

GREENLAWNS SCHOOL, WORLI

FINAL EXAMINATION 2018

GENERAL SCIENCE

Std: VII

Marks: 80

Date: 23/02/2018

Time: 1½ hrs

Carefully read this paper in the first ten minutes. Your answers should be concise and contain scientific terms. All answers have to be written on the answer script.

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Q.I) Name the following: [5]

1. The phylum which contains organisms which make about 80% of the animal kingdom.
2. A yellow crystalline solid non-metal used to make fungicides and insecticides.
3. The metalloid present in period 2.
4. A chemical reaction in which the reactant compound splits into its constituent elements or other compounds.
5. The total number of protons and neutrons in the nucleus of an atom.
6. The muscles which control and regulate the flow of urine out of urethra.
7. The smallest particle of a chemical element that can exist.
8. Bacterium which causes urinary tract infection.
9. The region of a sound wave in which air particles are crowded together.
10. Bristle-like structures in annelids which help them in movement.

Q.II) Fill in the blanks: [5]

1. \_\_\_\_\_ ion consists of one oxygen atom and three hydrogen atoms.
2. The \_\_\_\_\_ of a sound is a measure of the energy the sound wave is carrying.
3. \_\_\_\_\_ is a liquid non-metal at room temperature.
4. The representation of a chemical reaction using symbols and formulae is known as a \_\_\_\_\_
5. The brain and the spinal cord together make up the \_\_\_\_\_ nervous system.
6. The metalloid \_\_\_\_\_ is used in making bullets and lead shots.
7. Phylum \_\_\_\_\_ comprises of mostly marine organisms which are either attached to the ocean floor or free-floating.
8. The number of waves passing through a point in one second is called \_\_\_\_\_
9. The elements in the periodic table are arranged in the increasing order of their \_\_\_\_\_
10. The \_\_\_\_\_ is a cylindrical structure present inside the vertebral column.

Q.III) Give difference between the following pairs on the basis of what is indicated in the brackets: [5]

1. Helium and argon (use)
2. Groups and periods (meaning)
3. Amplitude and frequency (SI unit)
4. Spinal and cranial nerves (number of pairs)
5. Mollusca and Echinodermata (body movement)

Q IV) Define the following terms: [5]

1. Time period
2. Combination reaction
3. Valency
4. Metalloids
5. Galvanization

Q V) Give scientific reasons for the following: [5]

1. Nitrogen and phosphorus are placed in group 15.
2. Gold and silver find use in dentistry.
3. Fishes and birds have a streamlined body.
4. Skin is an excretory organ.
5. Music recording studios use sound absorbing materials on their walls.

Q.VI) Answer in short: [14]

1. Give any four uses of silicon.
2. What are the main causes of kidney stone?
3. Mention any four characteristics of chemical reaction.
4. State any four methods to prevent rusting of iron.
5. What are echoes? What is the condition for an echo to be heard?
6. Give any four characteristics of reptiles.
7. Mention any two observations for reaction of ammonium chloride with sodium hydroxide solution.

Q VII) Solve the following numericals:

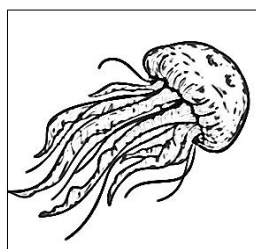
1. What is the frequency of a wave with a time period of 0.05 seconds? [1]
2. An observer stands at a distance of 850 m from the cliff and fires a gun. [2]  
After what time gap will he hear the echo, if sound travels at a speed of 350 m/s in air?
3. Balance the following chemical equations: [2]
  - a.  $\text{CH}_4 + \text{Cl}_2 \rightarrow \text{CCl}_4 + \text{HCl}$
  - b.  $\text{Fe} + \text{O}_2 \rightarrow \text{Fe}_2\text{O}_3$

Q VIII) Write short notes on: [6]

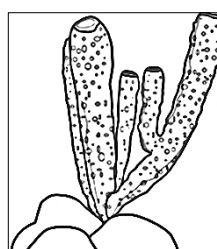
1. Structure of neuron
2. Phylum Platyhelminthes
3. Structure of an atom

Q IX) Answer the following diagram based questions:

1. Observe the organisms given below and answer the questions that follow:



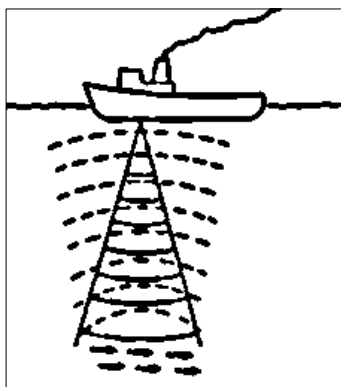
A



B

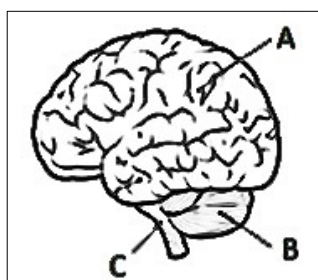
- Name the organisms 'A' and 'B'. [1]
- State the phylum to which they belong. [1]
- Explain the body feature of organism 'A'. [1]
- Explain the body features of organism 'B'. [2]

2. Observe the figure given below and answer the questions:



- Name the technique shown. [1]
- How is this technique used? [4]
- If the speed of sound in sea water is 1520 m/s, how deep are the fishes if the boatman receives an echo after 4 seconds? [1]
- What is the method used by this technique called? [½]
- In which medium does sound travel faster? [½]

3. Observe the organ below and answer the following questions:



- Label parts A, B and C. [1½]
- Mention functions of A, B and C. [3]
- What does part C extend into? [½]
- State the function of the extension. [1]

4. The elements of a period are as given below:

Si	Al	Na	S	Ar	Mg	P	Cl
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- Identify the period to which these elements belong to? [½]
- Arrange the elements in a correct order. [1]
- Name the element with 3 valence electrons. [½]
- Give the formula of its chloride and hydroxide. [1]

Q X) Write the word and chemical equations for the following: [3]

- Decomposition of calcium carbonate.
- Formation of magnesium oxide.
- Reaction between iron and sulphur.

Q XI) Draw structures of the following atoms and give relevant information: [3]

- Oxygen
- Neon

Q XII) Draw a neat and labelled diagram of the Human excretory system. [3]

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