SET -3

Subject code:086

COMMON PRE-BOARD EXAMINATION 2017-2018

CLASS: X

Time Allowed: 3 hours Maximum Marks: 80

General Instructions

1 *The question paper comprises two sections, A and B. You are to attempt both the sections.*

2 *All questions are compulsory*

3 *All questions of section A and B are to be attempted separately.*

4 *There is an internal choice in two questions of three marks each and one question of five marks*

5 *Question numbers 1 and 2 in Section-A are one mark question. They are to be answered in one word or in one sentence.*

6 *Question numbers 3 to 5 in Section- A are two marks questions. These are to be answered in 30 words each.*

7 *Question numbers 6 to 15 in Section-A are three marks questions. These are to be answered in about 50 words each.*

8 *Question numbers 16 to 21 in Section-A are 5 marks questions. These are to be answered in 70 words each.*

9 *Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question. These are to be answered in brief*

SECTION A

1 Why is the inner wall of stomach is not digested although the digestive enzyme can digest it? 1

2 What is saliva ?State its role in the digestion of food? 1

3 State what happens when zinc granules are heated with sodium hydroxide. Write balanced chemical equation and the name of main product formed. 2

4 "A ray of light incident on a rectangular glass slab immersed in any medium emerges parallel to itself". Draw a diagram to justify the statement. 2

5 List two reasons which limit the usage of solar cells for harnessing energy for domestic use? 2

6 What is short circuiting of an electric circuit? An electric motor of 1.5 KW power rating is operated in a domestic electric circuit of current rating 5A.What would happen when it is switched ON? Give reason for your answer. 3

OR

A coil of insulated copper wire is connected to a galvanometer. What would happen

If a bar magnet is

(i)Pushed into the coil

(ii)Withdrawn from inside the coil?

(iii)Held stationary inside the coil?

7 a) Derive an expression for Joule's law of heating. 3
b) Give two examples for applications of heating effect of electric current.

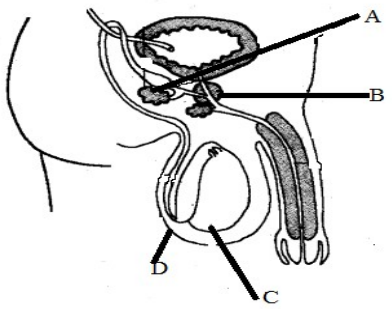
8 Explain the ways by which evolutionary relationships can be traced. 3

9 a) What factors could lead to speciation? 3
b) Give one example for homologous organs.

OR

What is reflex action and give one example?Name the part of nervous system that controls this action.

10 a)Label the parts A,B,C and D 3
b)Write the functions of the parts labelled as A,B and D



11 You were standing on the road side ,then you saw a family travelling in a car .An ambulance carrying a patient for dialysis was travelling behind the car. The driver of the car brought his car to one side of the road and allowed the ambulance to over take. 3
a)What is dialysis?
b)What is the principle behind dialysis?
c)What value was shown by the driver?

12 The image of an object formed by a lens is of magnification -1. If the distance between the object and image is 60 cm, what is the focal length of the lens? If the object is moved 20 cm towards the lens, where would the image be formed? State reason and also draw a ray diagram in support of your answer. 3

13 With the help of an activity show that water is necessary for acids to produce hydrogen ions. 3

Show the dissociation of HCl in water with the help of an equation.

OR

Differentiate between Modern periodic table and Mendeleev's periodic table.

14 Write the preparation for the following chemicals from sodium chloride using balanced chemical equation 3

a)Sodium hydroxide b)Baking soda

Write two uses for each of above chemicals.

15 a) Draw the structure of benzene and write its formula. 3
b) Show the formation of Na_2O by the transfer of electrons. Identify the type of bond formed.

16 a) A person cannot read newspaper placed nearer than 50 cm from his eyes. Name the defect of vision he is suffering from. Draw a ray diagram to illustrate this defect .List its two possible causes. Draw a ray diagram to show how this defect may be corrected using a lens of appropriate focal length. 5
(b)We see advertisements for eye donation on television or in newspaper. Write the Importance of such advertisements .

