

Class: VIII

Time: 2 hour
Score : 60

Instructions

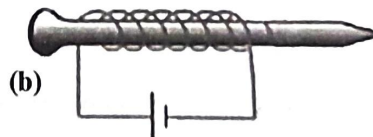
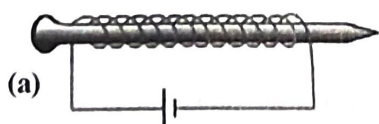
- The total cool off time for Physics, Chemistry and Biology is 15 minute. Read the questions carefully and understand them during this time.
- Answers are to be written in the order Physics, Chemistry and Biology. The time for each section is 40 minute. The answer books must be returned to the teacher after writing each subject.

Physics

Time: 40 minute
Score : 20

Answer any **FOUR** questions from 1 to 5. Each question carries 1 score. (4 x 1 = 4)

1. Observe the relation in the first pair and complete the second pair. (1)
 Electric charge: coulomb :: Capacitance :
2. How many second make one solar day? (1)
 (24 s, 60 s, 86400 s)
3. Designing the shape of an object in order to reduce friction is (1)
4. Which of the following has more susceptibility. (1)
 (Steel / Soft iron)
5. The following figures depict, two electromagnets made from two iron nails of same size. Which is the strongest electromagnet? (1)



Answer any **FIVE** questions from 6 to 13. Each question carries 2 score. (5 x 2 = 10)

6. a) The radius of curvature of a concave mirror is 40 cm. Find the focal length of the mirror. (1)
 b) Which type of spherical mirrors are used as rear view mirror in vehicles? (1)
7. a) Draw magnetic lines of force between the given poles of magnets. (1)

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 b) Write any two peculiarities of magnetic lines of force. (1)
8. 1 mm is the least count of a metre scale.
 a) What do you mean by least count? (1)
 b) Arrange the following units in ascending order of their values. (1)
 (μm , km, nm, cm)

9. Observe the figure.



- a) Identify the device. (1)
- b) When you touch the metallic sphere of this device with a charged object, what do you observe? (1)

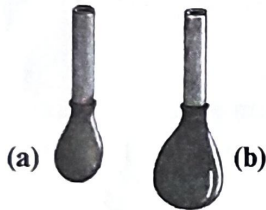
10. Classify the following as acceleration and retardation (2)

- a) A ball rolling on a level ground.
- b) A train starting from station.
- c) Motion of a stone thrown up, when it goes up.
- d) A coconut falling from a coconut tree.

11. The weight of the air column over unit area of earth's surface is atmospheric pressure.

- a) What is standard atmospheric pressure? (1)
- b) Name the instrument used to measure atmospheric pressure (1)

12. Two identical balloons one filled with water and other with kerosene of equal quantity.



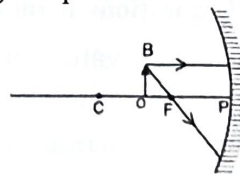
- a) Identify the balloon filled with water. (1)
- b) Why is the expansion of balloons appear different in figures (a) and (b)? (1)

13. Two immiscible liquids A and B of densities 0.8 g/cm^3 and 1 g/cm^3 respectively are taken in a beaker.

- a) Which liquid comes on the upper layer. (1)
- b) Give reason. (1)

Answer any TWO questions from 14 to 16. Each question carries 3 score. (3 x 2 = 6)

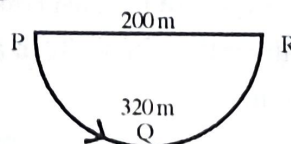
14. a) Complete the following diagram by depicting the path of reflected rays. (2)
- b) Write any two features of the image. (1)



15. Production of sound in a manner unhealthy to human beings is noise pollution.
 - a) Write any two harmful effects of noise pollution. (1)
 - b) Write any two methods to minimize noise pollution. (2)

16. The following figure depicts the path of an object which takes 10 s to travel from P to R through Q at uniform speed. Observe the figure and answer the following questions.

- a) What is the speed of the object? (1)
- b) Among velocity and speed, which one is a vector quantity. Why? (2)



Chemistry

Time: 40 minute
Score : 20

Answer any 3 questions from 1 to 5. (1 Score each)

(3x1=3)

1. Boiling point of water is (1)
2. Magnesium + Hydrochloric acid \rightarrow Magnesium chloride + Hydrogen + Heat Which type of reaction is this? (1)
(Exothermic reaction, Endothermic reaction, Photochemical reaction)
3. Changes that are permanent and new molecules formed are called (1)
4. Monomer of the polymer Rubber is (1)
5. Haven't you noticed the caption " Shake well before use" in certain medicine bottles. Which class does the substance in them belong to?
(Solution, Colloid, Suspension) (1)

Answer any 4 questions from 6 to 10. (2 Scores each)

(4x2=8)

6. Complete the table. (2)

Element	Symbol	The basis of naming
Germanium	Ge	<u> a </u>
<u> b </u>	Cu	Latin name

7. Malleability and ductility are the properties of metals.
 - a) Which is the most malleable metal? (1)
 - b) Which is the most ductile metal? (1)
8. What are the changes that happen to the following properties of particles in a substance when heat is absorbed? (2)
 - (a) Energy of particles
 - (b) Attraction between particles
 - (c) Distance between particles
 - (d) Movement of particles
9. Following are the observations when a student added soap solution to two samples of water collected from two different sources.

