

Class-VIII
Annual Examination (2023-2024)
Subject: Science
Set- A1

Time allowed: 2 ½ hours

M.M:60

Physics

M.M: 20

Q1. Select and write one most appropriate option out of the four options given for each of the questions (i) to (v)

(i) Which of the following statements are correct? (1)

- (A) Sound is produced by vibrations.
 - (B) Sound requires a medium for propagation.
 - (C) Light and sound both require a medium for propagation.
 - (D) Sound travels slower than light.
- (a) (A) and (B) only
 - (b) (A) ,(B) and (C) only
 - (c) (A) ,(C) and (D) only
 - (d) (A) ,(B) and (D) only

(ii) Which of the following is not likely to cause a Tsunami? (1)

- (a) A major nuclear explosion under sea
- (b) Earthquake
- (c) Volcanic eruption
- (d) Lightning

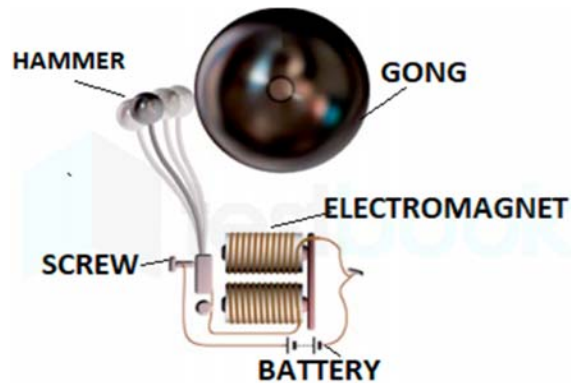
(iii) Ultrasound has frequency of vibration (1)

- (a) between 20 and 20,000 Hz
- (b) below 20 Hz
- (c) above 20,000 Hz
- (d) between 500 and 10,000 Hz

(iv) Which of the following statements is incorrect? (1)

- (a) Friction acts on a ball rolling along the ground.
- (b) Friction acts on a boat moving on water.
- (c) Friction acts on a bicycle moving on a road.
- (d) Friction does not act on a ball moving through air.

(v) In the circuit in Figure of an electric bell shown below, when the circuit is completed, the hammer strikes the gong. Which of the following force(s) is responsible for the movement of the hammer? (1)



- (a) gravitational force alone
- (b) magnetic force alone
- (c) electrostatic force alone
- (d) frictional force alone

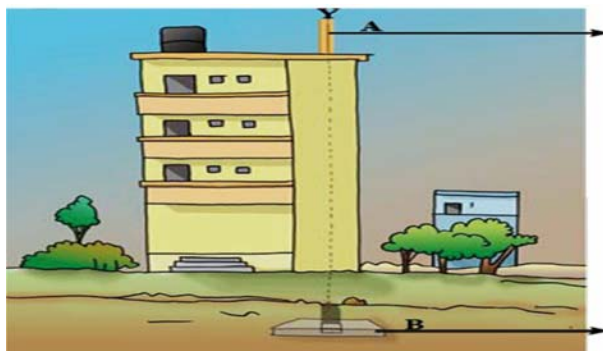
Q2. Questions (i) to (iii) are very short answer questions carrying 02 marks each

(i) Read the following situation and answer the questions.

Squeezing a piece of lemon between the fingers to extract its juice. (2)

- a) Identify the agent exerting the force and the object on which force acts.
- b) Name the type of contact force in the above situation.
- c) state the effect of force on an object on which the force acts..

(ii) (a) Identify lightning conductor and a copper plate in the following figure: (2)



(b) Explain how a lightning conductor protects a building from getting struck by lightning.

- (iii) (a) What would be angle of incidence and angle of reflection if you throw the light on the plane mirror along the normal ?
(b) Draw a ray diagram to justify your answer. (2)

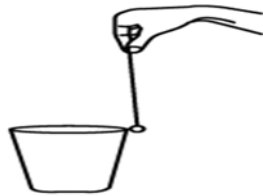
OR

- (iii) (a) Consider a plane mirror. The angle between incident ray and reflected ray is 60° . What is the value of angle of incidence?
(b) Draw a ray diagram showing angle of incidence and angle of reflection for the above part. (2)

Q3. Question is a short answer question carrying 03 marks (3)

- (a) Suppose your writing desk is tilted a little. A book kept on it starts sliding down. Show with the help of a diagram, the direction of frictional force acting on it.
(b) A marble is allowed to roll down an inclined plane from a fixed height. At the foot of the inclined plane, it moves on a horizontal surface (a) covered with newspaper (b) covered with a layer of sand and (c) covered with a glass sheet. On which surface will the marble move the shortest distance? Give reason for your answer.
(c) Is there a force of friction between the wheels of a moving train and iron rails? If yes, name the type of friction.

