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B—101—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

MARCH/APRIL, 2019

(CGPA/CBCS Pattern)

BOTANY

Paper II (CCB-I)

(Cell and Molecular Biology)

(MCQ+Theory)

(Saturday, 30-3-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

(MCQ)

1. Choose the *correct* answer of the following questions : 10

(i) 70'S' ribosomes consists of subunits :

(A) 50'S' and 30'S' (B) 60'S' and 40'S'

(C) 60'S' and 30'S' (D) 40'S' and 50'S'

(ii) Nucleolus was first reported by :

(A) Fleming (B) Porter

(C) Robert Brown (D) Fontana

(iii) The chromosomes are arranged on equator during :

(A) Prophase (B) Metaphase

(C) Anaphase (D) Telophase

(iv) In prophase-I, Diakinesis represents :

(A) Terminalization (B) Crossing over

(C) Synapsis (D) Chiasmata

P.T.O.

- (v) The polytene chromosomes are found in :
 (A) Kidney (B) Salivary glands
 (C) Pancreas (D) Ovary
- (vi) A sequence of three unpaired nitrogen bases on *m*-RNA is called as :
 (A) Codons (B) Anticodons
 (C) Initiation codons (D) Stop codons
- (vii) The nucleotide is the combination of :
 (A) Sugar and nitrogen base
 (B) Phosphate and sugar
 (C) Phosphate and Nitrogen base
 (D) Sugar, phosphate and nitrogen base
- (viii) The nitrogen base which is *not* present in DNA is :
 (A) Uracil (B) Adenine
 (C) Guanine (D) Cytosine
- (ix) Find structure of gene was elaborated by :
 (A) H.G. Khorana (B) T.H. Morgan
 (C) S. Benzer (D) A.E. Garrod
- (x) The urine of affected persons turns black in disease.
 (A) Amniocentesis (B) Albinism
 (C) PKU (D) Alkaptonuria

(Theory)

2. Describe ultrastructure and functions endoplasmic reticulum in detail. 10

Or

Describe in brief :

- (a) 70'S' ribosomes 5
- (b) PKU. 5

3. Describe in detail typical structure of chromosome. 10

Or

Describe in brief :

(a) Lampbrush chromosome 5

(b) Fine structure of gene. 5

4. Describe Watson and Crick's model of DNA. 10

Or

Describe in brief :

(a) Structure and functions of *m*-RNA 5

(b) Albinism. 5