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5 SEM TDC ZOOH (CBCS) C 12

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(Nov/Dec)

ZOOLOGY

(Core)

Paper : C-12

(Principles of Genetics)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks : 1×5=5

(a) Inheritance of Y-linked genes is called _____.

(b) Chromosomal theory of linkage is proposed by _____.

(c) Klinefelter's syndrome is a type of _____ disorder.

(2)

- (d) The F_2 ratio in polygenic inheritance is _____.
- (e) The transposing elements in *Drosophila* are known as _____ elements.
2. Write briefly on any *two* of the following : 3×2=6
- (a) Epistasis
- (b) Codominance
- (c) Incomplete dominance
3. What is crossing-over? Write briefly about cytological basis of crossing-over. 2+5=7

Or

Define linkage. Explain it with a suitable example. 7

4. What is chromosomal aberration? Explain any two forms of chromosomal anomalies in human. 2+5=7

Or

What are mutagens? Give examples of some mutagens. Explain briefly the methods of detection of mutation. 2+2+3=7

(3)

5. Explain the mechanism of sex determination in man. 7
6. What do you mean by extrachromosomal inheritance? Write about antibiotic resistance in *Chlamydomonas*. 3+4=7
7. What is polygenic inheritance? Distinguish between transformation and transduction. 3+4=7
8. What is transposon? Write about A_c - D_s elements in maize or P elements in *Drosophila*. 2+5=7