17 a))What do you mean by corrosion ? 5
b) How do the following metals undergo corrosion; silver and iron?
c)Suggest 2 methods to prevent corrosion
d)Identify the combination of elements present in the alloys: brass and solder

18 a) How does a feedback mechanism help to regulate blood sugar level in humans? 5
b)Write any two functions of a)Medulla b)Cerebellum

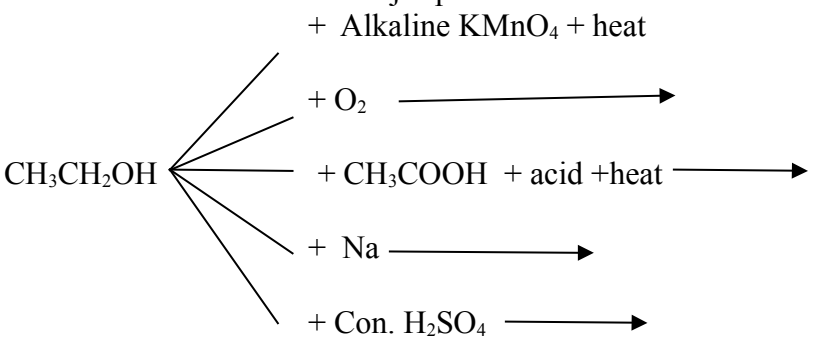
OR

Explain human excretory system with the help of a labelled diagram.

19 a) Draw a schematic labelled diagram of domestic electric circuit. 5
b) Why is it necessary to provide-
(i) A fuse in an electric circuit
(ii) An earth wire to electric application metallic body? Explain

20 a) 'The number of trophic levels in a food chain is limited'. Give reasons to justify this statement. 5
b) What are the problems created due to the construction of large dams?

21 5
Complete the reaction and name the major products obtained.

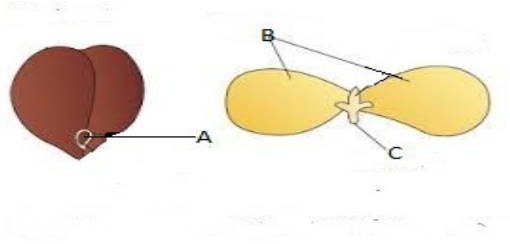


SECTION B

22 What would happen if a) KOH solution is not hung in conical flask during experiment. 2
b) Seeds are not kept moist during experiment.

23 What changes can be observed when an aluminum strip is kept immersed in freshly prepared solution of ferrous sulphate? 2

24 a) Label the parts,A,B and C b)Write the function of the part labelled as B 2

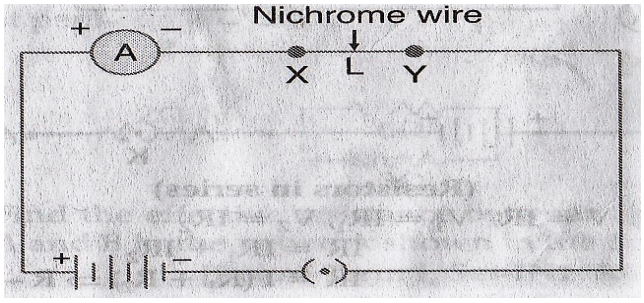


25 What is the composition of vinegar? How will you test the nature of vinegar with the help of a chemical test? 2

26 Draw a path of light ray passing through a prism. Label angle of incidence and angle of deviation in the ray diagram.

27 State Ohm's law. Draw a circuit diagram to verify this law indicating the positive and negative terminals of the battery and meters. Also show the direction of current in the circuit. 2

OR



In the above circuit, connect a nichrome wire of length L between points X and Y and note the ammeter reading.

(i)When this experiment is repeated by inserting another nichrome wire of the same thickness but twice the length (2L), What changes are observed in the ammeter reading?

(ii)State the changes that are observed in the ammeter reading if we double the area of cross section without changing the length in the above experiment.

Justify your answer in both the cases.