

3. Enumerate the principle of maceration. Differentiate between infusion and decoction. 2.5 X 2=5
4. What is the eco-friendly, safe, time saving extraction technology. Write down its principle. 1+4=5
5. Describe Vitali—Morin's test and Liebermann—Burchard test. 2.5 x 2=5
6. Exemplify two monoterpenes based biological marker compounds. Draw their structures 2+1.5 x 2=5
7. Write down the analytical procedure of GLYCYRRHETINIC ACID? 5
8. What is the utilisation of Diosgenin ? Mention its chemical nature. 2.5 x 2=5
9. What are the analytical tools are used to elucidate the structure of phytocompounds. 5

★★★

2022/SEM/ODD/BP-504T/014

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**UG Odd Semester (CBCS) Examination, 2022
held in March 2023**

PHARMACEUTICAL SCIENCES

(5th Semester)

Course No: BP 504T

(Pharmacognosy and Phytochemistry II-Theory)

Full Marks: 75

Time: 3 Hours

The figures in the margin indicate full marks for the questions

I (A). Multiple choice questions 1x10=10

- i) TLC is an analytical tool
 - a) true
 - b) false
 - c) both a & b
 - d) all of the above
- ii) monoterpene is produced from
 - a) mevalonic acid
 - b) phenyl propanoic acid
 - c) acetyl malonic acid
 - d) aromatic amino acids
- iii) $R_x = 1$ implies that sample is
 - a) not impure
 - b) degraded
 - c) adulterated
 - d) none of the above
- iv) precursor compound of Quinine
 - a) METHIONINE
 - b) aromatic amino acid

(Turn Over)

- c) valine
d) tryptophan
- v) Acetone & ethyl acetate are the solvent of choice for extracting
- ALKALOID
 - STEROID
 - FLAVONOID
 - VOLATILE OIL
- vi) Dental analgesic formulation contains
- Glycyrrhiza glabra
 - Papaver somniferum
 - Eugenia caryopholia
 - none of the above
- vii) green colour is produced when ferric ammonium sulphate is added to dilute solution of
- black catechu
 - Clove
 - Aloes
 - Asafoetida
- viii) Quinine responds
- murexide test
 - Vitali -morin test
 - drangendorffs test
 - Thalleoquine test
- ix) Curcumin gives reddish pink colour with the treatment of
- conc. Sulphuric acid,
 - dilute Sulphuric acid
 - Hydrochloric acid
 - All of the above
- x) HEROIN is the diacetyl derivative of
- codeine
 - morphine

- c) papaverine
d) solasidine

I (B). Objective type (Answer the following in brief)

2x5=10

- What is radio-isotopes?
- Mention two bio-active compounds of Bitter almond.
- Indicate three major uses of forskolin.
- What is reverse phase TLC?
- Write one Flavonoidal glycosides and sesquiterpene lactone based phyto compound.

II. Long answers (Answer two out of three questions)

10x2=20

- Write Schematically with flow chart, by which secondary metabolites is produced from primary metabolites. Highlight the significance of radiotracer techniques. 5+5=10
- Mention one Vitamin P based Phyto compound. Write its structure. How it will be identified through phytochemical test. Write its analysis procedure. 1+2+3+4=10
- Differentiate between Analytical and Preparative TLC. What is R_f, hR_f, R_t ? Mention three detecting agents, used for detection of TLC chromatogram 4+3+3=10

III. Short answers (Answer seven out of nine questions)

5x7=35

- What is the difference between TLC and HPTLC ? 5
- Write down the application of TLC? 5