

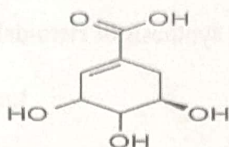
Duration: 3 Hours

Total marks: 75

- N.B.: 1. All questions are compulsory  
2. Figures to right indicate full marks

Q. I Choose appropriate option for following multiple choice based questions. 20

1 The following structure leads to synthesis of \_\_\_\_\_.



- a Amino acids
  - b Fatty acids
  - c Sterols
  - d Terpenes
- 2 Following is a primary metabolite
- a Glycol
  - b Glucose
  - c Glycerol
  - d Glycyrrhizin
- 3 Forskolin belongs to the family
- a Lamiaceae
  - b Liliaceae
  - c Leguminosae
  - d Loganiaceae
- 4 \_\_\_\_\_ will respond to Vitali Morin's test
- a Artemisia
  - b Belladonna
  - c Licorice
  - d Opium
- 5 Reserpine on first step of hydrolysis gives
- a Reserpic acid+Methanol
  - b Reserpic acid+Ethanol
  - c Methyl reserpate+Trimethoxy benzoic acid
  - d Ethyl reserpate+Trimethoxy cinnamic acid
- 6 Rutin belong to \_\_\_\_\_ class of phytoconstituent
- a Tannin
  - b Alkaloid
  - c Flavonoid
  - d Volatile oil

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Page 1 of 4

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- 7 An example of anticancer drug is
- Pterocarpus
  - Podophyllum
  - Pudina
  - Peppermint
- 8 Following drug is used for the synthesis of steroidal hormone:
- Dioscorea
  - Dill
  - Duboisia
  - Dhanawantari
- 9 Vittae are found in
- Fennel
  - Clove
  - Cinchona
  - Cinnamon
- 10 Menthol is commercially produced from
- Mentha piperata*
  - Mentha arvensis*
  - Mentha spicata*
  - Mentha Canadensis*
- 11 Which of the following is not the use of Forskolin?
- Vasodilating agent
  - Antidepressant agent
  - Antibiotic agent
  - Antiasthmatic agent
- 12 \_\_\_\_\_ is the synonym of Colophony
- Reserpine
  - Resin
  - Rosin
  - Ricin
- 13 Guggulosterone is present in
- Cassia acutifolia*
  - Cinchona calisaya*
  - Commiphora mukul*
  - Carum carvi*
- 14 Schoenteten test is also called as \_\_\_\_\_.
- Baljet test
  - Biuret test
  - Burchardt test
  - Borax test

- 15 Alexandrian senna is \_\_\_\_\_  
 a *Cassia angustifolia*  
 b *Cassia abbreviata*  
 c *Cassia acutifolia*  
 d *Cassia obovata*
- 16 \_\_\_\_\_ contains indole in its structure.  
 a Atropine  
 b Reserpine  
 c Resveratrol  
 d Aporphine
- 17 Enoxolone is nothing but  
 a Glycyrrhetic acid  
 b Anthraquinone  
 c Gallic acid  
 d Gluconolactone
- 18 Spectroscopy is interaction between  
 a Electromagnetic radiation and matter  
 b Electromagnetic radiation and visible rays  
 c Electromagnetic radiation and ultra violet rays  
 d Electromagnetic radiation and ultra violet-visible rays
- 19 Caffeine chemically is  
 a 1,3-dimethylxanthine  
 b 1,3,7-trimethylxanthine  
 c 3,7- dimethylxanthine  
 d 1,3,7,9-tetramethyl xanthine
- 20 Electrophoresis is a technique used for  
 a Purification of Alkaloids  
 b Separation of lipids  
 c Identification of volatile oils  
 d Separation of DNA, RNA or Proteins

**Q. II Answer any TWO out of THREE** **20 M**

- A**
- 1 Answer the following **10 M**  
 a. Illustrate various Investigation techniques for biogenetic pathways  
 b. Write source, structure, isolation, analysis and uses of Menthol
- 2 Write industrial production and utilization of the following: **10M**  
 1. Atropine  
 2. Artemisinin
- 3 Enlist all modern methods of extractions, draw well labelled diagram of pressurized solvent extraction write note on chemical reaction based extraction with suitable example. **10M**

- Q.II Answer any SEVEN out of NINE 35 M**
- B.**
- 1 Elaborate shikimic acid pathway with names & structures. 5 M
  - 2 Classify Saponin Glycosides and write a note on one drug belonging to the category. 5 M
  - 3 Write source and phytochemistry of a Narcotic Drug. 5 M
  - 4 Give phytochemistry and uses of *Digitalis purpurea*. 5 M
  - 5 What are bitter glycosides? Write source, chemistry & uses of Gentian. 5 M
  - 6 Write source, structure, isolation and analysis of Quinine. Differentiate between Quinine and Quinidine. 5 M
  - 7 What are terpenoids? Write source, structure, isolation and analysis of Citral. 5 M
  - 8 Write any five conventional methods of extraction in detail. 5 M
  - 9 Give principle, procedure and applications of TLC. 5 M
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