**CLASS-IX**

**SUBJECT—SCIENCE**

**TERM—II**

**Time Allowed 3 Hours Max. Marks ; 90**

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| ***General Instructions***1. **The question paper comprises two Three sections, A ,B and C. You are to attempt all the sections.**
2. **All questions are compulsory.**

 **There is no overall choice. However internal choice has been provided in all**  **the three questions of five marks category. Only one option in each question**  **is to be attempted,**1. **All questions of Section A and all questions of Section B and Section C are to be attempted separately.**
2. **Question numbers 1 to 3 A are one mark questions.**
3. **Question numbers 4 to 6 are two marks questions, to be answered in about 30 words each.**
4. **Question numbers 6 to 16 are three marks questions, to be answered in about 50 words each.**
5. **Question numbers 17 to 21 are five marks questions, to be answered in about 70 words each.**
6. **Section B has 3 OTBA questions.Question number 22 is two marks,Question number 23 is of three marks and question number 25 is of five marks.**
7. **Question number 25 to 33 in Section C are MCQ’S of 1 mark each.**
8. **Question number 34 to 36 in section C of 2 marks based on practical**

 **Skills.** 1. **Question numbers 25 to 36 in Section B are practical based questions.**
2. **Question numbers 25 to 33 are of one mark and 34 to 36 are of two marks each.**
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**SECTION –A**

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| Q.1. | Name the S.I. Unit of Pressure. |  |
| Q.2. | Define the commercial unit of electrical energy. |  |
| Q.3. | In which type of plants are Nitrogen fixing bacteria present. |  |
| Q.4. | How did Rutherford come to the conclusion that most of the space in an atom is empty? |  |

Q.5. Find the relative density of copper block of mass 216g having volume of 80cm3 (Density of Water = 1g/ cm3).

Q.6. How do angiosperm differ from gymnosperms?

Write one example each?

Q.7. List any three differences between longitudinal waves and transverse waves.

Q.8. List any three human activities which would lead to an increase

in the carbon dioxide content of air.

Q.9. What information do you get from the figure given below about the atomic number, at mass number and valency of atoms X, Y and Z. Give your answer in tabular form.

Q.10. Define kinetic energy. How are they related to momentum ?

Q.11. Write the given statement in your answer books after filling in the blanks?

a) Pila and Unio have an external shell and belong to the phylum .

b) Free living marine animals with water driven tube system are in the phylum .

c) To which phylum do sponges belong\_ .

Q.12. Differentiate between monocots and dicots. Give two differences and one example of each?

Q.13. (a) State the law of Constant Proportion.

 (b) In a compound Carbon and Oxygen react in a ratio 3: 8 by mass to form carbon dioxide. What mass of oxygen is required

to repeated to react completely with 9g Carbon?

Q.14. (a) What are the conditions for work to be done?

(b) An electric bulb of 60W is lighted for 10 hours a day. What is the amount to be paid in a month of 30 days, if one unit of electricity of costs Rs. 3.50?

Q.15. (a) On which characteristics of sound wave do the following properties depend?

(i) loudness (ii) Pitch

(b) Calculate the time for which the sensation of sound persists in our brain if the minimum distance of the obstacle from the source of sound is 17.2m (speed of sound in air =344m /s)

Q.16. (a) What is the causal organism for Swine flu?

 (b) Suggest two measures that the local authorities of your

neighbourhood should take to bring down the incidence of diseases like malaria, typhoid and dengue?

Q.17. a) A child hers an echo from a cliff 4 seconds after the sound from a powerful cracker is produced. How far away is the cliff from the child. Speed of sound = (340 m/s).

b) Derive a relation between wave length, frequency and wave velocity.

Or

Draw a neat labeled structure of human ear and its working.

Q.18. Give reasons for the following:

(a) Bryophytes are called “amphibians of the plant kingdom.”

(b) Spiders and scorpions are very different from each other but are placed in the same phylum –Arthropoda.

(c) Platyhelminths and Nematodes possess a Pseudocoelom.

Write the name of the following:- (a) Body is segmented

(b) Reptile which has four chamber heart.

Or

Write the main characteristics of phylum Porifera and Aves give one example of each with its diagram.

Q.19. An Element “X” has 13protons, 13electrons and 14 neutrons.

Answer the following questions: a) What is its atomic number of „X‟? b) Identify the element.

c) What is its valency? What is the number of valence electrons is

“x”?

d) What is the type of ion formed by “X” ? Why?

e) Name the scientists who discovered electrons and protons.

Or

(a) Describe Bohr‟s model of an atom.

(b) Draw a sketch of Bohr‟s model of an atom with 3 shells.

(c) What was the drawback of Rutherford‟s model of an atom?

Q.20. (a) Prove the law of conservation of energy for a stone moving vertically down.

(b) A boy of mass 50kg runs up a staircase of 45 steps in 9s. If the height of each step is 15cm, find his power [g= 10 ms-2]

Or

(a) Define the term „kinetic energy‟.

(b) Derive an expression for kinetic energy for an object of mass

„m‟ moving with a velocity „v‟.

(c) Certain force acting on a 20 kg mass changes its velocity from

5m/s to 2 m/s. Calculate the work done by the force.

 Q.21. (a) What are the green house gases?

 (b) Give a diagrammatic representation of Carbon Cycle in nature.

Or

 (a) List four main processes involved in the water cycle.

 (b) Give a diagrammatic representation of Nitrogen cycle in nature.

**SECTION-B**

Q.22 What are the two aspects of environment which influence health down.?

Q 23 Write three points which relate the environmental quality and health?

Q 24 What can we do to reduce our exposure to harmful chemicals ?

**SECTION-C**

25. S.I. Unit of density is :-

 a) g/m3 b) kg/m2

c) g/m2 b) kg/m3

26. The density of salty water as compared to the density of pure water is always.

|  |  |  |  |
| --- | --- | --- | --- |
| a) | Less | b) | more |
| c) | same | d) | keep changing |

27. In the experiment to find the density of a solid block, the volume is measured by measuring cylinder. The correct set up is shown in:-

28. If the mass of a solid body is doubled, then the density is :-

29.

|  |  |  |  |
| --- | --- | --- | --- |
| a) | doubled | b) | halved |
| c) | does not change | d) | becomes four times. |
| The sea water is denser than fresh water due to |
| a) | evaporation | b) | mixing of sand |
| c) | mixing of salts | d) | stagnation |
|  |
| a) | walking | b) | standing |
| c) | sitting | d) | sleeping |

30. Largest group of animalia kingdom is

 a) Arthropoda b) Mollusca

 c) Echinodermata d) None of these

31. Waves propagate well in

|  |  |  |  |
| --- | --- | --- | --- |
| a) | loaded stinky | b) | unloaded slinky |
| c) | equally in (a) and (b) | d) | None of these. |

32. Trees with fine needle like leaves are usually found in hilly areas.

They are called:-

a) mosses b) conifers c) algae d) fungi

33. What are (i) and (ii) respectively , in the given diagram? (a) Gills and annulus

(b) Pileus and gills

c) Stipe and annulus d) Gills and pileus

34. A spring balance calibrated in newton reads 19.6 N. calculate its mass in grams.

35. To establish the relation between loss of weight of solid when it is fully immersed in a liquid, to the weight of water displayed can you calculate the density of liquid by using this method?if yes,write the formula to calculate the density of liquid.

36. Write two features of Mammalia Kingdom.