

Half-Yearly Examination 2017-18

Class- 9 IX

Time : 3¼ Hrs. Subject- Science M.M. : 70

Instructions : (1) All the questions are compulsory. (2) For questions having more than part the answer to those parts are to be written together in compulsory.

1. When is National Science Day celebrated? 1
2. Write the full name of CNG. 1
3. Name the basic particles of an atom. 2
4. Write electronic configuration of chlorine atom. 1
5. Who discovered the cell first of all? 1
6. Name the propounder of binomial system. 1
7. Which conducting tissue is responsible for taking water from root to leaves? <http://www.rbseonline.com> 1
8. A particle is moving along a circular path of radius r . What will be the displacement of the particle, when it completes one revolution? 1
9. On which Newton's law, Principle of rocket is based. 1
10. Name the principle on which ball pen works? 1
11. How do we obtain Bose-Einstein-Condensate (BEC). 2
12. What is physical change? Give one example. 1+1=2
13. What do you understand by isotopes? Write two uses of isotopes. 1+½+½=2
14. Write the latin name of the following elements : ½×4=2
- (i) Sodium (ii) Potassium
- (iii) Gold (iv) Copper
15. Write two differences between chordate and non-chordates. 1+1=2
16. What do you mean by Menstrual Cycle? 2
17. How many gravitational acceleration does the moon? and what is the gravitational acceleration of the moon as compared by the earth. 1+1=2
18. Why is the tyres of vehicles rough and wavy made? 2
19. Give main reasons of accidents on National Highway? 3
20. Write different steps of scientific method. 3
21. What type of liquids are separated into their component by using fractional distillation? Explain by a labelled diagram. 1+1+1=3
22. An element has atomic number 19 and Atomic mass 39. 1+1+1=3
- (i) Write the Name of element. <http://www.rbseonline.com>

- (2)
- (ii) Write Number of Proton in the element.
- (iii) Write Number of Neutron in the element.
23. Write the Molecular formula of the following compound : ½×6=3
- (1) Calcium Chloride (2) Sodium Carbonate
- (3) Calcium hydroxide (4) Sodium Chloride
- (5) Ferric Chloride (6) Zinc Sulphate
24. Write short notes on : 1½+1½=3
- (1) Mangrove Vegetation (2) Lichen
25. What is the Universal law of Gravitation? derive this. 1+2=3
26. Explain Louis Pasteur's Experiment by using a labelled diagram. 2+4=6

OR

Match the items given in Column A with those given in Column B.

Column A	Column B
(1) Theory of Spontaneous generation	(A) Francesco Redi / Louis Pasteur
(2) Biochemical evolution	(B) Miller
(3) Cosmozoic theory	(C) Virus
(4) Experimental proof of Chemical evolution	(D) Leibig / Calvin / Arhinius
(5) Organism devoid of Metabolism http://www.rbseonline.com	(E) Oparin

27. Draw the labelled Diagram of the following : 2×3=6
- (1) Nerve Cell (Neuron) (2) Chloro plast
- (3) Mitochondria

OR

What is Mitosis cell division? Describe the various stages of Mitosis with diagram. 1+2+3=6

28. Describe the Excretory System of human being by a labelled diagram? 2+4=6

OR

Describe the internal structure of Human heart by a labelled diagram?

29. Define Momentum? In direct collision of two moving object the momentum remains conserved. Prove it with a diagram. 2+4=6

OR

(i) Describe Newton's First law of Motion in daily life by giving a example? <http://www.rbseonline.com>

(ii) Calculate the acceleration of an object having 4kg. mass and 20N force. 3+3=6

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