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SARDAR PATEL UNIVERSITY  
M. Sc. Pharmaceutical Chemistry (Semester-II) Examination  
Tuesday, 17/04/2018; Time-10:00 AM to 01:00 PM  
SUBJECT CODE: PS02EPCH21  
SUBJECT TITLE: Chemistry of Natural Product II

Maximum Marks: 70

Note: (1) All questions are compulsory.  
(2) Figure to right indicates total marks of question.

Q-1 Choose the correct option for the following:

1 × 8

1. The term alkaloid or alkali like was proposed by:
  - a. W. Meissner
  - b. Chadwick
  - c. Rutherford
  - d. None
2. The position of double bond in codeine or morphine is between
  - a. C<sub>17</sub>-C<sub>18</sub>
  - b. C<sub>7</sub>-C<sub>8</sub>
  - c. C<sub>4</sub>-C<sub>5</sub>
  - d. None
3. Saponins are categorised according to number of \_\_\_\_ in their structure:
  - a. Carboxylic group
  - b. H-Bond
  - c. Salt chain
  - d. None
4. Active principal of the rauwolfia species is:
  - a. Lysergic acid
  - b. Textaline
  - c. Ambelline
  - d. Reserpine
5. -CO-NH- bond is known as
  - a. Polyamide bond
  - b. Peptide bond
  - c. Amino bond
  - d. None
6. Denaturation occurs most readily near the
  - a. Isoelectric point
  - b. Flash point
  - c. Eutectic point
  - d. None
7. The substance first isolated from urine and it's found in many gums
  - a. Paracetamol
  - b. Ginkgolides
  - c. Glucuronic acid
  - d. None
8. The genus name is derived from Greek godas and queen of Caria.
  - a. Taxine
  - b. Ginkgolides
  - c. Glucuronic acid
  - d. Artemisinin

Q-2 Answer the following (Any Seven).

2 × 7

1. Write the functions of alkaloids.
2. Show the position of double bond in codeine scaffold.
3. Define sterols.
4. Give the classification of sterols
5. Describe the nomenclature of alkaloids.
6. Describe the uses of proteins.

(1)

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7. What are the major composition of protein?
8. How will you diagnose the toxicity of taxine
9. Describe the properties of gluconic acid.
- Q-3 A. Give the classification and isolation of alkaloids. 6  
B. Establish the position of Oxygen atoms in Phenanthrene. 6
- OR
- B. Describe the structure of Resperic acid. 6
- Q-4 A. Describe the Extraction and uses of Diosgenin. 6  
B. Justify the position of the hydroxyl group in Cholesterol Moiety. 6
- OR
- B. Justify the position of angular methyl group in Cholesterol. 6
- Q-5 A. Give the classification of peptide and highlight the structure of poly-peptides. 6  
B. What is the importance of removal of the protecting group in the poly-peptide synthesis with suitable example? 6
- OR
- B. Write a note on chemistry of insulin. 6
- Q-6 A. Write a short note on Taxine. 6  
B. Describe the chemistry and SAR of Camptothecin. 6
- OR
- B. Describe Ginkgolides and give its bio-synthesis. 6