

Duration: 3 hours

Total marks: 75

N.B.: 1. Answer all questions sequentially.

2. Figures to right indicate full marks

Q1

Choose appropriate option for following multiple choice based questions

20M

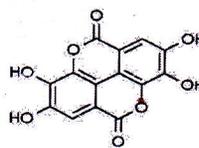
1 The term 'Pharmacognosy' was first coined by:

1M

- a Hippocrates
- b C.A. Seydler
- c Galen
- d Avicenna

2 Identify the given structure

1M



- a Anthraquinone
- b Terpenes
- c Hydrolysable tannins
- d Steroidal alkaloids

3 _____ is the classification based on phytoconstituents.

1M

- a Chemical
- b Pharmacological
- c Alphabetical
- d Morphological

4 The lycopodium spore method is used to estimate:

1M

- a Moisture content
- b Foreign organic matter
- c Microbial contamination
- d Purity of crude powder drug

5 Which leaf constant is expressed in the percentage number?

1M

- a Palisade ratio
- b Stomatal index
- c Vein-islet number
- d Veinlet number

6 Gibberellins are primarily used to:

1M

- a Promote root formation
- b Delay fruit ripening
- c Promote stem elongation
- d Induce flowering

- 7 Which technique involves crossing two genetically different plants?
 - a Mutation
 - b Cloning
 - c Polyploidy
 - d Hybridization

- 8 Which of the following is NOT a processing method for crude drugs?
 - a Grafting
 - b Drying
 - c Garbling
 - d Packaging

- 9 Which of the following best describes hallucinogens?
 - a Substances that improve physical strength and endurance
 - b Natural and synthetic substances that significantly alter consciousness when ingested
 - c Medications used to treat bacterial infections
 - d Chemicals that increase appetite and promote sleep

- 10 Which of the following exogenous factors has the greatest influence on the volatile oil content in clove buds?
 - a Wind speed
 - b Altitude
 - c Photo period
 - d Mutation

- 11 Which of these is an example of ex-situ conservation?
 - a Wildlife sanctuary
 - b National park
 - c Seed bank
 - d Natural landscaping

- 12 Which culture involves the cultivation of isolated plant cells in liquid medium?
 - a Callus culture
 - b Organ culture
 - c Meristem culture
 - d Suspension culture

- 13 Which of these is NOT a threat to medicinal plant conservation
 - a Overharvesting
 - b Deforestation
 - c Domestication
 - d Habitat loss

- 14 Which of the following is the biological source of jute? **1M**
- a *Gossypium herbaceum*
 - b *Corchorus capsularis*
 - c *Cannabis sativa*
 - d *Linum usitatissimum*
- 15 Which of the following enzymes is commercially used for the treatment of burns? **1M**
- a Bromelain
 - b Serratiopeptidase
 - c Papain
 - d Pepsin
- 16 Which plant-derived oil has both purgative and lubricant properties? **1M**
- a Linseed oil
 - b Chaulmoogra oil
 - c Castor oil
 - d Coconut oil
- 17 Which system uses the principle of "like cures like"? **1M**
- a Homeopathy
 - b Ayurveda
 - c Siddha
 - d Unani
- 18 Which test is used to detect the presence of alkaloids? **1M**
- a Molisch's test
 - b Dragendroff's test
 - c Seliwanoff's test
 - d Benedict's test
- 19 Which of the following is a typical property of natural resins, **1M**
- a They are physiological products of plants
 - b They are soluble in water
 - c They are brittle and hard at room temperature
 - d They form crystals on evaporation
- 20 An aqueous solution of _____ is hydrolysed with concentrated HCl, heated, and then treated with barium chloride, resulting in the formation of a white precipitate. **1M**
- a *Gelidium amansii*
 - b *Acacia senegal*
 - c *Astragalus gummifer*
 - d *Ricinus communis*

- Q.II
- 1 a Answer **any TWO** Of the following
- 1 a Give biological source, preparation method, chemical constituents and identification test for Acacia.
- b Draw heterocyclic nucleus and one example with uses and identification test for the following secondary metabolites
- i) Flavonoids
- ii) Quinazoline alkaloid
- 2 a Write a note on any two Physico-chemical methods of evaluation for DONO.
- b Define plant tissue culture and explain callus culture.
- 3 a Classify fibres based on source. Discuss any two lignified fibres used in pharmaceutical industry with suitable examples.
- b Give biological source, method of preparation, chemical constituents and identification test for animal-origin wax.

- Q.III
- 1 Answer **any SEVEN** of the following
- 1 Explain the collection of medicinal plants with a suitable example.
- 2 How does adulteration affect the quality of DONO?
- 3 Discuss any two proteolytic enzymes obtained from non-herbal sources.
- 4 i. Give the significance of Pharmacognosy in Unani Systems of Medicine.
- ii. Write a note on auxins.
- 5 Give advantages and disadvantages of Alphabetical and Chemo-taxonomical classification of DONO.
- 6 Write a note on plant allergens with suitable examples.
- 7 Draw a heterocyclic nucleus and one example with uses and identification tests for the following secondary metabolites
- i. Tropane alkaloid
- ii. Cardiac glycosides
- 8 Give salient features and applications of edible vaccine.
- 9 Classify volatile oil with examples and give its chemical tests.