

# SHAMBHUNATH INSTITUTE OF PHARMACY

JHALWA, PRAYAGRAJ

## **IMPORTANT QUESTION BASED ON PREVIOUS QUESTION PAPER**

NAME OF SUBJECT: **PHARMACOGNOSY AND PHYTOCHEMISTRY- II**

SUBJECT CODE: **(BP-504T)**

COURSE AND SEMESTER: **B. PHARM & 5<sup>TH</sup> SEMESTER**

TEACHER'S NAME: **SHAILESH PATHAK**

### **UNIT-I**

#### **Short questions:**

1. Define radiotracer technique. Enlist various detectors used in tracer techniques. **(2021, 24)**
2. Discriminate primary and secondary metabolites with example. **(2021)**
3. What are applications of amino acid pathway? **(2019, 21)**
4. Give biosynthetic flow of production of various primary and secondary metabolites. **(2022, 24)**
5. Explain the significance of acetate pathways in the plants. **(2023)**
6. Mention the role of mutant strains in Biogenetic investigations. **(2023)**

#### **Long questions:**

1. Explain in detail about shikimic acid biosynthetic pathway. **(2019, 21, 22, 23, 24)**
2. Write short note on Mevalonic Acid pathway **(2021)**
3. Describe Radiotracer technique. Enlist a few examples of radioactive isotopes that can be used in biogenetic studies. Discuss their applications in biogenetic studies. **(2023, 24)**

### **UNIT-II**

#### **Short questions:**

1. Differentiate hydrolysable and condensed tannins with example. **(2021)**
2. Write the bio-sources and medicinal uses of Benzoin and Clove. **(2021)**
3. Write biological source and chemical constituents of Tea and Taxol. **(2021)**
4. Bio-source of catechu and Asafoetida. **(2019, 21)**
5. Write composition and therapeutic uses of gentian and benzoin. **(2019 21)**
6. Therapeutic and commercial application of Senna and Vinca. **(2019, 21)**
7. Enlist various different species of senna. **(2020)**
8. Differentiate between cardenolides and bufadienolides.
9. Give the Biological Source of Squill.
10. Define pseudotannins.
11. Give the examples of Isoquinolenes and Imidazole alkaloids.
12. How to differentiate C- glycosides from O- glycosides.
13. Discuss chemical constituents and use of Asafoetida. **(2022)**
14. What is therapeutic significance of ginger? **(2022)**
15. Discuss physicochemical properties of resins. **(2022)**
16. What are biological sources and uses of Artemisinin. **(2022, 23, 24)**
17. What are biological sources and uses of Curcumin. **(2024)**
18. Elaborate the chemical constituents and uses of Opium. **(2023)**
19. Discuss the medicinal uses of Clove and Aloe. **(2023)**
20. Name any two alkaloids containing drugs and give their uses. **(2024)**

#### **Long questions:**

1. Discuss bio-sources, therapeutic uses and commercial applications of Opium and Digitalis.
2. Discuss complete pharmacognosy of Clove and Aloe. **(2024)**
3. Explore the biosources, chemical class, chemical constituents and therapeutic uses of Benzoin and

Guggul. (2024)

(2021, 22)

4. Describe bio-sources, compositions, chemistry and therapeutic uses of Licorice and Rauwolfia. (2022)
5. Pharmacognostical study of ligands. (2020)
6. Write composition, chemical class and therapeutic uses of Pterocarpus. (2020)
7. What are saponin glycosides? Write a short note on Dioscorea.
8. Describe briefly the chemistry and properties of tannins. How these are identified on the basis of chemical tests?
9. How is Black Catechu differentiated from Pale Catechu? Describe the biological source, chemical constituents, chemical tests and uses of Pale Catechu.
10. Discuss the biological source, chemical class, chemical constituents, identification tests, and therapeutic uses of Asafoetida and Digitalis. (2023)
11. Write down the complete Pharmacognosy of Aloe with their identification tests.
12. Write down the Biological Source, macroscopic, microscopic characters, chemical constituents & uses of Digitalis leaves.
13. Discuss in detail on Cynogenetic Glycosides
14. What is alkaloid? Classify the alkaloids according to chemical structure along with suitable examples.
15. Write a note on Glycosides? Discuss in details about Flavonol glycosides.
16. Write a note on cardiac Glycosides? Support your answer with their chemical tests.
17. Discuss biological source, chemical constituents and use of belladonna. Give extraction of atropine. (2022)
18. Discuss biological source, chemical constituents and use of ruta and extraction of citral. (2022)
19. Discuss biological source, chemical constituents and use of Rauwolfia and extraction of reserpine. (2022)
20. Describe the properties of Alkaloids. Illustrate the pharmacognosy of Rauwolfia. (2023)

