

**SVKM'S NMIMS**

**Shobhaben Pratapbhai Patel / School of Pharmacy & Technology Management**

Programme: B. Pharm / B. Pharm + MBA ✓

Year: III

Semester: V ✓

Academic Year: 2019-20

Marks: 75 ✓

Subject: Pharmacognosy and Phytochemistry II – Theory ✓

Time: 10.00 am to 1.00 pm

Duration: 3 hrs. ✓

Date: 25 November 2019 ✓

No. of Pages : 02

**FINAL EXAMINATION**

**Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.**

- 1) Question No. 1 is compulsory.
- 2) Question No. 2 will have 3 questions of 10 marks each (answer any 2 out of 3)
- 3) Question No. 3 will have 9 questions of 5 marks each (answer any 7 out of 9)
- 4) Candidates are requested to attempt all questions as specified above.
- 5) Answer to each new question to be started on a fresh page.
- 6) Figures in brackets on the right hand side indicate full marks.
- 7) Assume suitable data and draw diagram if necessary.

Q.1	Objectives (10X2 marks each) <ol style="list-style-type: none"> <li>1. Explain the function of synthase and dehydratase enzymes in biosynthetic pathway.</li> <li>2. Name any four secondary metabolites that are formed using shikimate pathway</li> <li>3. Give the biological source of Pterocarpus.</li> <li>4. Enlist any four important chemical constituents present in Vinca plant.</li> <li>5. Write the therapeutic use of <i>Artemisia cina</i> and <i>Artemisia annua</i>.</li> <li>6. Explain vitali morin's test used for identification of atropine.</li> <li>7. Write therapeutic utilization of Forskolin.</li> <li>8. Name chemical class of Taxol and explain its therapeutic use.</li> <li>9. Differentiate between maceration techniques used for organized drug is different to that used for unorganized drug extraction.</li> <li>10. Write any four advantage of HPTLC over TLC process.</li> </ol>	(20 marks)
Q.2	Long Answers (answer 2 out of 3) <ol style="list-style-type: none"> <li>1. Explain and write each step of the Acetate mevalonate pathway used for the biosynthesis of squalene in plants.</li> <li>2. Explain the process of isolation, identification, estimation and uses of caffeine.</li> <li>3. Discuss in detail the principle, procedure and application of super critical fluid extraction technique with its advantages and limitations.</li> </ol>	(20 marks)

Q.3	Long Answers (answer 7 out of 9) <ol style="list-style-type: none"><li>1. Explain the significance of rauwolfia with respect to its source, chemical constituents, therapeutic uses and commercial application in pharmaceutical industry.</li><li>2. Write b.s, c.c. and uses of colophony &amp; coriander.</li><li>3. Write a note on use of belladonna in pharmaceutical industry.</li><li>4. Draw and explain the principle, procedure and uses of counter current extraction method.</li><li>5. Explain the source, isolation process and utilization of Diosgenin.</li><li>6. Explain the source, physiochemical properties and utilization of citral.</li><li>7. Explain the principle, procedure and applications of gas liquid chromatography as a separation technique.</li><li>8. Write the industrial production and utilization of Artemisinin as phytoconstituent.</li><li>9. Write a note on importance of tea catechins in pharmaceutical industry</li></ol>	(35 marks)
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