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B.Sc V Semester(old) degree Examination, Nov/Dec-2016

ZOOLOGY

Paper-Z.5.2: GENETICS

Time : 3 Hours]

[Max.marks : 80

Instructions : 1) Answer ALL questions.

2) Draw labeled diagrams wherever necessary.

SECTION-A

I. Answer the following in one word or one sentence each.

(15X1=15)

1. Define synapsis.
2. What are super sexes?
3. Who proposed genic balance theory?
4. Define cloning.
5. What is point mutation?
6. What is hypertrichosis ?
7. What are purines and pyrimidines?
8. Define Eugenics.
9. Mention the tools used in manipulation of DNA.
10. Define epistasis.
11. What is triplet code?
12. List any two branches of genetics.
13. What is colour blindness?
14. Define phenotype.
15. Define multiple allele?

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SECTION-B

Answer any FIVE of the following in brief.

(5X5=25)

16. Give an account of Down's syndrome.
17. Write a note on the properties of genetic code?
18. Write short notes on Klinefelter's syndrome.
19. Write a brief note on Lamp Brush chromosome.
20. Explain criss cross inheritance with respect to Haemophilia in human beings.
21. Enumerate the application of genetic engineering.
22. Explain Frederick Griffith's experiment to show DNA as the genetic material.

SECTION-C

Write explanatory notes on any FOUR of the following.

(3X10=30)

23. Briefly explain the process of protein Bio-synthesis.
24. With a neat labeled diagram explain Watson and Crick model of double stranded DNA .
25. Describe the types of chromosomes based on their position of the centromere .
26. Explain the genetics of ABO blood group and principles in blood transfusion.
27. Describe the chromosomal mechanism of sex determination.
28. Explain the sex linked inheritance in Drosophila.