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PG/2nd Sem/BOT/19

2019

M.Sc.

2nd Semester Examination

BOTANY

Paper - BOT 203

Full Marks : 40

Time : 2 Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Use separate script for separate units.

203.1

(Plant Anatomy)

[20 Marks]

1. Answer any *two* questions from the following :

2×2=4

- (a) What is totipotency ?
- (b) Define salt gland.
- (c) How specific gravity of wood can be calculated.
- (d) What are gelatinous fibres ?

[Turn Over]

2. Write short notes on any *two* of the following :

4×2=8

- (a) Chemical composition of wood;
- (b) Polarity;
- (c) Development of various laticifer structures; and
- (d) Trichomes in plants.

3. Answer any *one* of the following :

8×1=8

- (a) Mention the source, types and uses of plant fibres obtained from jute, cotton and coir. Write a short note on retting of jute. 6+2
- (b) Distinguish between primary and secondary xylem. Briefly describe the lignification patterns in xylem. What are the major types of xylary fibres ? 2+4+2

203.2

(Pharmacognosy)

[20 Marks]

4. Answer any *two* questions from the following :

2×2=4

- (a) What does it mean by organoleptic study of crude drugs ?

(3)

- (b) Differentiate between primary and secondary metabolites.
- (c) Give two chemical properties of alkaloids.
- (d) Define glycoside. Cite one example.
5. Answer any *two* questions of the following : 4×2=8
- (a) Describe in brief the biosynthesis of saturated fatty acids in acetate malonate pathway.
- (b) Mention the chemical characteristics and describe the micro-morphological characters of *Digitalis* leaves .
- (c) Mention the alkaloids obtained from *Rauwolfia* sp. and their respective uses.
- (d) Mention the microscopical characters of *Cinchona* sp.
6. Answer any *one* of the following : 8×1=8
- (a) Give a brief account of shikimic acid pathway.
- (b) Briefly describe the classification of glycosides according to aglycone part.
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