

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103**

First Periodic Test of Semester-I Examination – October – 2017

Model Answer

Branch: M. Pharm (Pharmaceutical Chemistry)

Sem.:- I

Subject with Subject Code: Chemistry of Natural Product (MPC103T)

Date: 12/10/2017

Time: 1:30 Hr.

Marks: 30

Instructions: All questions are compulsory (Marks)

Q.No.1 Solve any Five out of seven (10)

a.) Which of the following compounds is characteristic of Rauwolfiae radix?

- A) Physostigmine B) Quinidine C) Reserpine D) Cytisine

Ans. (C)

b.) Which of the following is an alkaloid with a Purine skeleton?

- A) Hygrine B) Theobromine C) Ephedrine D) Strychnine

Ans. (B)

c.) Ergot is the.....of the fungus Claviceps purpurea.

- A) Vegetative form B) dried sclerotium C) ascospore D) conidiospore

Ans. (B)

d.) Macrolide antibiotics contain

- A) a large macrolcyclic lactone ring B) a macrolide ring
C) some sugar D) all answers are correct.

Ans. (D)

e.) Which of the following explanations is why morphine can be separated from its accompanying Alkaloids?

- A) Morphine contains a piperidine ring.
B) Morphine contains two methoxy groups.
C) Morphine contains a phenolic hydroxyl group whereas the accompanying alkaloids have none.
D) Morphine does not contain phenolic hydroxyl group whereas the accompanying alkaloids contain one.

Ans. (C)

f.) Erythromycin is acid sensitive. Which of the following processes is responsible for this instability ?

- A) The acid catalysed hydrolysis of the lactone.
B) The acid catalysed intramolecular hydrolysis of the lactone aided by alcohol.
C) The acid catalysed intramolecular formation of a ketal involving the ketone and the two alcohol groups.
D) The acid catalysed intramolecular formation of a ketal involving the ketone and the diol .

Ans. (C)

g.) The semi-synthetic preparation of azithromycin involves a Beckmann rearrangement of the following intermediate. The rearrangement involves the oxime and one other functional group in the structure. Which functional group is involved?

- A) The alcohol at position 11
- B) The alcohol at position 6
- C) The alcohol at position 12
- D) The alcohol in the desoxamine rings

Ans. (B)

Q.No. 2 Attempt any two of the following: (10)

a.) Write a note on Extraction of Alkaloids

Ans. Enlist all extraction method and explain in detail of any two

b.) Write an elaborate account on chemical and pharmacological profile of Reserpine

Ans. Explain Chemical profile with structure 5 marks and Pharmacological profile 5 marks.

c.) Write a note on Cephalosporine

Ans. Discuss in detail from sources, classification, SAR, mechanism and Therapeutic Uses.

Q.No 3. Attempt any one of the following (10)

a.) Describe in brief chemistry of flavonoids, how are flavonoids isolated?
Explain with example of Quercetin.

Ans. Chemistry of flavonoids 2.5 marks, Explanation of isolation method in short 2.5 marks.
Chemistry and isolation of Quercetin flavonoids 5 marks

b.) Write method of extraction, characterization and structural elucidation of Morphine.

Ans. Extraction 2.5 marks, Characterization 2.5 marks and structural elucidation of morphine
Discuss of UV, IR, NMR and MASS spectra for 5 marks.