

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86**  
**(For candidates admitted during the academic year 2011–12 & thereafter)**

**SUBJECT CODE: 11CH/PI/NP24**

**M.Sc. DEGREE EXAMINATION, APRIL 2015**  
**BRANCH IV- CHEMISTRY**  
**SECOND SEMESTER**

**REG. NO. \_\_\_\_\_**

**COURSE: INDEPENDENT ELECTIVE**

**PAPER : CHEMISTRY OF NATURAL PRODUCTS**

**TIME : 30 MINUTES**

**MAX.MARKS: 20**

**SECTION – A**

**(20x1 =20)**

**ANSWER ON THE QUESTION PAPER ITSELF:**

**Answer all the questions:**

**I Choose the correct answer the following:**

1. The optically inactive amino acid is  
a) Lysine                      b) Sereine                      c) Glycine                      d) Alanine
2. Action of nitrous acid on glycine gives  
(a) lactone                      (b) alanine                      (c) lactic acid                      (d) acetic acid
3. The solvent used in the extraction of steroids  
a) chloroform                      b) benzene                      c) water                      d) ether
4. What is the major source of terpenoids?  
a) petroleum                      b) sea water                      c) animal fats                      d) plant oils
5. Quercetin is an example for  
a) Steroids                      b) flavones                      c) alkaloids                      d) terpenoids

**II State whether true or false:**

6. Only 20 naturally occurring amino acids are present in proteins.
7.  $\alpha$ - pinene is a diterpene
8. Alkaloids are biologically active alkenes.
9. Insulin is a steroidal hormone
10. Cyanidins on hydrolyses yield glucose.

**III Fill in the blanks:**

11. The protein that contains iron is \_\_\_\_\_.
12. gly-ala-val is named \_\_\_\_\_
13. The fundamental structural unit of terpenoid is \_\_\_\_\_
14. The yellow pigments of plants are called \_\_\_\_\_
15. The structure of steroids are based on \_\_\_\_\_ skeleton.

**IV. Answer the following in one or two lines:**

16. What is isoelectric point?
  
  
  
  
  
  
  
  
  
  
17. List out the essential amino acids.
  
  
  
  
  
  
  
  
  
  
18. State isoprene rule.
  
  
  
  
  
  
  
  
  
  
19. What are alkaloids?
  
  
  
  
  
  
  
  
  
  
20. Give any one colour reaction of sterols.

\*\*\*\*\*

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86**  
**(For candidates admitted during the academic year 2011–12)**

**SUBJECT CODE: 11CH/PI/NP24**

**M.Sc. DEGREE EXAMINATION, APRIL 2015**  
**BRANCH IV- CHEMISTRY**  
**SECOND SEMESTER**

**COURSE: INDEPENDENT ELECTIVE**

**PAPER : CHEMISTRY OF NATURAL PRODUCTS**

**TIME : 2½ HOURS**

**MAX.MARKS: 80**

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS**

**(5x6=30)**

1. What is the action of amino acids on  
i) HCHO (ii) FDNB (iii) CO<sub>2</sub>
2. How will you synthesise coniine?
3. Discuss the pharmaceutical application of any three alkaloids.
4. Explain the general methods of structure determination of flavanoids
5. Discuss the structural relationship bet Quercetin, cyanidin and epicatechin .
6. How are proteins classified based on their structure and composition?
7. What are steroid hormones? How will you synthesise progesterone?

**SECTION – C**

**ANSWER ANY TWO QUESTIONS**

**(2x20=40)**

8. a) Explain the primary, secondary and tertiary structures of protein.  
b) Elucidate the structure of cyanidin. (10+10)
9. a) Elucidate the structure of nicotine.  
b) Discuss the general methods of extraction of terpenoids. (10+10)
10. Describe the isolation, clinical significance and structural elucidation of cholesterol.

\*\*\*\*\*

