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BF—102—2016

FACULTY OF SCIENCE

B.Sc. (Third Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

ZOOLOGY

Paper VI

(Genetics)

(MCQ + Theory)

(Monday, 24-10-2016) **Time : 2.00 p.m. to 4.00 p.m.**

Time—2 *Hours* *Maximum Marks*—10+30=40

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Draw neat and labelled diagrams wherever necessary.

(*iii*) *All* questions carry equal marks.

MCQ

1. Select the correct answer from the given multiple choices : 10

(1) The alternative forms of same gene on homologous chromosome are called as ..... .

(A) Factors (B) Genomes

(C) Alleles (D) Determinants

(2) The external appearance of an organism is called as ..... .

(A) Genotypes (B) Phenotypes

(C) Genomes (D) Traits

(3) The AB blood group person is called as ..... .

(A) Universal donor (B) Universal recipient

(C) Permanent recipient (D) Partial donor

(4) The linkage was discovered by ..... .

(A) T. H. Morgan (B) Bateson

(C) Mendel (D) Punnet

P.T.O.

(5) The crossing over occurs during ..... .

(A) Meiosis (B) Mitosis

(C) Amitosis (D) None of these

(6) The genic balance theory was formulated by ..... .

(A) Bridges (B) Morgan

(C) Bateson (D) M. C. Clug

(7) The colour blindness shows ..... .

(A) Criscross inheritance (B) Zigzag inheritance

(C) Both (A) and (B) (D) Straight inheritance

(8) In sickle cell anaemia, which amino acid is substituted ..... in haemoglobin molecule.

(A) Glutamic acid by valine

(B) Valine by Glutamic acid

(C) Methionine by lysine

(D) Lysine by methione

(9) Micromolecular model of DNA was proposed by ..... .

(A) Watson and Crick (B) Bateson and Punnet

(C) Corren (D) Morgan

(10) The Klinefelter's syndrome is caused by ..... .

(A) Trisomy (B) Monosomy

(C) Tetrasomy (D) None of these

Theory

2. Define intereaction of genes. How inhibitory factor modify Mendelian ratio. Give suitable example. 10

Or

Write short notes on :

(*a*) Laws of segregation

(*b*) Alkaptonuria.

3. What are multiple alleles ? Explain the skin pigmentation in man. 10

Or

Write short notes on :

(*a*) Factors affecting the crossing over

(*b*) Types of RNA.

4. What are mutations ? Describe the structural mutations. 10

Or

Write short notes on :

(*a*) Haemophilia

(*b*) Structure of DNA.