THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

(LM 4258) FEBRUARY 2018 **Sub. Code: 4258**

B.PHARM. DEGREE EXAMINATION
SECOND YEAR
PAPER III – ADVANCED PHARMACEUTICAL ORGANIC CHEMISTRY

Q.P. Code: 564258

Time: Three hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. Explain the following reactions as synthetic tools:
   a) Oxidation with lead tetra acetate and periodic acid.
   b) Beckmann rearrangement and Schmidt rearrangement.

2. a) Define and classify terpenoids with example.
   b) Write the chemistry of alpha terpineol.

II. Write notes on: **(8 x 5 = 40)**

1. Explain the various elements of symmetry with example.
2. Explain the chemistry of caffeine.
3. Discuss on tetrahedral carbon atom and stereochemistry of cyclic compounds.
4. Explain the sequence rules relating the R & S configuration.
5. Describe the common method of isolation of alkaloid.
6. Write the electrophili reaction of pyrrole.
7. Explain the chemistry of Vitamin A.
8. Discuss the pharmacological activity of atropine and related alkaloids.

III. Short answers on: **(10 x 2 = 20)**

1. What is clemmenson's reduction?
2. Define Stereomutation.
3. Mention the medicinal uses of Vitamin B_6 and $B_{12.}$
4. Write the difference between enantiomer and diastereomer.
5. Give any two important reactions of isoxazole.
6. What is Walden inversion?
7. Define glycosides and name any two glycosides.
8. Write the structure and uses of papaverine.
9. Give the structure and uses of menthol and thymol.
10. Write the structural difference between theophyllin and theobromine.

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