

Oct - 2013

Seat
No.

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क्रय - 040

BOTANY PAPER - II (NEW) (11146) BOT-112
Cell Biology

P. Pages : 2

Time : Two Hours

Max. Marks : 40

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory.
5. Draw neat labeled diagram wherever necessary.

1.

Solve **any eight**.

8

- a) What is the function of the cell wall ?
 - i) Support and protects the cell
 - ii) Stores water and mineral ions
 - iii) Controls the cell
 - iv) Controls what enters and leaves the cell
- b) What is cell feature is responsible for powering the cell ?
 - i) Endoplasmic reticulum
 - ii) Golgi apparatus
 - iii) Mitochondria
 - iv) Lysosome.
- c) What is one major feature that plant cell have that animal cells do not ?
 - i) Lysosome
 - ii) Cell wall
 - iii) Cell membrane
 - iv) Mitochondria.
- d) What is another term for cytoplasm division ?
 - i) cytokinesis
 - ii) Karyokinesis
 - iii) Protoplasm
 - iv) Protokinesis.
- e) Chiasmata formation takes place in.....
 - i) Mitosis
 - ii) Meiosis
 - iii) Interphase
 - iv) None of these.
- f) The plasma membrane is
 - i) Permeable
 - ii) Selectively permeable
 - iii) Impermeable
 - iv) Semipermeable.
- g) Fluid mosaic model of plasma - membrane was proposed by
 - i) Danielli and Davson
 - ii) Singer and Nicolson
 - iii) Both i and ii
 - iv) Neither i and ii.

- h) is cell division in which the diploid number is reduced by one half (haploid) for the formation of gametes.
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|---------------------|---------------|
| i) Meiosis | ii) Mitosis |
| iii) Photosynthesis | iv) Evolution |
- i) Select the correct statement about G_1 phase.
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| i) Cell is metabolically inactive |
| ii) DNA in the cell does not replicate |
| iii) It is not a phase of synthesis of macromolecules |
| iv) Cell stops growing. |
- j) When does crossing over occur ?
- | | |
|------------------------|--------------------------|
| i) During prophase - I | ii) During fertilization |
| iii) At the centromere | iv) During prophase II. |

2. Solve **any four**. 8
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| a) Why mitochondria can be considered the power houses of the cells ? |
| b) What is plasma membrane ? |
| c) What is mitosis ? |
| d) What is cell cycle ? |
| e) What is the chemical composition of cell wall ? |
| f) What are cytoplasmic inclusions ? |
3. Solve **any two**. 8
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| a) Enlist the differences between meiosis and mitosis. |
| b) What is the difference between plasma membrane and cell wall ? |
| c) Comments on interphase in cell division. |
4. A) Solve **any two**. 6
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| i) Describe structure of cell wall. |
| ii) What is the chemical composition of the plasma membrane. |
| iii) What are chloroplast ? What are the main function of chloroplast ? |
- B) Enlist the stages of cell cycle ? 2
5. Describe with the help of well labelled diagram the structure of plant cell. 8

OR

Describe with the help of well labelled diagram the structure of Mitochondria ?
What are its main functions.
