

19. (a) Brief explain the characteristics of invertebrates.

Or

- (b) What are the characteristics feature of phylum Arthropoda? Explain in brief.
20. (a) Describe in brief about respiratory organs in mammals.

Or

- (b) What is ethology? Explain in brief.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

21. What are the general characteristics features or living organisms? Explain in detail.
22. What are the main difference between gymnosperms and angiosperms? Explain in detail.
23. Describe in detail about asexual reproduction in plants.
24. What are the seven hierarchical categories of classification? Explain in detail.
25. Describe in detail about animal reproductive biology and endocrinology.

S.No. 8731

22 SACMB 1

(For candidates admitted from 2022–2023 onwards)

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Part III — Allied

FUNDAMENTALS OF BIOLOGICAL SCIENCES

Time : Three hours

Maximum : 75 marks

PART A — (20 Marks)

Answer ALL questions.

- I. (A) Choose the best answer. ($5 \times 1 = 5$)
1. Who demonstrated that life originated from pre-existing cells?
(a) Louis Pasteur (b) Hugo de Vries
(c) Charles Darwin (d) Stanley Miller
2. Bryophytes are erect with hair like structures called as _____.
(a) Rhizoids (b) Stipe
(c) Seta (d) Foot
3. Plants having vascular tissue without seeds
(a) Angiosperm (b) Pteridophytes
(c) Bryophytes (d) Gymnosperms

4. Animals of which phylum have jointed legs?
 (a) Arthropoda (b) Nematoda
 (c) Echinodermata (d) Mollusca
5. What is one characteristic that separates chordates from all other animals?
 (a) Bilateral symmetry
 (b) Post-anal tail
 (c) Blastopore, which becomes the anus
 (d) True coelom

(B) Fill in the blanks. (5 × 1 = 5)

6. The building blocks of proteins are _____.
7. The female sex organs in bryophytes are called as _____.
8. _____ structure is the transport system for nutrients in plants.
9. Arthropods excrete through _____.
10. Female reproductive system contains _____ no or ovaries.
- II. Descriptive type questions. (5 × 2 = 10)
11. Comment on prokaryotes.
12. What is a lichen?

13. Write short note on respiration in plants.
14. Write short note on ICZN.
15. Comment on behavioural biology.

PART B — (5 × 5 = 25)

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

16. (a) Describe in brief about chemosynthetic theory of origin of life.

Or

- (b) Cell is the fundamental, structural and functional unit of Life- Justify.

17. (a) What is binomial nomenclature? Who proposed it? Explain it with suitable Example.

Or

- (b) What are the criterion for classifying plants? Explain.

18. (a) Write in brief about plant of economic importance? And add a note on classification.

Or

- (b) What is micropropagation in plants and what is an advantages of it? Explain in brief.