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PRACTICE PAPER FOR

II PREPARATORY EXAMINATION 2015-2016

STD:- IX

Sub: - Science

Time: - 3 Hours

Date: -

Marks: - 90

General Instructions:-

1. The question paper comprises of two sections, A and B. You are to attempt both the sections.
2. All questions are compulsory.
3. All questions of section A and all questions of section B are to be attempted separately.
4. Question numbers 1 to 3 in section A are one mark questions. These are to be answered in one word or one sentence.
5. Question numbers 4 and 5 are two mark questions, to be answered in about 30 words each.
6. Question numbers 6 to 16 are three mark questions, to be answered in about 50 words each.
7. Question numbers 17 to 21 are five mark questions, to be answered in about 70 words each.
8. Question numbers 22 to 30 in section B are multiple choice questions based on practical skills. Each question is a one mark question. You are to choose one most appropriate response out of the four provided to you.
9. Question numbers 31 to 33 are explanatory questions based on practical skills and carry 2 marks.
10. Section C is Open Text Based Assessment carrying 10 marks.

SECTION - A

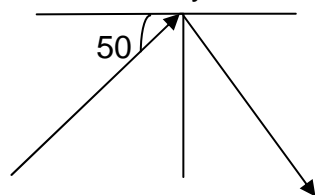
1. How many atoms are present in one gram of hydrogen? **1M**
2. Name the group of organisms to which Protozoa belong. **1M**
3. Why is ozone layer considered to be an important component of earth's atmosphere? **1M**
4. An animal is dorsoventrally flattened, has three embryonic germ layers and is acoelomate. Which phylum does it belong to? Give one example. **2M**
5. (a) The frequency of a sound source is 100Hz. How many times does it vibrate in a minute? **2M**
(b) In which of the three media-air, water or steel-does sound travel fastest? Why?
6. Identify the polyatomic ions in the following compounds and calculate the molar mass of the compounds: Given atomic mass of **3M**
Mg=24u, C=12u, O=16u, S=32u, Na=23u
(a) $MgCO_3$ (b) Na_2SO_4
7. Why is atomic mass of chlorine taken as 35.5u and not a whole number like 35u or 36u? Explain. **3M**

8. Atomic number and mass number of an element are 18 and 40 respectively. Identify the element and write the number of electrons and neutrons present in its atom. Show the schematic atomic structure of the atom. **3M**
9. State the reasons for the following: **3M**
- Mammals have mammary glands.
 - Crocodile has four chambered heart but still is a reptile.
 - Arthropods have open circulatory system.
10. The number of malaria cases had increased in Pooja's village in last one year. She read in her textbook that diseases like malaria spread through mosquitoes which breed in stagnant water. She immediately suggested her friends and decided to kill the mosquitoes in water bodies in the locality. They also took help of nearest municipal office. **3M**
- Answer the following questions:
- Which preventive measure do you suggest for the prevention of such diseases caused by mosquitoes?
 - Which values are displayed by Pooja in taking initiative?
 - Suggest one school activity to promote such values in school students.
11. Explain the working of SONAR. **3M**
12. (a) How are ultrasonics used to clean objects? **3M**
(b) A person is listening to a tone of frequency 500 Hz sitting at a distance of 450 m from the source of sound. What is the time interval between successive compressions from the source?
13. (a) Define the S.I. unit of power. **3M**
(b) Calculate the work done to increase the velocity of a car from 36 km/h to 72 km/h if the mass of the car is 1500 kg?
14. (a) State two applications of Archimedes Principle. **3M**
(b) Define buoyancy.
15. (a) Name two biologically important compounds that contain both oxygen and nitrogen. **3M**
(b) Describe the role of nitrogen fixing bacteria.
16. List three functions performed by the atmosphere to act as blanket. **3M**
17. (a) State the relationship between mass and Avogadro number. **5M**
(b) Calculate the number of molecules in 4 g of methane. Atomic mass of C=12u, H=1u
(c) What is the difference between sodium and sodium ion?
18. (a) If penicillin is given to a patient suffering from jaundice, it doesn't have any effect on the infection. Why? **5M**
(b) Name the disease which has been eradicated from the world.
(c) State the principle behind its eradication.
(d) Name two bacterial diseases.

19. (a) The kingdom 'Plantae' has been grouped into five divisions. List the divisions. **5M**
 (b) Name the division whose members are called 'the amphibians' of the plant kingdom.
 (c) Write one difference between Thallophytes and Bryophytes with one example each.
20. (a) Explain how bats use ultrasound to catch their prey. **5M**
 (b) A SONAR device on a submarine sends out a signal and receives an echo 10 seconds later. Calculate the distance of the object from the submarine if the speed of sound in water is 1500m/s.
21. Explain the reason: **5M**
 (a) A steel needle sinks in water but a ship made of steel floats.
 (b) It is easier to swim in sea water than in river water.
 (c) It is difficult to stand on one foot as compared to two feet.

SECTION B

22. In the experiment to verify the laws of reflection of sound, The angle of reflection is **1M**



- (a) 40 (b) 60 (c) 100 (d) 0
23. In the experiment to verify the laws of reflection of sound, the clock and the ear should be placed just at the edge of the tubes so that: **1M**
 (a) Only sound passing through tube 1 and reflected comes through tube 2 is received
 (b) tubes may transmit the sound
 (c) disturbance due to which wind is avoided
 (d) sound produce by the clock becomes a musical sound
24. In a spring balance the space between 0 and 25 g marks is divided into 10 equal parts. The least count of the spring balance **1M**
 (a) 2.5gwt (b) 25gwt (c) 0 gwt (d) 15gwt
25. During an experiment to verify the law of conservation of mass a solution of barium chloride and sodium sulphate were mixed in a conical flask. The correct set of observation is : **1M**
 (a) a yellow precipitate is formed (b) chlorine gas is evolved
 (c) a white precipitate is formed (d) a colourless solution is seen
26. A test tube containing 15 g of sodium sulphate solution was poured into a beaker containing 15 g of barium chloride solution. The mass of products obtained in the beaker is : **1M**
 (a) 15g (b) 30g (c) 45 g (d) none of these
27. The law of conservation of mass was given by **1M**
 (a) Antoine Lavoisier (b) Avogadro (c) Dalton (d) Bohr

28. A Spirogyra is : **1M**
(a) rounded colonial (b) unbranched filament
(c) branched filament (d) flat thallus
29. In a female anopheles mosquito the organ for sucking blood is: **1M**
(a) antennae (b) proboscis (c) spiracles (d) wings
30. A student observed a monocot plant and noted the following observation. The observation which is incorrect is : **1M**
(a) leaves have reticulate venation (b) three petals are seen in the flower
(c) stem is hollow (d) adventitious root
31. In the experiment to find the volume of the metal block ,the initial reading of water level in the graduated cylinder is 18.5 ml.On immersing the given block completely in water, the water level rose to 21.7 ml.Calculate the volume of the metal block. **2M**
32. Define relative density and state its unit. **2M**
33. Write the characteristic feature of dicot plant on the basis of : **2M**
(a) cotyledons (b) root system

SECTION – C OPEN TEXT BASED ASSESSMENT

34. Differentiate between the environment of Mars and Earth on the basis of : **5M**
(a) length of day
(b) length of year
(c) tilt of axis
(d)No .of satellites
(e) polar caps
Note:- (use tabular form)
35. Express your views on Prime Minister's " SWACHH BHARAT ABHIYAN" in about 500 words. **5M**

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