

(6 pages)

Reg. No. :

Code No. : 30517 E Sub. Code : CAZO 11

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

First/Third Semester

Zoology — Allied

CELL BIOLOGY, GENETICS
AND BIOTECHNOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The unit membrane concept was proposed by
- (a) Watson
 - (b) Bateson
 - (c) Robertson
 - (d) Morgan

2. The type of chromosomes found in the salivary gland cells of chironomid larva are
- (a) Autosomes
 - (b) Allosomes
 - (c) Heterosomes
 - (d) Polytene chromosomes
3. In living cells, protein synthesis takes place in the
- (a) Nucleus
 - (b) Nucleolus
 - (c) Cytoplasm
 - (d) Plasma membrane
4. Erythroblastosis foetalis is concerned with the inheritance of
- (a) ABO blood group
 - (b) Rh blood group
 - (c) Mn blood group
 - (d) Ss blood group

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5. Name the secondary structure of tRNA.

- (a) Clover leaf
- (b) L Shaped
- (c) Duplex
- (d) Triple Helix

6. The initiation codon is

- (a) AUG
- (b) UGG
- (c) UAG
- (d) GUA

7. An example of alleles is

- (a) AB and Tt
- (b) TT and Tt
- (c) T and t
- (d) X and Y

8. Which of the following is the defect of hemophilia?

- (a) Bleeding
- (b) Death
- (c) Joint swelling
- (d) All of the above

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9. The name biotechnology was coined by

- (a) Earl Ereky
- (b) Robert Cook
- (c) Schwann
- (d) Einstein

10. pBR322 is a ——— plasmid.

- (a) Natural
- (b) Artificial
- (c) Semi natural
- (d) None of them

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Describe briefly the structure of desmosomes.

Or

(b) Narrate the structure of plasma membrane.

12. (a) Write short notes on DNA.

Or

(b) Describe the diagnosis of cancer.

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[P.T.O.]



13. (a) With reference to blood groups in man explain multiple alleles.

Or

- (b) Explain Erthroblastosis foetalis.

14. (a) Explain Turners Syndrome.

Or

- (b) What is Hypertrichosis?

15. (a) What is Lambda Phage?

Or

- (b) What is plasmid give an example?

PART C — ($5 \times 8 = 40$ marks)

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

Each answer should not exceed 600 words.

16. (a) Explain the structure of Nucleus.

Or

- (b) Explain about Polytene Chromosomes.

17. (a) Explain the steps in protein synthesis.

Or

- (b) Discuss the role of ribosomes in protein synthesis.

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18. (a) Explain Rh factor in man.

Or

- (b) Explain about Multiple Gene Inheritance.

19. (a) Explain in detail about Alkaptonuria in man.

Or

- (b) Explain in detail about Colour Blindness in man.

20. (a) Narrate the significance of biotechnology.

Or

- (b) Explain about Transgenic animals.
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