

4. A tumour arising from epithelial cell is known as
 (a) Sarcoma (b) Carcinoma
 (c) Lymphoma (d) Steoma
5. If a person having AB blood group, it is existing in
 (a) Co dominance
 (b) Incomplete dominance
 (c) Duplicate gene
 (d) Epistasis
6. The B blood group contains _____ antigen(s).
 (a) A (b) B
 (c) AB (d) Nil
7. Sex linked characters are usually _____.
 (a) Recessive
 (b) Dominant
 (c) Found only in man
 (d) None of the above
8. Klinefelter's syndrome was _____ chromosome.
 (a) 44 + XXY (b) 45 + XX
 (c) 44 + X (d) 45 + XXY
9. Which of the following organelles is related with genetic engineering?
 (a) Lysosome (b) Plasmids
 (c) Golgi apparatus (d) Mitochondria

10. Cloned genes is expressed in the form of _____.
 (a) Protein (b) Lipid
 (c) Carbohydrates (d) Hormones

PART B — (5 × 5 = 25 marks)

Answer ALL questions by choosing (a) or (b).
 Each answer should not exceed 250 words.

11. (a) Describe the different types of chromosomes.
 Or
 (b) Explain the structure of nucleus.
12. (a) Describe the structure of DNA.
 Or
 (b) Explain the causes of cancer.
13. (a) Write short notes on any two mendelian traits in man.
 Or
 (b) Describe Rh factor.
14. (a) Give an account on hypertrichosis.
 Or
 (b) Write short notes on turner's syndrome.
15. (a) Explain the importance of biotechnology.
 Or
 (b) Classify plasmids.

PART C — (5 × 8 = 40 marks)

Answer ALL questions by choosing (a) or (b).
Each answer should not exceed 600 words.

16. (a) Explain the structure and functions of plasma membrane.

Or

- (b) Describe the lamp brush chromosomes.

17. (a) Explain the replication of DNA.

Or

- (b) Write an essay on protein synthesis.

18. (a) Write an essay on A, B, O blood groups and their inheritance.

Or

- (b) Describe the multiple alleles in man.

19. (a) Write an essay on chromosomal theory of sex determination.

Or

- (b) Colour blindness is a sex linked disorder discuss.

20. (a) Explain the production of transgenic animals.

Or

- (b) Describe the structure and advantages of bacterial plasmid P^{BR} 322.