

Seat No. :

NI-108

November-2013

M.Sc. Sem.-III

CHE(O) 501, Organic Chemistry
 (Natural Product and Biomolecules)

Time : 3 Hours

Max. Marks : 71

Instructions : (1) All questions are compulsory.

(2) Figures to the right indicate full marks.

1. (A) Answer the following :

(1) What are anthocyanins and anthocyanidins? [Give one general method for the synthesis of anthocyanidin. Give synthesis of Quercetin.] P 4

(2) Discuss the geometry and aromatic character of porphyrin. [Give one synthesis of dipyrromethene.] 2+15+14 = 30 P 3

OR

Q. 1) Discuss general chemical properties of flavones. Prove the presence and position of glucose units present in anthocyanin. P 4

(2) Give evidences for the presence of porphyrin nucleus in chlorophyll and derive conclusion. P 3

B) Answer the following :

(1) Give synthesis of

(a) $\omega, 3, 4$ - Trimethoxy acetophenone from veratic acid. P 4

(b) 2-Hydroxy 4, 6 - dimethoxy benzaldehyde from phloroglucinaldehyde. P 3

(2) Differentiate haem and haemin. Discuss the degradation product of haemin under different condition. P 3

OR

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P.T.O.

5. Answer the following:

(1) What is meant by solet band in porphyrin?

(2) Give name and structure of product when delphinidin chloride is fused with alkali.

(3) Give name and structure of two pyrrole and pyrone pigment.

(4) The haemoglobin consist which of two parts? Mention their names.

(5) Giving necessary reaction discuss weerman test.

(6) Discuss relationship between morphin, codein and dielamine.

(7) Give structure of diels hydrocarbon, chrysene and picene.

(8) Give structural formula of any two corticoids.

(9) How the double bonds in ergosterol are determined?

(10) Define isoprene and special rule giving example.

(11) How will you detect alkyl and isopropyl groups in terpenoids?

(12) Giving example distinguish Vitamins and hormones.

(13) Define alkaloid. Give justification for colchicines to be alkaloid.

(14) Give name of any two monocyclic or bicyclic terpenoids.