobar
14. Compare the properties of electrons, protons and neutrons. 3
15. What are valence electron ? Where are valence electrons situated in an atom ? 3
16. (a) What do you mean by Electrovalency ? 3
- (b) What is covalency ?
17. (a) What is an atom ? 3
- (b) What is a molecule ?

Physics

1. What is the S.I. unit of $(\frac{G}{g})$? 2
2. Two bodies are thrown vertically upward with their initial velocity in the ratio 2:3. Then the ratio of the maximum height attained by them is 2
3. A particle of mass 'm' moving with velocity v strikes a stationary particle of mass '2m' and sticks to it. What will be the speed of the system . 2
4. A monkey is accelerating down a string whose breaking strength is two - third of his weight. What will be the minimum acceleration of the monkey ? 3
5. Can a pendulum vibrate in an artificial satellite ? 3
6. Transverse waves are not produced in liquids and gases. Why ? 3
7. When a ball is thrown up, the magnitude of its momentum decreases and then Increases. 5

(a) Does this violate the conservation of momentum principle?

(b) A bullet is fired from a gun. Which will have a greater K.E. the bullet or the gun?

8. Why is it easier to swim in sea water than in river water?

(b) Where will a body weight more in air or in vacuum?

9. How much above the surface of the earth does the acceleration due to gravity reduce by 36% of its value on the earth's surface?

10. Explain the process of walking on the ground. Why does walking become difficult when the ground is slippery or covered with snow?

Bio

1. Very short answer type questions.

(i) Name two examples of "Porifera".

(ii) Name the bacteria which cause cholera and Typhoid disease.

(iii) Name the causative agent of Malaria.

2. Short answer type questions.

(i) What is the difference between congenital and acquired disease with two examples.

(ii) Discuss the features of phloem and xylem..

(iii) Differentiate between aves and arthropods.

3. Long answer type questions.

(i) Write in brief about kingdom 'Monera' with single diagram.

(ii) What do you know about "Carbon cycle" and draw its flow chart?

(iii) What are the advantage of intercropping and crop rotation method?