

SUBJECT : INTEGRATED SCIENCE

CLASS : VIII

Time : 2½ Hrs.

M.M.: 80

General Instructions :

- (i) This paper consists of three sections A, B and C.
- (ii) Marks are indicated against each question.
- (iii) Draw neat and well labelled diagrams wherever required.

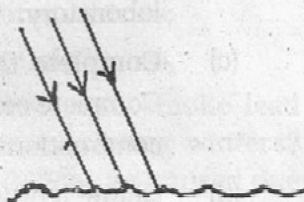
PART-A (PHYSICS)

Q1. Answer in one word or one sentence : (1x5=5)

- (a) Name the two planets between which the asteroid belt exists.
- (b) The star 'X' appears stationary when seen from Earth. Identify the star 'X'.
- (c) Does pure water conduct electricity? If not, what can we do to make it conducting?
- (d) Write down two English alphabets which do not show lateral inversion on reflection from a plane mirror.
- (e) Comets are known to appear periodically. Name the comet which appears after nearly every 76 years.

Q2. Answer briefly: (2x4=8)

- (a) Which metal is electroplated on bathroom fittings? Why is this metal used in electroplating?
- (b) (i) Radha has green eyes. Which part of the eye gives it its distinctive colour?
(ii) What is the role of eyelids?
- (c) India has built and launched several artificial satellites. Write any two main uses of artificial satellites.
- (d) Observe the given figure. Complete it and identify the type of reflection.



(1)

Q3. Answer the following:

(3x3=9)

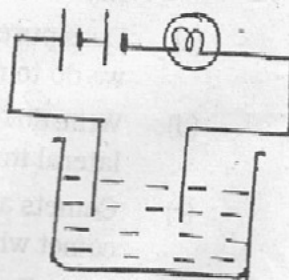
- (a) Circle the odd one out giving reason
- (i) Earth, Jupiter, Uranus, Neptune
 - (ii) Ursa major, Orion, Alpha centauri, Cassiopeia
- (b) (i) What happens when electric current is passed through a potato and why?
- (ii) Your elders might have cautioned you against touching an electrical appliance with wet hands. Why is it so?
- (c) Eyes play an important role in our life. Give any three ways in which we can take care of our eyes.

Q4. Answer the following :

(5x1=5)

The bulb shown in the given setup does not glow:

- (a) List down three possible reasons due to which the bulb doesn't glow.
- (b) Label the diagram.
- (c) What will be the direction of flow of current if the bulb in the given set up starts glowing?



PART-B (CHEMISTRY)

Q1. Answer in one word or one sentence:

(1x5=5)

- (a) 'Z' is a tough, porous and black substance which is an almost pure form of carbon. Identify 'Z' and write its any one use.
- (b) Give reason: Fossil fuels cannot be prepared in the laboratory.
- (c) Complete the-given analogy w.r.t. carbon fuels.
Complete combustion : carbondioxide :: incomplete combustion: _____
- (d) Define ignition temperature.

- (e) Use of CFCs in refrigerators and air conditioners should be replaced by less harmful chemicals. Justify.

Q2. Answer briefly: (2x4=8)

- (a) Sujata has four samples of substances with her namely wood, alcohol, LPG and water. Choose the samples that are inflammable. Why are these substances called inflammable?
- (b) Excessive quantities of chemicals when washed from the fields into the ponds result in the growth of algae. This in turn leads to death of aquatic organisms. Explain.
- (c) Burning of phosphorus in air at room temperature and burning of LPG in a gas stove in the kitchen are examples of two different types of combustion. Name and define these two types of combustion.
- (d) Sharma family and Juneja family are good friends but when it comes to purchasing a car, Sharma's prefer a CNG model while Juneja's prefer a diesel model. Whose choice of fuel is more eco-friendly and why? As a responsible citizen what role can you play to protect the environment from vehicular pollution?
(Note: Write any two ways apart from choice of fuel)

Q3. Answer the following: (3x3=9)

- (a) A dark coloured viscous liquid 'X' is called black gold.
- (i) Name 'X'.
- (ii) Constituents of 'X' have various applications. Identify these constituents from their uses:
- [A] Motor fuel and Aviation fuel:
[B] Fuel for stoves and lamps:
[C] Fuel for heavy motor vehicles:
- (iii) Why is 'X' called 'Black Gold'?
- (b) What are air pollutants? How does smoke lead to formation of smog especially during winters? Name two breathing related difficulties caused due to smog.

(c) Given figure shows the different zones of a candle flame:

(i) Label them as 1, 2, 3 according to the given instructions.

1. zone of partial combustion
2. zone of complete combustion
3. zone of unburnt wax vapours

(ii) Also classify the zones 1, 2 and 3 according to their degree of hotness.



