

(6 pages)

Reg. No. :

**Code No. : 30670 E Sub. Code : JNPB 4 B/
SNBO 4 B**

U.G. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Fourth Semester

Plant Biology and Plant Biotechnology / Botany

Non-Major Elective

BOTANY FOR COMPETITIVE EXAMINATION

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL the questions.

Choose the correct answer.

1. The classification of algae is based on
 - (a) Type of pigment
 - (b) Nature of cell wall material
 - (c) Nature of reserve food
 - (d) All the above

2. Iodine is obtained from the members of
- (a) Green Algae (b) Brown Algae
(c) Red Algae (d) Blue green Algae
3. Binomial with identical genus name and specific epithet are called
- (a) Homonym (b) Tautonym
(c) Basionym (d) Synonym
4. A document containing a comprehensive account of a specific taxonomic group, generally a genus of family is
- (a) Manual (b) Flora
(c) Monograph (d) Revision
5. Plants with medicinal value are called
- (a) pulses (b) scented plants
(c) medicinal plants (d) barks
6. Herbs are aromatic due to the presence of
- (a) Volatile oil (b) Oil
(c) Sap (d) Latex

7. Due to low atmospheric pressure, the rate of transpiration will
- (a) increase (b) decrease rapidly
 - (c) decrease slowly (d) remain unaffected
8. The transpiration is regulated by the movements of
- (a) Subsidiary cells of the leaves
 - (b) Guard cells of the stomata
 - (c) Mesophyll tissue cells
 - (d) Epidermal cells of the leaves
9. The growth of plant tissues in artificial media is called
- (a) Gene expression
 - (b) Transgenesis
 - (c) Plant tissue culture
 - (d) Cell hybridization

10. Which of the following is NOT the feature of plant cells?
- (a) Presence of centrioles
 - (b) The cell wall outside the cell membrane
 - (c) Cell-cell communication through plasmodesmata
 - (d) Consists of plastids

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the diagnostic features of algae.

Or

- (b) Describe the diagnostic features of fungi.

12. (a) List out the economic importance of Fabaceae.

Or

- (b) Describe the economic importance of Cucurbitaceae.

13. (a) Write short notes on medicinal importance of *Zingiber officinale*.

Or

- (b) Explain the medicinal importance of *Vetiveria zizanioids*.

14. (a) Give an account on passive absorption of water.

Or

- (b) Write short notes on transpiration.

15. (a) Briefly explain the tissue systems.

Or

- (b) What is gene cloning? Describe.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write an essay on basics of the plant kingdom.

Or

- (b) Give a detailed account on economic importance of Gymnosperms.

17. (a) Give a brief account on natural system of classification.

Or

- (b) Describe the family Poaceae.

18. (a) Narrate the medicinal importance of *Ocimum Sanctum*.

Or

- (b) Give an account on medicinal importance of *Azadirachta indica*.

19. (a) Explain light reaction taking place during photosynthesis.

Or

- (b) Give a detailed account on Kreb's cycle.

20. (a) Write notes on any two cell organelles.

Or

- (b) Write an essay on genetic engineering.