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BF—79—2016

FACULTY OF SCIENCES

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

OCTOBER/NOVEMBER, 2016

(CBCS Pattern)

BOTANY

Paper II

(Cell and Molecular Biology)

(MCQ + Theory)

(Friday, 21-10-2016)

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) Use separate answer sheet for MCQs (OMR-Sheet) and descriptive questions.

(iv) Draw well labelled diagrams wherever necessary.

MCQ

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

(i) The extrachromosomal genetic material of prokaryotic cell is :

(A) Nucleolus

(B) Centriole

(C) Nucleoid

(D) Plasmids

(ii) The type of Ribosomes in eukaryotic cell is :

(A) 50'S'

(B) 60'S'

(C) 70'S'

(D) 80'S'

(iii) Terminal part of the chromosome is :

(A) Centromere

(B) Telomere

(C) Satellite

(D) Chromomere

(iv) In prophase-I of meiosis, synapsis occurs in :

(A) Zygotene

(B) Leptotene

(C) Pachytene

(D) Diplotene

(v) The polytene chromosomes are found in :

(A) Kidney

(B) Pancreas

(C) Salivary glands

(D) Ovary

P.T.O.

- (vi) A sequence of three unpaired nitrogen bases of *m*-RNA are called as :
 (A) Codons (B) Anticodons
 (C) Stop codons (D) Non-sense codons
- (vii) Semi-conservative method of DNA replication was proposed by :
 (A) Watson and Crick (B) Beadle and Tatum
 (C) Meselson and Stahl (D) T.H. Morgan
- (viii) The nitrogen base which is not present in DNA is :
 (A) Adenine (B) Guanine
 (C) Thymine (D) Uracil
- (ix) The term Mutation was coined by :
 (A) Hugo DeVries (B) J.G. Mendel
 (C) T.H. Morgan (D) H.G. Khorana
- (x) The technique that detect genetic abnormalities during pregnancy is :
 (A) Alkaptonuria (B) Amniocentesis
 (C) Albinism (D) Sickle cell anemia

Theory

2. Describe the ultrastructure and functions of endoplasmic reticulum. 10

Or

Describe in brief :

- (a) Nuclear membrane 5
 (b) Morgan's views of gene concept. 5

3. Describe the structure of typical chromosome. 10

Or

Describe in brief :

- (a) Cell cycle 5
 (b) Phenylketonuria. 5

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

Or

Describe in brief :

- (a) Structure of *m*-RNA 5
 (b) Alkaptonuria. 5