Q4. Observe the following picture of a suspended small thermocol ball touching the rim of a tumbler which will begin to oscillate when the tumbler vibrates. (3)

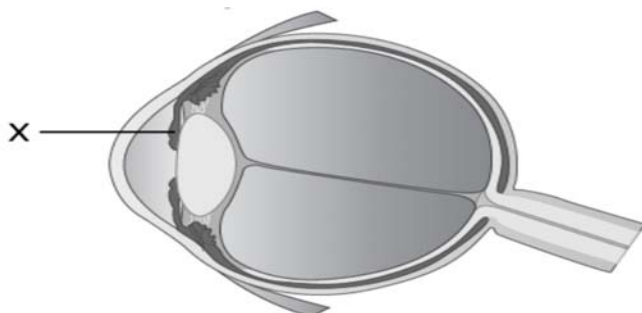


- (a) If we strike the tumbler with a steel spoon harder, will the thermocol ball be displaced farther? What does this indicate in terms of amplitude of a vibrating object ?
(b) A simple pendulum makes 10 oscillations in 20 seconds. What is the time period and frequency of its oscillation?

Q5. Read the paragraph given below and answer the questions: (3)

We see things only when light coming from them enters our eyes. Eye is one of our most important sense organ. It is therefore important to take care of your eyes. It is necessary that you take proper care of your eyes. If there is any problem you should go to an eye specialist.

(a) Name the part of the eye that is marked as “X” in the following diagram.



(b) Why do the eyes of the nocturnal birds have large cornea and large pupil?

(c) What kind of lens is there in our eyes? Where does it form the image of an object?

OR

(c) “Too little or too much light is bad for the eyes” Justify the statement.


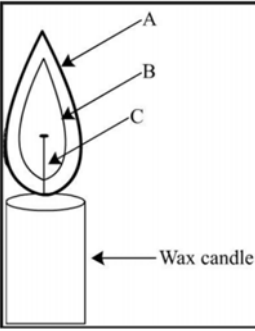
Subject: CHEMISTRY

General Instructions : **Maximum marks:20**

- i) All questions are compulsory.
- ii) Question 6 and 7 carry 1 mark for each part.
- iii) Question 8, 9 and 10 carry 2 marks each.
- iv) Question 11 and 12 carry 3 marks each. Internal choice has been given in both.
- v) Question 13 is Case Based and carries 3 marks.

Q.No	Questions with expected answers	Marks
6	Choose the correct option for the following:	1
(i)	Read the following statements and select the correct ones. i. Coal, petroleum and natural gas are fossil fuels. ii. Coal and natural gas are exhaustible resources. iii. Coke is used in the manufacture of steel. iv. Fossil fuels are present in limited quantities. (a) i and ii (b) i, ii, iii and iv (c) i, ii and iii (d) i and iv	
(ii)	Which of the following when added to water will not conduct electricity? (a) Salt (b) Honey (c) Vinegar (d) Lemon juice	1

(iii)	An electric current can produce: (a) Heating effect (b) Chemical effect (c) Magnetic effect (d) Chemical, heating, and magnetic effects.	1
(iv)	The substances which have very low ignition temperature will (a) Catch fire easily (b) Will not catch fire (c) Catch fire after some time (d) None of these.	1
7	These consist of two statements are given- Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (a) Both A and R are true, and R is the correct explanation of the assertion. (b) Both A and R are true, but R is not the correct explanation of the assertion. (c) A is true, but R is false. (d) A is false, but R is true. Assertion: A combustible substance cannot catch fire or burn as long as its ignition temperature is reached. Reason: Ignition temperature is the highest temperature at which a substance can catch fire.	1
8	(a) What does PCRA stand for ? (b) Mention any two tips suggested by PCRA for saving petrol. OR Describe how coal is formed from dead vegetation. What is this process called?	1+1= 2
9	Explain how water can control fire by giving any two reasons.	1+1=2
10	Differentiate between rapid and spontaneous combustion.	1+1=2
11	Give reasons for the following: (a) Tap water can conduct electricity while distilled water cannot. (b) When the free ends of a tester are dipped into a solution, the magnetic needle shows deflection. (c) Tin cans, used for storing food, are made by electroplating tin on iron.	1+1+1 =3

