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W—87—2018

FACULTY OF SCIENCE

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

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA)

BOTANY

Paper II

(Cell and Molecular Biology)

(MCQ & Theory)

(Saturday, 20-10-2018)

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 the *correct* answer of the following questions : 10

(i) Eukaryotic cell differs from prokaryotic cell in having :

(a) Ribosomes (b) Plasma membrane

(c) True nucleus (d) Nucleolus

(ii) Lysosomes were first reported by :

(a) Flemming (b) Porter

(c) Robert Brown (d) de Dave

(iii) Diagrammatic representation of Karyotype is called as :

(a) Idiogram (b) Phenogram

(c) Histogram (d) Cardiogram

P.T.O.

- (iv) Nuclear membrane disappears in :
- (a) Early prophase (b) Late prophase
(c) Metaphase (d) Anaphase
- (v) During cell division, the spindle fibres are attached to of the chromosomes.
- (a) Centromere (b) Chromatids
(c) Chromomere (d) Chromonemata
- (vi) A complex formed by deoxyribose sugar, phosphoric acid and nitrogen base is :
- (a) Nucleoside (b) Polypeptide
(c) Nucleotide (d) Amino acids
- (vii) DNA does *not* contain :
- (a) Adenine (b) Guanine
(c) Thymine (d) Uracil
- (viii) The function of *t*-RNA is :
- (a) To carry Amino Acids
(b) Production of *m*-RNA
(c) Synthesis of *r*-RNA
(d) Production of Ribosomes
- (ix) S. Benzer classified genes into :
- (a) Cistron (b) Muton
(c) Recon (d) All of these
- (x) The term mutation was coined by :
- (a) Hugo DeVries (b) G.J. Mendel
(c) T.H. Morgan (d) H.G. Khorana

Theory

2. Describe in detail ultrastructure and functions of nucleus. 10

Or

Describe in brief :

- (a) Ribosomes
- (b) Fine structure of gene.

3. What is Meiosis ? Describe prophase-I of meiosis. 10

Or

Describe in brief :

- (a) Lampbrush chromosome
- (b) AKU.

4. What are Nucleic acids ? Describe types and functions of RNA. 10

Or

Describe in brief :

- (a) Cell cycle
- (b) PKU.