

Day: Tuesday
Date: 23/10/2018

W-2018-0687

Time: 11.00 A.M TO 02.00 PM
Max. Marks: 60

N.B:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.

Q.1 A) Attempt all of the following (MCQ) (06)

- a) Out of 38 ATP in aerobic respiration of glucose the net gain of ATP in the mitochondria is -----
 - i) 08
 - ii) 04
 - iii) 11
 - iv) 14
- b) A highly coiled condensed form of chromatin formed in the cell nucleus during meiosis and mitosis
 - i) Genome
 - ii) DNA
 - iii) Gene
 - iv) Chromosome
- c) In ----- phase the spindle fibers are clearly seen
 - i) Metaphase
 - ii) Prophase
 - iii) Inter phase
 - iv) None of these
- d) ----- type of ribosome present in prokaryotic cell
 - i) Only 70 s
 - ii) Only 80 s
 - iii) Both 70 s and 80 s
 - iv) 40 s
- e) ----- is the power house of energy
 - i) Chloroplast
 - ii) Mitochondria
 - iii) Nucleus
 - iv) Golgi complex
- f) ----- is the function of RNA
 - i) Protein synthesis
 - ii) Lipid synthesis
 - iii) Carbohydrate synthesis
 - iv) None of these

B) Attempt the following: (one sentence / statement / definition) (06)

- a) What is the reason of acidic P^H in lysosomes.
- b) What is cytokinesis?
- c) Function of spindle fiber in cell division.
- d) Give the function of plasma membrane.
- e) Sketch and label the structure of DNA.
- f) What is telomere ? Give its function.

Q.2 Attempt **ANY THREE** of the following: (12)

- a) Give types of ribosomes and gives its function.
- b) Comment on glyoxysomes and peroxisomes.
- c) Explain ultra structure of chloroplast.
- d) Give any two stages of mitosis.

Q.3 Attempt **ANY FOUR** of the following: (12)

- a) Describe structure and functions of endoplasmic reticulum.
- b) Explain organisation of cellulose in cell wall.
- c) Explain prophase I in meiosis .
- d) Comment on “mitochondria are called as power house of cell.”
- e) Give the functions of golgi complex.

Q.4 Attempt **ANY TWO** of the following: (12)

- a) Describe cell structure and its historical background.
- b) Give difference between prokaryotic and eukaryotic cell.
- c) Give the role of spindle fiber in cell division.

Q.5 Attempt **ANY TWO** of the following: (12)

- a) Explain role of ion channels in cellular transport.
- b) Describe nuclear envelope and nuclear pore complex.
- c) Give the ultra structure of cell membrane with its function.