12	<p>Observe the picture given below and answer the following questions:</p>  <p>(a) What will you observe when a glass slide is kept on the top of a candle flame? (b) Which zone of candle flame is responsible for the above observation and why? (c) A wax candle burns with a flame while a piece of charcoal does not. Why?</p> <p style="text-align: center;">OR</p> <p>Study the picture given below and answer the following questions:</p>  <p>(a) Out of A, B and C zones, identify : (i) Zone of complete combustion (ii) Luminous zone (b) Define calorific value. (c) In an experiment 40 kg of coal was completely burnt. The heat produced was measured to be 360,000 kJ. Calculate the calorific value of the fuel.</p>	1+1+1 =3
13	<p>The burning of fossil fuels refers to the burning of oil, natural gas, and coal to generate energy. We use this energy to generate electricity, and to power transportation (for example, cars and planes) and industrial processes. Ever since the invention of the first coal-fired steam engines of the 1700s, our burning of fossil fuels has steadily increased. Across the globe each year we now burn over 4,000 times the amount of fossil fuels burnt during 1776. The effects of the burning of fossil fuels are having far-reaching effects on our climate and ecosystems.</p> <p>(a) How is burning of fossil fuels responsible for Global Warming? (b) Why are unburnt carbon particles harmful for us? (c) Burning of fossil fuels like coal and diesel releases harmful oxides which are responsible for acid rain. Name any two gases that dissolve in rain water to cause acid rain.</p>	1+1+1 =3

BIOLOGY

Max. Marks: 20

General Instructions:

1. Question no.14 to 16 are of 1 mark each.
2. Question no. 17 to 21 are of 2 marks each.
3. Question no. 22 is case based, comprising of 3 sub-parts of 1 mark each.
4. Question no.23 is of 4 marks.

Q14 Choose the correct statement regarding the function of the given agricultural implement. (1)



- (a) It is used to deposit seeds in the soil at equal distance.
- (b) It is used for drying the food grains.
- (c) It is used for spraying weedicides.
- (d) It is used for removing weeds and for loosening the soil.

Q15 Select the events involved in the menstrual cycle in a human female. (1)

- (i) Maturation of egg
- (ii) Release of egg
- (iii) Thickening of uterine wall
- (iv) Breakdown of uterine wall

- (a) (i) and (iii)
- (b) (i), (ii) and (iii)
- (c) (i), (iii) and (iv)
- (d) (i), (ii), (iii) and (iv)

In the following questions, two statements are given- One labelled **Assertion (A)** and the other labelled **Reason (R)**. Select the correct answer to these questions from the (1)

Q16 codes (a), (b), (c) and (d) as given below:

- (a) Both A and R are true, and R is the correct explanation of the assertion.
- (b) Both A and R are true, but R is not the correct explanation of the assertion.
- (c) A is true, but R is false.
- (d) A is false, but R is true.

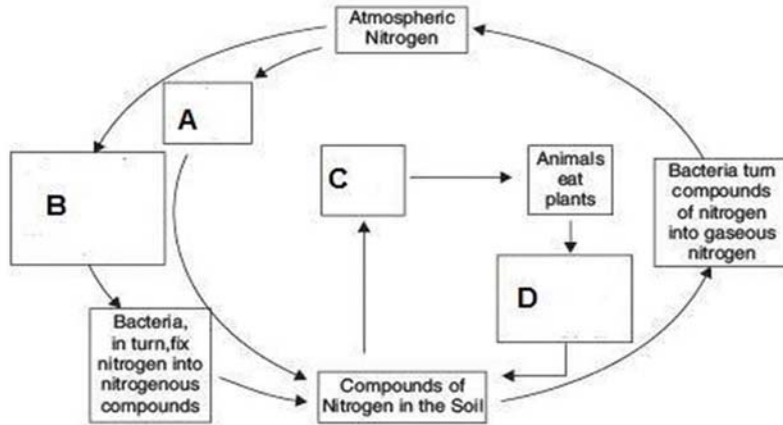
Assertion(A): Streptomycin, tetracycline and erythromycin are some of the commonly known antibiotics which are made from only viruses.

