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R—80—2017

FACULTY OF SCIENCE

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

MARCH/APRIL, 2017

(CBCS/CGPA Pattern)

BOTANY

Paper II (CCB-I)

(Cell and Molecular Biology)

(MCQ+Theory)

(Wednesday, 5-4-2017)

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 MCQ (OMR sheet) and descriptive questions.
(iv) Draw well labelled diagrams wherever necessary.

(MCQs)

1. Choose the *correct* answer of the following questions : 10
- (i) The packaging and transport of proteins in eukaryotic cells is done by :
- (a) Nucleus (b) Ribosomes
(c) Golgi bodies (d) Lysosomes
- (ii) The hydrolytic enzymes are present in :
- (a) E.R. (b) Ribosomes
(c) Golgi bodies (d) Lysosomes
- (iii) The longest stage in cell cycle is :
- (a) G₁ (b) S
(c) G₂ (d) M

P.T.O.

- (iv) The type of cell division takes place in reproductive cells is :
- (a) Mitosis (b) Meiosis
(c) Apomixis (d) None of these
- (v) Chromosomal puffs are formed in :
- (a) Polytene chromosome
(b) Lampbrush chromosome
(c) X-chromosome
(d) Y-chromosome
- (vi) In Meiosis, terminalization occurs in :
- (a) Leptotene (b) Pachytene
(c) Zygotene (d) Diakinesis
- (vii) The distance between two consecutive nucleotides in a strand of DNA is :
- (a) 1.4 Å (b) 2.4 Å
(c) 3.4 Å (d) 4.4 Å
- (viii) Albinism occurs due to absence of :
- (a) Melanin (b) Serotonin
(c) Lycopene (d) Endorphin
- (ix) According to Benzer, the point of mutation is :
- (a) Recon (b) Muton
(c) Cistron (d) Transposon
- (x) Transposable genetic elements were first reported by :
- (a) Watson (b) McClintock
(c) Morgan (d) Benzer

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(3)

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(Theory)

2. Describe the ultrasturcutres of prokaryotic cell. 10

Or

Describe in brief :

(a) Ribosomes 5

(b) Sickle cell anemia 5

3. Describe the process of mitosis cell division. 10

Or

Describe in brief :

(a) Spontaneous mutation 5

(b) Fine structure of gene. 5

4. Describe composition of DNA and elaborate Meselson and Stahl experiment of semiconservative replication of DNA. 10

Or

Describe in brief :

(a) Polytene chromosome 5

(b) *t*-RNA. 5

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