

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b),
each answer should not exceed 600 words.

16. (a) Discuss the functions of plasma membrane.
Or
(b) Explain in detail the lamp brush chromosome.
17. (a) Give an account on the role of ribosomes in protein synthesis.
Or
(b) Explain cancer with reference to types, causes and properties.
18. (a) Explain skin colour inheritance.
Or
(b) Explain erythroblastosis foetalis.
19. (a) Explain the sex determination in man.
Or
(b) Write an essay on inborn errors of metabolism in man.
20. (a) Analyse the basic concepts of genetic engineering.
Or
(b) Write an essay on restriction and modification system in Biotechnology.

Reg. No. :

Code No. : 11581 E Sub. Code : JAZO 11/
SAZO 11

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2018.

First/Third Semester

Zoology.— Allied

CELL BIOLOGY, GENETICS AND
BIOTECHNOLOGY

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. F1 particles are found in
(a) Mitochondria (b) Lysosomes
(c) Nucleus (d) DNA.
2. Fluid mosaic model was proposed by
(a) Singer and John (b) Singer and Nicolson
(c) Robert and Singer (d) Hiller and Singer.
3. The double helix structure of DNA is proposed by
(a) Robert and Klive (b) Watson and Crick
(c) Urey and Miller (d) Stahl and Measalsen.



4. The widely accepted model of tRNA is
 - (a) Clover leaf model
 - (b) Watson and Crick model
 - (c) Hanson model
 - (d) Fluid mosaic model.
5. An example for multiple allele
 - (a) ABO blood group
 - (b) Skin colour
 - (c) Height
 - (d) All of these.
6. Elythroblastosis foetalis is associated with
 - (a) Rh-factor
 - (b) Multiple allele
 - (c) Polygene
 - (d) None of these
7. The type of sex determination found in Man is
 - (a) XX-XY
 - (b) XX-XO
 - (c) AA-XX
 - (d) AA-ZZ.
8. Haemophilia is a _____ disease.
 - (a) X linked recessive
 - (b) X linked dominant
 - (c) Blood clotting disorder
 - (d) Both (a) and (c).
9. pBR was developed by
 - (a) Boliver
 - (b) Adolf Engler
 - (c) Redriguez
 - (d) Both (a) and (c).

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10. Molecular Scalpels are
 - (a) Restriction enzyme
 - (b) Digestive enzyme
 - (c) Helicase enzyme
 - (d) Tag polymerase enzyme.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b), each answer should not exceed 250 words.

11. (a) Describe the types of chromosomes.
Or
(b) Write short notes on mitochondrial DNA.
12. (a) Evaluate the salient features of clover leaf model of tRNA.
Or
(b) Explain the characteristic features of cancer cells.
13. (a) Discuss simple Mendelian traits.
Or
(b) What are multiple alleles? Mention their features.
14. (a) Explain colour blindness in man.
Or
(b) Discuss the features of Dawn syndrome.
15. (a) State the features of plasmids.
Or
(b) Write short notes on pBR322.

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