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**AO—75—2018**

**FACULTY OF SCIENCE**

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

**MARCH/APRIL, 2018**

(CBCS/CGPA)

**BOTANY**

**Paper II**

(Cell and Molecular Biology)

(MCQ & Theory)

**(Wednesday, 28-03-2018)**

**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 diagram wherever necessary.*

**MCQ**

1. Choose correct answer of the following : 10

(i) The genetic material of prokaryotic cell is..... .

(a) Nucleus

(b) Centriole

(c) Nucleolus

(d) Nucleoid

(ii) The lysosomes are considered as 'suicide bag' because they contains.....

(a) Food vacuole

(b) Hydrolytic enzymes

(c) Catalytic enzymes

(d) Parasitic activity

(iii) Endoskeleton of cell is made up of.....

(a) Lysosomes

(b) Ribosomes

(c) Golgi complex

(d) Endoplasmic reticulum

P.T.O.

- (iv) Lamp brush chromosome is found during.....
- (a) Diplotene of meiosis (b) Diakinesis of meiosis
- (c) Prophase of Mitosis (d) Telophase of mitosis
- (v) During mitosis, the chromosomes are arranged on the equatorial plate during.....
- (a) Prophase
- (b) Telophase
- (c) Anaphase
- (d) Metaphase
- (vi) A sequence of three unpaired nitrogen bases on m-RNA is called as.....
- (a) Anticodons (b) Codons
- (c) Stop codons (d) Non-sense codons
- (vii) One turn of DNA helix measures.....
- (a) 0.34 Å (b) 34 Å
- (c) 3.4 Å (d) 20 Å
- (viii) DNA and RNA are the :
- (a) Proteins (b) Enzymes
- (c) Nucleic acids (d) Amino acids
- (ix) The technique to detect genetic abnormalities during pregnancy is.....
- (a) AKU (b) Amniocentesis
- (c) Sickle cell anemia (d) Phenylketonuria.
- (x) Mental retardation is the symptom of.....
- (a) Amniocentesis (b) Albinism
- (c) PKU (d) AKU

**Theory**

2. Describe ultrastructure of prokaryotic cell. 10

*Or*

Describe in brief :

- (a) Nuclear envelope
- (b) Fine structure of gene

3. What is mitosis ? Describe mitosis cell division in detail. 10

*Or*

Describe in brief :

- (a) Polytene chromosome
- (b) Phenylketonuria

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

*Or*

Describe in brief :

- (a) Structure and functions of t-RNA
- (b) Albinism