Note: Draw the figure in your answersheet.

Q4. Answer the following: (5x1=5)

Study the two situations given below and answer the questions that follow :

Situation A : On a Sunday afternoon, in absence of her parents Jasmine started burning different materials out of curiosity to see the kind of flame produced by them. Suddenly, a curtain caught fire which soon spread. Jasmine ran out to seek help.

Situation B : At the same time, people saw sparks from an electrical pole across the road in front of Jasmine's house. The sparks increased and people began shouting for help. Mr. Gupta, a good samaritan, quickly brought a CO_2 fire extinguisher from his car while other neighbours brought buckets full of water.

(a) Which of the two will be the right choice to:

(i) extinguish fire on electrical pole?

- (ii) extinguish fire at Jasmine's house?
- (b) Explain how your choice of water and CO_2 will help to extinguish the fire in the two situations.

PART-C (BIOLOGY)

Q1. Answer in one word or one sentence: (1x4=4)

(a) After harvesting a bountiful crop a farmer was so happy that he forgot to dry the crop before storing it. What problem can he face?

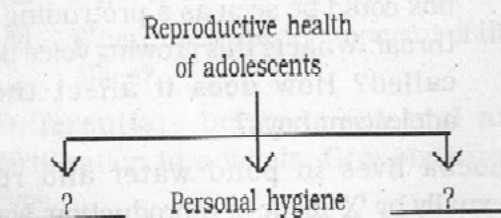
(b) (i) Identify the structure shown in the given figure.



(ii) What is the function of the part labelled I?

(c) It is observed that tadpoles are not growing into adult frogs in a village pond. A scientist who was asked to find the reason for this concluded that the pond water did not contain sufficient amount of a mineral 'P' which could make a hormone responsible to cause a phenomenon 'Q' in tadpoles so that they become adult frogs. Name 'P' and 'Q'.

(d) Complete the given flow chart.



Q2. Answer briefly: (2x4=8)

(a) 'A' is an organic substance obtained from decomposition of plant and animal waste. 'B' is an inorganic salt rich in a particular nutrient. 'C' is an example of 'B' which enriches the soil with nitrogen.

(i) Identify A, B and C.

(ii) State one advantage of using 'A' in agriculture.

(b) With the help of a flow chart explain the changes that take place in the human female reproductive system every month if the egg or ovum is not fertilised during the reproductive phase in females.

(c) Complete the given table:

Sex chromosome in egg	Sex chromosome in sperm	Sex chromosomes in fertilised egg	Sex of child
X	?	?	?
X	?	XX	?

(d) When you share your food with a person who is suffering from AIDS do you think that you have a chance to contract the disease? Name the causative organism of AIDS and list the modes of transmission of the disease.

Q3. Answer the following: (3x3=9)

(a) (i) What is meant by the term 'secondary sexual characters' in humans? Name the hormones that control their development in males and in females.

(ii) Ajay was worried because at puberty his voice box could be seen as a protruding part of the throat. What is this growing voice box in males called? How does it affect the voice of adolescent boys?

(b) Amoeba lives in pond water and reproduces asexually by 'X' mode of reproduction. Name 'X' and draw a neat and well labelled diagram to show reproduction in Amoeba.

(c) Given below are some glands present in the human body:

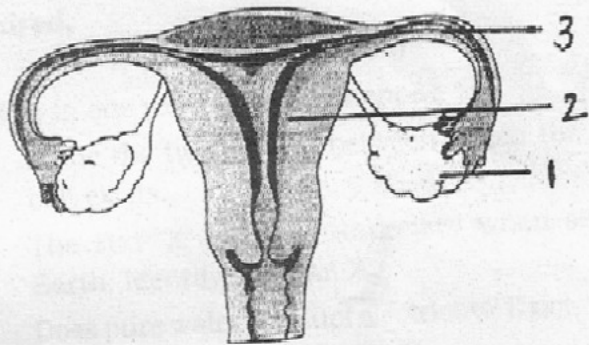
salivary gland, thyroid gland, pituitary gland, sweat gland, sebaceous gland.

(i) Identify the endocrine glands from the ones given above and state the function of each.

- (ii) Seeing a dog chasing him, Mohit gets stressed and begins to run. His blood pressure and heart beat increase. Which endocrine gland is responsible for regulating these conditions under stress? Name the hormone it produces.

Q4. Answer the following: (5)

- (a) Study the given figure and answer the questions that follow :



- (i) The figure represents _____.
- (ii) Label parts 1, 2 and 3.
- (iii) What is the function of part 1?
- (iv) Where does the development of the foetus take place?
- (b) Differentiate between external and internal fertilisation in animals. Give one example of each type.