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**R—122—2017**

**FACULTY OF SCIENCE**

**B.Sc. (Second Year) (Third Semester) EXAMINATION**

**MARCH/APRIL, 2017**

**ZOOLOGY**

**Paper VI**

**(Genetics)**

**(MCQ+Theory)**

**(Monday, 10-4-2017)**

**Time : 2.00 p.m. to 4.00 p.m.**

*Time—2 Hours*

*Maximum Marks—40*

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

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

*(iii) All questions carry equal marks.*

**(MCQs)**

1. Select the *correct* answer from the given multiple choice questions : 10

(i) The term genetics was coined by .....

(a) Aristotle

(b) Empendoes

(c) Bateson

(d) Malphigi

(ii) Epistatis means .....

(a) Stopping

(b) Inhibiting

(c) Both (a) and (b)

(d) Decreasing

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

(a) T.H. Morgan

(b) Mendel

(c) Bateson

(d) DeVries

(iv) When F1 hybrid is crossed with anyone of the parent, such a cross is called as .....

(a) Back cross

(b) Reciprocal cross

(c) Monohybrid cross

(d) Dihybrid cross

P.T.O.

- (v) The character which appears in F1 generation is called as .....
- (a) Dominant character (b) Recessive character  
(c) Aggressive character (d) Contrasting character
- (vi) The transfer of blood from one person to another person is called as .....
- (a) Blood donation (b) Blood transfusion  
(c) Blood transfer (d) Blood coagulation
- (vii) The genic balance theory of sex determination was formulated by .....
- (a) Bridges (b) Morgan  
(c) Bateson (d) M.C. Clug
- (viii) The exchange of segments between two non-homologous chromosomes is called as .....
- (a) Inversion (b) Translocation  
(c) Deletion (d) Duplication
- (ix) Who awarded noble prize for the discovery of DNA model ?
- (a) Bateson and Punnet (b) Watson and Crick  
(c) Chargaff (d) Johanson
- (x) The Down's syndrome is also called as .....
- (a) Mongolism (b) Mongoloid idiocy  
(c) Both (a) and (b) (d) Albinism

**(Theory)**

2. Describe Mendel's dihybrid cross with a suitable example.

10

Or

Write short notes on :

- (a) Test cross  
(b) Sickle cell anaemia.

3. Discuss mechanism and factors affecting the crossing over. 10

*Or*

Write short notes on :

(a) Inheritance of ABO blood group in man.

(b) Phenylketonuria.

4. Describe bridge ratiotheory of genic balance. 10

*Or*

Write short notes on :

(a) Complete linkage

(b) Albinism.