Reason(R): Medicines that kill or stop the growth of disease-causing microorganisms are called antibiotics.

Q17 Give one word for the following: (2)

- (a) Process used to separate grains from chaff and hay with the help of wind.
- (b) Variety of plants, animals and microorganisms found in the area.

Q18 Complete the Nitrogen- cycle given below by filling the boxes **A**, **B**, **C** and **D**. (2)



OR

Q18 Study the following table related to some common human diseases caused by microorganisms and complete the boxes labelled **P**, **Q**, **R** and **S**. (2)

Human disease	Causative organism	Mode of transmission
Chicken-pox	P	Air/contact
Cholera	Q	Water/Food
Malaria	Protozoa	R
Hepatitis A	S	Water

Q19 (a) 'A' and 'B' are the 'flora' and 'fauna' of the Pachmarhi Biosphere Reserve respectively. Identify and name them. (2)



A



B

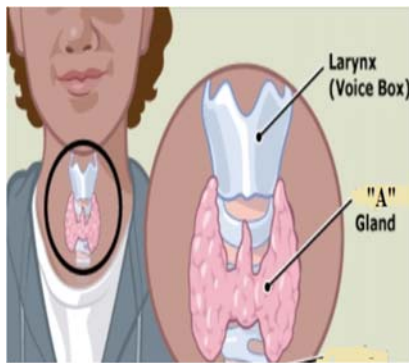
(b) Name the first Reserve Forest of India. Which famous tree is found there?

Q20 State any two points of differences between the oviparous animals and viviparous animals. (2)

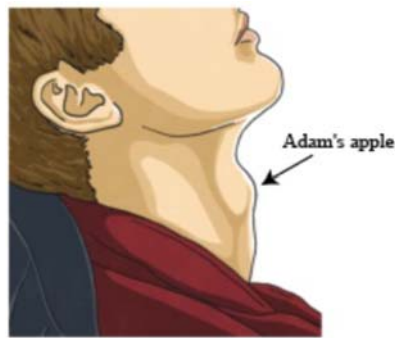
Q21 Specify the hormone which is responsible for: (2)
(a) secondary sexual characteristics in boys.
(b) development of tadpole into an adult frog.

Q22 Read the given passage and answer the questions 9(a) to 9(c), based on the passage and related studied concepts: (3)

Sam and Grace were classmates since childhood. When Grace became eleven years old, she developed a little swelling on her neck. She visited the doctor who started medication for her after diagnosing a deficiency disease of gland "A". After a few years, Sam also developed a slight protrusion in his throat. He got worried and went to the doctor. But the doctor assured him that it was a normal feature (Adam's apple) in boys while they are growing up.



Diagnosis of Grace



Diagnosis of Sam

- (a) Identify gland "A" shown in the throat of Grace.
- (b) Name the disease diagnosed by doctor for Grace's big and bulging throat.
- (c) Specify the change in voice box or the larynx of boys during puberty and its impact on their voice.

OR

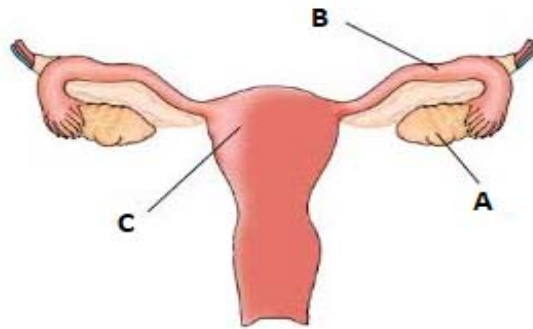
- (c) Adam's apple is usually formed in grown up boys. Why?

Q23 (a) With the help of labelled diagram **only**, explain the process of binary fission in *Amoeba*. (4)

(b) Define metamorphosis. Name any two animals showing metamorphosis in their life cycle. (4)

OR

- Q23 (a) Explain the importance of reproduction in organisms.
(b) The diagram given below shows the female reproductive organs in humans. Identify the parts labelled **A**, **B** and **C**. State the function of part 'A'.



(c) Fill in the blanks:

- i. The fertilized egg formed after the fusion of the gametes is called _____.
- ii. _____ is the stage of embryo in which all the body parts can be identified.