

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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