

Roll No.

21212

**B. Sc. (Pass Course) 2nd Semester
Examination – May, 2019**

BOTANY- II (GENETICS)

Paper : BOT-2.2

Time : Three Hours]

[Maximum Marks : 40

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting one question from each Unit. Question No. 1 is compulsory.

1. (a) The purines are and in nucleic acids. 1
- (b) Define a CODON. 1
- (c) The plastid inheritance study makes typical example in plant. 1
- (d) Colour blindness disease occurs due to gene located in chromosome. 1

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- (e) Sickle cell anemia is a typical example of 1
- (f) Define transposable genetic elements. 1
- (g) In snails anticlockwise coiling is called coiling. 1
- (h) The results of reciprocal crosses in inheritance are usually identical. 1

UNIT – I

2. Give details of Hershey and Chase (1952) experiment to show DNA as hereditary material. 8
3. Describe the nucleosome model. 8

UNIT – II

4. What is a three point test cross ? Explain with the help of an example. What is its importance ? 8
5. What are gene interactions ? Describe any two types with examples. 8

UNIT – III

6. What are mutations ? Describe mode of action of chemical mutagens. 8

(2)

7. Give details of DNA damage and repair.

UNIT – IV

8. (a) What is central dogma ?

(b) Describe the lac operon.

9. Describe the structure of proteins.

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