

ST.MARYS A.I.H.S.S.(Chennai-01)

SCIENCE

CHEMISTRY

TEST-04

Short Answers:

1. Name the simplest ketone and give its structural formula .
2. Classify the following compounds based on the pattern of carbon chain and give their structural formula :
 - (i) Propane
 - (ii) Benzene
 - (iii) Cyclobutane
 - (iv) Furan
3. How is ethanoic acid prepared from ethanol? Give the chemical equation.
4. How do detergents cause water pollution? Suggest remedial measures to prevent this pollution?
5. Differentiate soaps and detergents .

Long Answers :

1. What is called homologous series ? Give any three characteristics ?
2. Arrive at , systematically , the IUPAC name of the compound : $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-OH}$.
3. How is ethanol manufactured from sugarcane?
4. Give the balanced chemical equation of the following reactions :
 - (i) Neutralization of NaOH with ethanoic acid.
 - (ii) Evolution of carbon dioxide by the action of ethanoic acid with NaHCO_3 .
 - (iii) Oxidation of ethanol by acidified potassium dichromate.
 - (iv) Combustion of ethanol.
5. Explain the mechanism of cleansing action of soap.

6. The molecular formula of an alcohol is $C_4H_{10}O$. The locant number its –OH group is 2. Give its a) structural formula ,b)IUPAC name ,c)saturated or unsaturated ?

7. An organic compound A is widely used as a preservative and has the molecular formula $C_2H_4O_2$. This compound reacts with ethanol to form a sweet smelling compound B .

a) Identify A , b) write the equation for the formation of B , c)Name the process .

SCIENCE

PHYSICS

2 MARKS

- 01.**Why does sound travel faster on a rainy day than on a dry day?
- 02.**Explain why, the ceilings of concert hall are curved?
- 03.**Write any three features of natural and artificial radioactivity.
- 04.**State soddy and fajan's displacement law.
- 05.**What is stellar energy?

4 MARKS

- 01.**State three uses of ultrasonic vibrations.
- 02.**What are the factors that affect the speed of sound in gases?
- 03.**Explain the process of controlled and uncontrolled chain reactions.
- 04.**What is a nuclear reactor? Explain its essential parts with their functions.

7 MARKS

- 01.**What is an echo?
 - a.**State two conditions necessary for hearing an echo.
 - b.**What are the medical applications of echo?
 - c.**How can you calculate the speed of sound using echo?
- 02.**Compare the properties of alpha,beta and gamma radiations.

SCIENCE – BIO (LESSONS 16, 17)

Two Marks:

1. Why is vegetative propagation practiced for growing some types of plants?
2. Write the difference between endocrine and exocrine gland.
3. Which is life-saving hormone? Why it is called so?
4. What is the role of Parathormone?
5. Why are family planning methods not adopted by all the people of our country?
6. What is Parthenocarpic fruit? Give an example.
7. How does the developing embryo, gets its nourishment inside the mother's body?
8. Write the characteristics of insect pollinated flowers.
9. Name the hormones which regulate water and mineral metabolism in man.
10. How can menstrual hygiene be maintained during menstrual days?
11. Minerals in the plants are not lost during the falling of leaves. Give reason.
12. What are the hormones secreted by posterior lobe of the pituitary gland? Mention the tissues on which they exert their effect.
13. What is colostrum? How milk production is hormonally regulated?
14. Which hormone in plants is known as stress hormone? Why?
15. Which hormone requires iodine for its formation? What will happen if intake of iodine in our diet is low?

Four Marks:

16. A. Write the events involved in sexual reproduction of flowering plants.
B. Discuss the first event and write the types and mention the advantages and disadvantages of that event.
17. Name the gaseous plant hormone. Describe its three different actions in plants.
18. Where are estrogens produced? What is the role of estrogens in human body?
19. What are the two types of Auxins? Give an example each.
20. A. Draw a neat labeled diagram of the structure of anther.
B. Draw a neat labeled diagram of human sperm.

Seven Marks:

21. With a neat labeled diagram, describe the parts of the typical angiospermic ovule.
22. Describe an experiment which demonstrates that growth stimulating hormone is produced at the tip of the coleoptile.
23. Write the physiological effects of gibberellins.
24. What are the different phases of the menstrual cycle indicate the changes in the ovary and uterus?
25. What are the conditions which occur due to lack ADH and insulin? How are the conditions different from one another?
