



MAE-680

Seat No. _____

B. Sc. (Sem. III) Examination

October / November - 2018

Biotechnology : CC

Genetics & Analytical

Techniques : Paper - 4 (302)

Time : 3 Hours]

[Total Marks : 70

1 Attempted all question : 1×15=15

(1.1) Non Allelic gene interaction

- (A) Duplicate (B) Dominance
(C) Multiple (D) B + C

(1.2) Molecular Gene Mutation if purine replace to purine

- (A) Deletion (B) Transversion
(C) Transition (D) Insertion

(1.3) Range of Visible EM

- (A) 360-700nm (B) 200-900nm
(C) 450-660nm (D) 1200-1500nm

(1.4) Stationary phase of TLC

- (A) Cellulose (B) Silica gel
(C) Alumina (D) B+C

(1.5) Modern method to separate isotopes

- (A) Laser
(B) X-ray
(C) Ionization
(D) Chromatography

(1.6) _____ and _____ is Gene for Length of Pea plants.

(1.7) _____ and _____ is types of mutation.

(1.8) _____ and _____ is Allelic gene interaction.

(1.9) Expand (Full) of HPLC _____.

(1.10) Expand (Full) of NMR _____.

(1.11) to (1.15) Match the followings :

(1.11) Paper Chromatograph (A) 10nm to 400nm

(1.12) Supplementary gene (B) 700nm to 1mm

(1.13) Multiple Gene (C) Combs in fowls

(1.14) UV Range (D) Color of eyes

(1.15) IR Range (E) Cellulose

2 Attempted any **five** questions : **3×5=15**

(2.1) Write definition of Genetics

(2.2) Define law of dominance

(2.3) Define Spectroscopy

(2.4) Describe linkage

(2.5) List out Allelic gene interaction

(2.6) Define Chromatography.

3 Attempted any **four** questions : **5×4=20**

(3.1) Describe Di hybrid cross of TTRR × ttrr
(T = tall and R = Round seed).

(3.2) Write short note on Multiple Gene.

(3.3) Define HPLC and applications.

(3.4) Define inborn metabolic error in human being.

(3.5) Explain Spectroscopy and their types.

4 Attempted any **two** questions : **10×2=20**

(4.1) Explain Non Allelic gene interaction.

(4.2) Define linkage and their types.

(4.3) Describe Chromatography types and application.