

Day: Tuesday
Date: 07/11/2017

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

W-2017-0548

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Neat diagrams must be drawn **WHEREVER** necessary.

Q.1 A) Attempt the following: (MCQ) **(06)**

- a) Plastids are absent in _____.
 - i) Animal cells
 - ii) Fungi and animal cells
 - iii) Plant cells
 - iv) Bacterium
- b) Meiosis means _____.
 - i) Reduction division
 - ii) Triploid division
 - iii) Diploid division
 - iv) None of these
- c) _____ is power house of cell.
 - i) Chloroplast
 - ii) Mitochondria
 - iii) Ribosomes
 - iv) Lysosomes
- d) Which of the following organelles lack ribosomes.
 - i) Nucleus
 - ii) Mitochondria
 - iii) Endoplasmic reticulum
 - iv) Chloroplast
- e) Cell wall is present in _____.
 - i) Plant cells
 - ii) Animal cells
 - iii) Bacterium cell
 - iv) None of these
- f) _____ described first by Watson and Crick.
 - i) RNA
 - ii) DNA
 - iii) Lysosome
 - iv) Nucleus

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

- a) What is cell division in plant science?
- b) What is mitosis?
- c) Give the functions of Lysosomes.
- d) What is role of spindle apparatus in cell division?
- e) What is centromere and telomeres?
- f) Give the functions of glyoxysomes.

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

- a) Explain organization of cellulose in cell wall.
- b) Give the function of Golgi complex.
- c) Explain role of ion channels and pumps in cellular transport.
- d) Give the origin and types of ribosomes.

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

- a) Describe structure and functions of endoplasmic reticulum.
- b) What is centromere? Give its functions.
- c) Explain metaphase and anaphase in mitotic cell division.
- d) Describe ultrastructure of chloroplast.
- e) Comment on 'Mitochondria are called power house of cell'.

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

- a) Give functions of plasma membrane.
- b) Describe significance of cell division.
- c) Explain concept of apoptosis.

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

- a) Give difference between prokaryotic and eukaryotic cell.
- b) Describe meiosis-II with its significance.
- c) Explain micro bodies – Peroxisomes.