### **UNIT-III**

#### **Short questions:**

1. Write down in detail about identification tests for Alkaloids.
2. Chemical tests of Saponin glycosides.
3. Chemical tests of Quinine. (2024)
4. Define tannin. Write chemical test of tannins. (2021)
5. What is Borntrager's test?
6. Enlist general chemical tests for terpenoids. (2020)
7. Write specific identification test for caffeine. (2020)
8. Give the chemical test used to identify saponins.
9. Write a short note on chemical tests for resins. (2020)
10. Write a note on gold-beater skin test.
11. Write chemical test used to identify Cardiac glycosides. (2021, 24)
12. Give chemical identification test of digoxin. (2022)

#### **Long questions:**

1. Explain isolation of Atropine and Podophyllotoxin. (2021)
2. Write about isolation, identification and analysis of Quinine. (2021)
3. Isolation of Rutin and Citral. (2020)
4. Discuss the source, utilization and isolation method of Caffeine. (2024)
5. Isolation, Identification and Analysis of Menthol. (2020)
6. Describe isolation and Analysis of Curcuma. (2020)

- Classify glycosides with suitable examples. Give the chemical tests used to identify flavonoids, cyanogenetic glycosides and alkaloids present in plant extracts.
- Mention physio-chemical properties of Resins. Discuss the isolation of Podophyllotoxin. (2023, 24)
- Describe isolation method for Atropine and Citral. (2023, 24)

#### **UNIT-IV**

##### **Short questions:**

- Write a short note on estimation of sennosides. (2021)
- Enlist therapeutic and commercial applications of senna and vinca.
- Explain the utilization of Diosgenin. (2023, 24)
- Define Tannins. Indicate the commercial applications of Tannins. (2024)

##### **Long questions:**

- Illustrate industrial production, estimation and utilization of Forskolin and Caffeine. (2020, 22)
- Describe about the industrial production and utilization of Sennosides and Digoxin. (2021)
- Describe Industrial production and estimation of Artemisinin. (2020)
- Explore industrial production, estimation and utilization of Sennosides. (2022, 23, 25)
- Discuss industrial production, estimation and utilization of Podophyllotoxin. (2022)
- Discuss the source, utilization and isolation method of Caffeine. (2023)

#### **UNIT-V**

##### **Short questions:**

- Define chromatography with suitable example. (2021)
- Differentiate TLC and HPTLC. (2021)
- Application of chromatography in the identification of the crude drugs. (2020)
- Enlist various modern methods used for extraction. (2021)
- Explain decoction process of extraction. (2022)
- What do you mean by theoretical plates in chromatography? (2022)
- Explain Stas-otto method for extraction. (2023)
- Differentiate between Infusion and Decoction. (2023)
- Illustrate the main principle of electrophoresis. (2024)
- Outline the factors to be considered for selecting solvent for extraction of crude drugs. (2024)
- Mention the applications of IR spectroscopy in characterization of phytoconstituents. (2023)

##### **Long questions:**

- Describe the application of HPLC techniques used for standardization of herbal drugs. (2021)
- Application of chromatographic techniques in the isolation, purification and identification of crude drugs. (2020, 24)
- Describe in detail about application of spectroscopic techniques used for quality control studies of herbal drugs. (2021)
- Application of HPTLC on the isolation and identification of crude drugs. (2020)
- Discuss in detail about the extraction and separation of phytoconstituents from fresh plant material.
- Define extraction? Write a note of successive solvent extraction of crude drugs by soxhlet extractor.
- Elaborate various chromatographic techniques with their significance. What is herbal finger printing. (2022)
- Write a note on application of various spectroscopic techniques in identification of crude drugs. (2022)
- Define Extraction. Elaborate the modern methods of extraction in detail. (2023, 24)
- Explain the role of TLC and HPTLC in isolation and purification of phytoconstituents. (2023)