BP504T – Pharmacognosy and Phytochemistry – II

Question Bank (As per PCI 2017 & MGR University)

REFERENCES:

- MGR University Question Papers
- C.K. Kokate – Pharmacognosy & Phytochemistry

UNIT I – Metabolic Pathways in Higher Plants

2 MARK QUESTIONS

1. Define metabolic pathway.
2. What is shikimic acid pathway?
3. Define acetate pathway.
4. What is amino acid pathway?
5. Define autoradiography.
6. What is competitive feeding?
7. Write two examples of secondary metabolites.
8. Define biogenetic studies.
9. What is liquid scintillation counter?
10. Mention two basic metabolic pathways.

5 MARK QUESTIONS

1. Explain shikimic acid pathway.
2. Describe acetate pathway with examples.
3. Explain amino acid pathway.
4. Role of radioactive isotopes in biogenetic studies.
5. Explain autoradiography.
6. Write a note on competitive feeding.

10 MARK QUESTIONS

1. Discuss in detail the basic metabolic pathways leading to biosynthesis of secondary metabolites.
2. Describe various methods for elucidation of biosynthetic pathways.
3. Explain utilization of radioactive isotopes in investigation of biogenetic studies.

UNIT II – Secondary Metabolites

2 MARK QUESTIONS

1. Define alkaloids.
2. Name alkaloids present in Vinca.
3. Write uses of Rauwolfia.
4. Mention constituents of Opium.
5. Define lignans.
6. Write constituents of Tea.
7. Mention source of Dioscorea.
8. Name volatile oil present in Clove.
9. Write constituents of Catechu.
10. Define resins.

5 MARK QUESTIONS

1. Pharmacognosy of Vinca.
2. Pharmacognosy of Rauwolfia.
3. Chemistry and uses of Opium.
4. Write a note on lignans.
5. Pharmacognosy of Tea.
6. Write a note on Dioscorea.
7. Pharmacognosy of Digitalis.
8. Write a note on Clove.
9. Compare pale and black catechu.

10 MARK QUESTIONS

1. Define and classify alkaloids. Explain Vinca.
2. Write biological source, chemistry and uses of Digitalis.
3. Describe volatile oil drugs with examples.
4. Explain resins with reference to Guggul and Benzoin.

UNIT III – Isolation, Identification and Analysis

2 MARK QUESTIONS

1. Write principle of chromatography.
2. Define electrophoresis.
3. What is HPTLC?
4. Write identification test for Atropine.
5. What is menthol?
6. Define citral.
7. Write uses of rutin.
8. What is podophyllotoxin?
9. Define curcumin.
10. What is glycyrrhetinic acid?

5 MARK QUESTIONS

1. Isolation and identification of Menthol.
2. Isolation and estimation of Glycyrrhetinic acid.
3. Isolation and identification of Atropine.
4. Isolation and identification of Quinine.
5. Isolation and analysis of Curcumin.
6. Role of column chromatography.
7. Applications of electrophoresis.

10 MARK QUESTIONS

1. Explain isolation, identification and analysis of phytoconstituents.
2. Describe isolation and identification of Quinine.
3. Explain isolation and analysis of podophyllotoxin.

UNIT IV – Industrial Production

2 MARK QUESTIONS

1. Write uses of Forskolin.
2. What are sennosides?
3. Mention source of diosgenin.
4. Write uses of caffeine.
5. Define taxol.
6. Name Vinca alkaloids.
7. Write source of atropine.
8. Define digoxin.
9. What is artemisinin?
10. Write therapeutic use of vincristine.

5 MARK QUESTIONS

1. Industrial production of Forskolin.
2. Estimation and uses of Sennosides.
3. Industrial production of Diosgenin.
4. Industrial production of Caffeine.
5. Industrial production of Podophyllotoxin.
6. Uses of Vinca alkaloids.

10 MARK QUESTIONS

1. Explain industrial production, estimation and utilization of Atropine.
2. Describe industrial production and uses of Caffeine.
3. Explain industrial production of Vinca alkaloids.

UNIT V – Basics of Phytochemistry

2 MARK QUESTIONS

1. Define extraction.
2. Write use of Clevenger apparatus.
3. Define chromatography.
4. What is spectroscopy?
5. Define electrophoresis.
6. Mention methods of volatile oil extraction.
7. Write principle of paper chromatography.
8. What is Soxhlet extraction?
9. Define supercritical fluid extraction.
10. Write applications of HPTLC.

5 MARK QUESTIONS

1. Modern methods of extraction.
2. Supercritical fluid extraction.
3. Applications of chromatography.
4. Role of spectroscopy in phytochemical analysis.
5. Applications of electrophoresis.
6. Write a note on Soxhlet extraction.

10 MARK QUESTIONS

1. Enumerate various methods of extraction and explain supercritical fluid extraction.
2. Elaborate chromatographic techniques used in phytochemical analysis.
3. Explain application of spectroscopy in identification of crude drugs.