

Seat No. : _____

AB-115

April-2019

B.Sc., Sem.-II

CC-103 : Environmental Science (Cell : The Unit of Life)

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Discuss cellular diversity among Eukaryotes. 14

OR

(1) Describe organization of Endoplasmic reticulum and give its functions. 7

(2) Explain the fluid mosaic model of cell membrane with diagram. 7

(B) Answer in brief : (Any **four**) 4

(1) Define cilia.

(2) Draw labelled diagram of mitochondria.

(3) Define Phytoplankton.

(4) What is function of flagella ?

(5) Give any two difference between Bacteria and Archea.

(6) Name the unique component of bacterial Cell wall.

2. (A) Discuss aerobic and anaerobic types of respirations. 14

OR

(1) Define enzyme and describe its physico-chemical properties. 7

(2) Explain Active transport mechanism for nutrient uptake. 7

(B) Answer in brief : (Any **Four**) 4

(1) What is importance of fermentation ?

(2) Define Photolithotrophs.

(3) Define Active transport.

(4) What is Anabolism ?

(5) List types of Photosynthetic pigments.

(6) Define symport.

3. (A) How tumour develops ? Discuss its types, stages, detection and treatment. **14**

OR

(1) Explain cell division by meiosis with diagram. **7**

(2) Describe various theories proposed for senescence. **7**

(B) Answer in brief : (Any **Three**) **3**

(1) Give a use of gene therapy.

(2) What is cytokinesis ?

(3) Give significance of Mitosis.

(4) What is Chemotherapy for cancer ?

(5) Define Apoptosis.

4. (A) Describe the transcription process in prokaryotes. **14**

OR

(1) Write a note on cell-to-cell communication. **7**

(2) Discuss the Operon model with example. **7**

(B) Answer in brief : (Any **three**) **3**

(1) Give an example of Terminating codon.

(2) Define gene.

(3) What is Central Dogma of Life ?

(4) List structural genes within Lac operon.

(5) What is genetic code ?
