

**B. PHARM.**  
**FIFTH SEMESTER**  
**PHARMACOGNOSY AND PHYTOCHEMISTRY –II**  
**BP504T [SPECIAL REPEAT]**  
[USE OMR SHEET FOR OBJECTIVE PART]

**SET**  
**A**

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

**PART-A: Objective**

Marks : 20

Choose the correct answer from the following:

1×20=20

- Precursor for the biosynthesis of tropane alkaloids is
  - Ornithine
  - Tyrosine
  - Leucine
  - Lysine
- Steroidal saponins are biosynthesized via
  - Shikimic acid pathway
  - Mevalonic acid pathway
  - Aceto-Acetate pathway
  - Calvin's cycle
- How many aromatic amino acid are derived from shikimate pathway
  - 1
  - 2
  - 3
  - 4
- Vinca alkaloid (Vincristine and Vinblastine) used for the treatment of
  - Hodgkin's disease
  - Haemocytic leukemia
  - Lymphoblastic leukemia
  - All of the above
- Etoposide and teniposide (potent anticancer drugs) are the semi synthetic derivative of ..
  - Taxol
  - Vincristine
  - Podophyllotoxin
  - Digoxin
- Sesquiterpene lactone endoperoxide ring (endoperoxide 1,2,4-trioxane ring) present In..
  - Diosgenin
  - Artemisinin
  - Fenchone
  - Forskolin
- Diosgenin obtained from the tubers of *Dioscorea deltoidea* is chemically..
  - Triterpenoid
  - Bufadenolides
  - Steroidal saponin
  - Iridoid
- Podophyllotoxin is obtained from which part of *Podophyllum hexandrum* ?
  - Fruits
  - Leaves
  - Stem and bark
  - Rhizome or root
- Sennoside is used as ..
  - Cardiotonic
  - Laxative
  - Severe stress
  - Hypoglycemic

10. Drug used for treating cerebral malaria ..
- |              |                |
|--------------|----------------|
| a. Amygdalin | b. Gentisin    |
| c. Barbaloin | d. Artemisinin |
11. Which of the following is not a quantitative chromatographic technique?
- |   |                          |
|---|--------------------------|
| a. Thin Layer Chromatography              | b. Column Chromatography |
| c. High Performance Liquid Chromatography | d. None of the above     |
12. Galenical is a term used for....
- |                     |                  |
|---------------------|------------------|
| a. Menstruum        | b. Extract       |
| c. Both 'a' and 'b' | d. None of these |
13. The family of Digitalis is...
- |                     |                 |
|---------------------|-----------------|
| a. Scrophulariaceae | b. Labiatae     |
| c. Lamiaceae        | d. Papaveraceae |
14. The Biological source of Curcumin is...
- |  |   |
|--|---|
| a. Dried rhizomes of <i>Curcuma longa</i>        | b. Dried aerals of <i>Curcuma longa</i>         |
| c. Dried rhizomes of <i>Zingiber officinales</i> | d. Dried stolons of <i>Papaverum somniferum</i> |
15. The biological source of Clove is...
- |  |   |
|--|---|
| a. Dried flowerbuds of <i>Catharanthus roseus</i>  | b. Dried flowerbuds of <i>Atropa belladonna</i> |
| c. Dried flowerbuds of <i>Eugenia caryophyllus</i> | d. All of these                                 |
16.  $R_f$  is useful in.....
- |                  |                     |
|------------------|---------------------|
| a. Fractionation | b. Chromatoraphy    |
| c. Isolation     | d. All of the above |
17. Atropine, Reserpine, Caffeine are all which class of drugs?
- |               |               |
|---------------|---------------|
| a. Glycosides | b. Alkaloids  |
| c. Resins     | d. Flavonoids |
18. Mentha and Citral can be isolated by which technique?
- |                            |                       |
|----------------------------|-----------------------|
| a. Hydro distillation      | b. Steam distillation |
| c. Fractional distillation | d. All of the above   |
19. Soxhelet apparatus is used in which extraction method?
- |                         |                              |
|-------------------------|------------------------------|
| a. Digestion Technique  | b. Hot Percolation Technique |
| c. Maceration Technique | d. Both 'b' and 'c'          |
20. The biological source of Opium is...
- |   |  |
|---|--|
| a. Dried capsules of <i>Atropa belladonna</i> | b. Dried capsules of <i>Papaver somniferum</i> |
| c. Both 'a' & 'b'                             | d. None of the above                           |



**PART-B: Descriptive**

Time : 2 hrs. 30 min.

Marks : 35

*[ Answer any seven (7) questions ]*

1. Draw general scheme for amino acid production through pathway. 5
2. Discuss various methods of tracer technique. 5
3. How vinca alkaloids are isolated and estimated? 5
4. Write down the different steps involved in radioactive tracer technique? 5
5. Describe the applications of Chromatographic techniques in Pharmacognosy? 5
6. Elaborate the different extraction techniques with examples? 2.5+2.5  
=5
7. What is the biological source of Reserpine? Give the isolation technique of Reserpine? 1+4=5
8. Explain the Soxhlet Extraction Technique with Diagram? 1+4=5
9. What is R<sub>f</sub> Value? Explain the Differences between Paper Chromatography and Thin Layer Chromatography? 1+4=5

**PART-C : Long type questions**

*[ Answer any two (2) questions ]*

1. Write in short about the production, estimation and utilization of taxol. 4+3+3  
=10
2. Discuss elaborately Shikimic acid pathway along with its significance in the biosynthesis of secondary metabolites. 8+2=10
3. Write the Biological source, Chemical constituents and Pharmacological uses for any four herbal drugs. 2.5×4  
=10

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