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Total Number of Pages: 01

MPHARM
M.PH2F.5

2nd Semester Regular / Back Examination – 2016-17
CHEMISTRY OF NATURAL PRODUCTS
BRANCH(S): PHARMACOGNOSY
Time: 3 Hours
Max Marks: 70
Q.CODE: Z1154

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions: (2x10)**
- a) What is chemical shift? Mention two different scales used to measure it.
 - b) What is special isoprene rule?
 - c) Where do you get the absorption bands for the following in I.R. (a) NO₂ (b) N-H.
 - d) Mention any three factors affecting production of secondary metabolites in medicinal plant.
 - e) Write the role of Herzig-Meyer reaction in determination of structure of alkaloids.
 - f) Write the structure of scillaridin-A.
 - g) What is Barbier-Wieland degradation?
 - h) What is acetate hypothesis?
 - i) How can you isolate cardiac glycosides?
 - j) What happens when vitamin-A is treated with hydrogen and what does it indicate?
- Q2 Discuss the degradative and synthetic evidences in establishing the structure of atropine. (10)**
- Q3 Mention the various techniques used in biosynthetic studies. Explain how they are useful in phytochemical analysis. (10)**
- Q4 What are cardiac glycosides? Differentiate between cardenolides and bufadienolides. Explain the chemistry of digitoxin. (10)**
- Q5**
- a) Write short notes on Chemistry of Streptomycin (5)
 - b) Explain briefly about Chemistry of Nicotinamide (5)
- Q6**
- a) Discuss briefly on Corticosteroids (5)
 - b) Discuss about the Chemistry of Cholesterol (5)
- Q7 Describe the biogenetic hypotheses leading to the formation of alkaloids (10)**
- Q8 Give an account on (5x2)**
- a) Chemistry and therapeutic activity of Tetracycline
 - b) Commercial production and chemistry of Folic acid