

F. Y. B. Sc. (Biotechnology) SEM – II (CBCS - 2015 COURSE) :
WINTER - 2018

Subject: Genetics

Day: Saturday
Date: 27/10/2018

W-2018-1173

Time: 02.00 PM TO 05.00 PM
Max. Marks: 60

N.B.:

- 1) Q1 and Q5 are compulsory.
- 2) Answer ANY TWO questions from Q 2, 3, 4 in Section I.
- 3) Answer ANY TWO questions from Q 6, 7, 8 in Section II.
- 4) Answers to Both the sections to be written in SEPARATE answer books.
- 5) Draw a labeled diagram WHEREVER necessary.

SECTION - 01

Q.1) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) What is mean by haploid number?
- b) What is a dominant trait?
- c) What is a solenoid tube?
- d) What are sex-limited characters? Give two examples.
- e) What are genetic model organisms?
- f) What is inter species hybrid?

Q.2) Answer the following: (5 Marks X 2 = 10)

- a) What are Y-linked genes? Explain its inheritance with an example.
- b) What is dihybrid cross? Explain in detail, how Mendel derived law of independence assortment using dihybrid cross?

Q.3) Explain the following: (5 Marks X 2 = 10)

- a) Epistasis and types of epistasis
- b) Explain salient features of a model organism.

Q.4) Write short notes on the following: (5 Marks X 2 = 10)

- a) Sex influenced characters
- b) Transgenic mice

SECTION - 02

Q.5) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) Name any two types of chromosomal sex determination method.
- b) Define intersex.
- c) Define germline mutation.
- d) What are base analogues?
- e) Define euploidy.
- f) Define suppressor mutation.

Q.6) Answer the following: (5 Marks X 2 = 10)

- a) Explain environmental sex determination in Alligator snapping turtle.
- b) Explain in detail two of aneuploidy and associated disorders in human being.

Q.7) Explain the following: (5 Marks X 2 = 10)

- a) Explain the reason of patchy distribution of fur color in tortoiseshell cat.
- b) Explain different steps in studying population genetics.

Q.8) Write short notes on the following: (5 Marks X 2 = 10)

- a) Genetic equilibrium
- b) Evolution
