

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VI • EXAMINATION – SUMMER 2015**

**Subject Code:163605****Date:14/05/2015**

**Subject Name: Technology of Solid Dosage Forms & Medicinal Natural  
 Products (Department Elective-VI)**

**Time:10.30AM-01.00PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Give biosynthesis of Phenylalanine from Phosphoenolpyruvate by Shikimate pathway. **07**  
 (b) Write different microencapsulation techniques for preparation of microcapsules. **07**
- Q.2** (a) Outline the biosynthesis of Bilirubin. **07**  
 (b) Give biosynthesis of DMAPP and IPP by Mevalonate pathway in Terpenes biosynthesis. **07**
- OR**
- (b) Write down structure and salient features of Porphine- the simplest Porphyrin. **07**
- Q.3** (a) Discuss in detail 'Digestion' and 'Decoction' as extraction process for crude drugs. **07**  
 (b) (i). Write the difference between Hard & Soft gelatin capsules. **04**  
 (ii). Write different steps involved in making of empty gelatin capsules. **03**
- OR**
- Q.3** (a) Discuss in detail drugs of mineral origin. **07**  
 (b) Define Pharmacognosy. Classify natural sources of drugs **07**
- Q.4** (a) (i). Define below mentioned: (1).Unit Operation (2). Tablet (3).Capsule (4). Microcapsule (5). Preformulation. **05**  
 (ii). Mention different Preformulation studies. **02**  
 (b) (i). List out the different ingredients used in the tablet formulation with examples. **03**  
 (ii). Write a note on the processing problems in tablet manufacturing **04**
- OR**
- Q.4** (a) What are the different tablet preparation methods? Give an account on it. **07**  
 (b) Explain tablet packaging methods with examples. **07**
- Q.5** (a) Outline the biosynthesis of Flavonoids and describe the role of Pelargonidine in coloration of flowers. **07**  
 (b) (i). Write short notes on Isoprene rule. **03**  
 (ii). Give mechanism of Baker-Venkataraman rearrangement. **04**
- OR**
- Q.5** (a) Write short notes on: (1). Calamine, (2). Mica, (3). Kieselgur **07**  
 (b) Write short notes on: (1). Adulteration of herbal drugs, (2). Isolation of menthol. **07**

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