Sample	Observation
Water collected from source 1	Lathers easily
Water collected from source 2	Does not lather easily

- a) Which one of these is hard water ? (1)
- b) Which salts are responsible for the hardness of water ? (1)
10. Thermoplastics and thermosetting plastics are two different types of plastics.
- a) Which one of these can be recycled ? (1)
- b) Give an example for thermosetting plastics (1)

Answer any 3 questions from 11 to 15 (3 Scores each) (3x3 = 9)

11. Match the table (3)

Mixture/Occasion	Method of separation	Property used for separation
Mixture of water and acetone	Centrifugation	Small difference in the boiling point of components
Mixture of petrol and kerosene	Distillation	Difference in the mass of components
To separate blood cells from blood	Fractional distillation	Large difference in the boiling point of components

12. NaCl is the chemical formula of common salt
- (a) Which elements are represented by the symbols Na and Cl ? (1)
- (b) Find the total number of molecules and atoms in $5\text{H}_2\text{SO}_4$ (2)
13. Two cotton pieces are soaked in Silver bromide solution. One is kept in direct sunlight and the other wrapped in a black cloth.
- a) What do you observe ? (1)
- b) Which form of energy was responsible for this chemical change ? (1)
- c) What is the common name of this type of reaction ? (1)
14. Some solutions are given below.

Brass, Sugar solution, Mixture of alcohol and water, Soda water

- a) Which among these has solid solute and solid solvent ? (1)
- b) Which are the solute and solvent in the mixture of alcohol and water ? (1)
- c) Which among these has gaseous solute ? (1)
15. Iron is a metal that corrodes fastly.
- a) Write any two situations that favour corrosion of iron. (1)
- b) Copper nails are preferred to Iron nails in coastal areas. Why? (1)
- c) Write any one method to prevent the corrosion of Iron. (1)

Biology

Time: 40 minute
Score : 20

Answer any 4 questions from 1 to 6. Each carries 1 score.

(1 × 4 = 4)

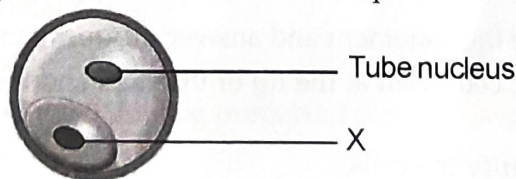
- Identify the word pair relation and fill. (1)
 - Leucoplast : Food storage; Chloroplast :
 - Animal Cell : Theodor Schwann; Plant Cell :
- Write the name of the connective tissue which perform the following functions. (1)
 - Conduction of materials
 - Makes the body resistant to diseases
- Correct the mistake if any in the underlined part of the given statements. (1)
 - The ovum is produced by the oviduct.
 - Amniotic fluid protects the foetus from dehydration.
 - Fertilization takes place in the uterus.
- Find out the odd one and write the common feature of others. (1)

(Gray Giant, Ankora, Muscovy, White Giant)
- Write down the name of any two organizations that work for the protection of nature. (1)
- Cocos nucifera is the scientific name of coconut. Identify the level of classification indicated by the underlined part. (1)

Answer any 5 questions from 7 to 13. Each carries 2 score.

(2 × 5 = 10)

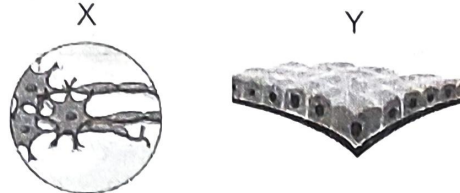
- Observe the figure of Pollen grain given below and answer the questions.



- Identify the part indicated as 'X' (1)
 - Write the change that takes place in 'X' after pollination. (1)
- The various levels of classification of human beings based on the six kingdom classification are given below. Complete the table suitably. (2)

Domain	Eukarya
Kingdom	a. _____
Phylum	Chordata
Class	b. _____
Order	Primates
Family	Hominidae
Genus	c. _____
Species	d. _____

9. Different stages of the preparation of the slide, to observe plant cells through microscope are given below. Write them in the correct order. (2)
- Wash the stained section in clean water and place it in the glycerin on the slide.
 - Take thin cross sections of the material to be observed.
 - Place a cover glass over the material.
 - Put the thinnest and complete sections in stain.
10. Observe the pictures of animal tissues given below and answer the questions



- a) Identify the tissues 'X' and 'Y'. (1)
- b) Write any one function of the tissue indicated as 'X'. (1)
11. Analyse the following statement and give reason. (2)

'Changes related to adolescence are more rapid in girls than in boys'

12. Choose the appropriate ones from the box and complete the table.

(a) Nilgiris	(b) Periyar	(c) Silent Valley
(d) Kadalundi	(e) Malabar Botanical Garden	

i) Wild Life Sanctuary	
ii) National Parks	
iii) Biosphere Reserves	
iv) Community Reserve	

13. Analyse the statement and answer the questions.

'Specific cells seen at the tip of the stem and the root in plants results in the growth of plants'.

- a) Identify the cells. (1)
- b) Write down any two characteristics of these cells. (1)

Answer any 2 questions from 14 to 17. Each carries 3 score (3 × 2 = 6)

14. Ecological interactions and their examples are given in the boxes. Make pairs according to the model given below. (3)

Model - Predation : Deer and tiger

Ecological interactions	Examples
Predation	Mango tree and loranthus
Mutualism	Deer and tiger
Parasitism	Flower and butterfly
Commensalism	Mango tree and vanda
	Paddy and weeds

15. Write one function each from any 3 of the following cell organelles. (3)

- a) Endoplasmic reticulum
- b) Mitochondria
- c) Ribosome
- d) Vacuole

16. Arrange column B and C in accordance with column A (3)

A	B	C
Rearing of fish	Apiculture	Tussar
Rearing of honey bee	Pisciculture	White giant
Rearing of silkworm	Horticulture	Mellifera
	Sericulture	Rohu

17. Analyse the illustration and complete it. (3)

