

Total No. of Questions: 3

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Enrollment No.....



Faculty of Pharmacy

End Sem Examination May-2024

PY3CO17 Pharmacognosy & Phytochemistry -I

Programme: B. Pharm.

Branch/Specialisation: Pharmacy

Duration: 3 Hrs.

Maximum Marks: 75

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1
- Enlist different quantitative microscopic methods and define stomatal index with formula. 2
 - Give two examples of unorganised drugs with their biological sources. 2
 - Name two synthetic plant growth regulators used as auxins. 2
 - Give one example of chemical to cause polyploidy. 2
 - Define callus. What is ratio of auxin: cytokinin for shoot formation in plant tissue culture. 2
 - Define edible vaccines. 2
 - Give two examples of tannins with their biological Sources. 2
 - What is the principle of ayurvedic system of medicine? 2
 - Henben shows which property? 2
 - Write down any two examples of proteolytic enzyme with their biological source. 2
- Q.2
- Attempt any two:
- Define pharmacognosy. Explain different types of classification of crude drugs with example. 10
 - What are different factors affecting cultivation of medicinal plants? Explain in detail with examples. 10
 - Write short note on adulteration of drugs of natural origin. 5
 - Give brief account of polyploidy with reference to medicinal plants. 5

[2]

Q.3 Attempt any seven: Two questions from each section is compulsory.

Section - A

- Enlist different types of tissue culture. Explain steps involved in plant tissue culture. 5
- Write a note on advantages and limitations of edible vaccines. 5
- Explain different phases involved in plant tissue culture with diagrammatic representation of growth curve. 5

Section - B

- Explain role of pharmacognosy in Chinese system of medicine. 5
- Define alkaloids. Classify according to chemical nature of phytoconstituent with examples. 5
- Discuss classification of Glycosides on the basis of aglycon moiety. 5

Section - C

- Give an account of plant products showing Hallucinating activity. 5
- Briefly explain carbohydrates as primary metabolites in plant with agar and acacia as example. 5
- Write a note on marine drugs as novel medicinal agents. 5

Marking Scheme

Pharmacognosy & Phytochemistry -I (T) - PY3CO17 (T)

- Q.1
- List- 1 2
Definition and example – 0.5,0.5
 - Gum tragacanth and Acacia-1 2
Biological source- 1
 - Name two synthetic plant growth regulators used against Auxins 2
Indole-3-butyric acid, 2,4-dichlorophenoxy acetic acid
 - Best known chemical to cause polyploidy is **Colchicine** 2
 - Define callus 2
It is an unspecialised, unorganised and dividing mass of cell-1
Auxin and Cytokinins are used in ratio 4:1 leads to formation of **Shoot-1**
 - Definition-2 2
 - Name -1 2
Biological source-1
 - Tridosha 2
Pancbhuta
 - Henben shows **Hallucinating** property 2
 - Name -1 2
Biological source-1
- Q.2 Attempt any two:
- Define Pharmacognosy. Explain different types of classification of crude drugs with example. 10
Definition – 2
Classification- 8
a) Alphabetical with example
b) Taxonomical with example
c) Chemical with example
d) Pharmacological with example
e) Morphological with example
f) Chemotaxonomical with example
g) Serotaxonomical with example
 - What are different factors which affecting cultivation of medicinal plants explain in detail with examples. 10
a) Altitude temperature and humidity with example- 2
b) Rainfall with example- 2

- soil and soil fertility with example- 2
- Fertilizer with example- 2
- Pest and pest control with example- 2

- (a) Write short note on adulteration of drugs of natural origin 5
Definition- 1
Types with examples- 4

(b) Give brief account of Polyploidy with reference to Medicinal plants. 5
Definition- 1
Description and agents-2
Example -2

- Q.3 Attempt any seven: Two questions from each section is compulsory.
Section - A

- Types-2 5
Steps –3
- Write a note on Edible vaccines. 5
Definition - 1 Marks
Method of advantage - 2 Marks
Limitation – 2 Marks
- Explain different phases involved in Plant tissue culture with diagrammatic representation of growth curve. 5
Phases with description-3
Growth curve diagram- 2

Section - B

- Explain role of Pharmacognosy in Chinese system of medicine. 5
Principles and theory of Chinese system of medicine-3
Role -2
- Define Alkaloids. Classify according to chemical nature of phytoconstituent with examples. 5
Definition- 1 Marks
Classification with structure and example-3 (any six class)+Exmple= 4 Marks
a) Pyrrole and Pyrrolidine
b) Pyridine and Piperidine
c) Pyrazolidine
d) Tropane
e) Quinoline and Isoquinoline
f) Indole

- g) Imidazole
- h) Purine
- i) Steroidal

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|-----|------------------------------------|---------|----------|
| vi. | Classify Glycosides with examples. | | 5 |
| | Definition - | 1 Marks | |
| | Classes- | 4 Marks | |

Section - C

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|-------|--|---------|----------|
| vii. | Give an account of natural product showing hallucinating activity. | | 5 |
| | Definition - | 1 Marks | |
| | Any four Hallucinogens with their source, chemical constituent and uses- | 4 Marks | |
| viii. | Briefly explain carbohydrates as primary metabolites in plant with Agar and Acacia as example. | | 5 |
| | Definition- | 1 Marks | |
| | Acacia- | 2 Marks | |
| | Tragacanth- | 2 Marks | |
| ix. | Write a note on Marine drugs as novel medicinal agents. | | 5 |
| | Definition - | 1 Marks | |
| | Five examples with biological source- | 4 Marks | |
