

COURSE CODE (CREDITS): 18B11BT111(3)

MAX. MARKS: 15

COURSE NAME: Fundamental Biology

COURSE INSTRUCTORS: Dr. Tyson

MAX. TIME: 1 Hour

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*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

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**Que. 1 Write/Tick the correct answer: [CO -1,2,3]**

**(0.5 Marks)**

- a) Specialized cells for fixing atmospheric nitrogen in Nostoc are
- (a) Akinetes
  - (b) Heterocysts
  - (c) Hormogonia
  - (d) Nodules
- b) Which organelle is not considered as a part of the Endomembrane system?
- (a) Vacuole
  - (b) Chloroplast
  - (c) Endoplasmic reticulum
  - (d) Lysosome
- c) Which of the following structures is not found in a prokaryotic cell?
- (a) Ribosome
  - (b) Mesosome
  - (c) Plasma membrane
  - (d) Nuclear envelope

- d) The imperfect fungi which are decomposers of litter and help in mineral cycling belong to:
- (a) Basidiomycetes
  - (b) Phycomycetes
  - (c) Ascomycetes
  - (d) Deuteromycetes
- e) A dikaryon is formed when
- (a) meiosis is arrested
  - (b) the two haploid cells do not fuse immediately
  - (c) cytoplasm does not fuse
  - (d) the two haploid cells fuse immediately
- f) Which one of the following statements is wrong?
- (a) Cyanobacteria are also called blue-green algae
  - (b) Golden algae are also called desmids
  - (c) Eubacteria are also called false bacteria
  - (d) Phycomycetes are also called algal fungi
- g) Identify the correct sequence of taxonomic categories
- (a) species – order – kingdom – phylum
  - (b) order – genus – phylum – species
  - (c) family – species – class – genus
  - (d) species – genus – order – phylum
- h) This organelle possesses 9+0 structure
- (a) Centriole
  - (b) Cilia
  - (c) Flagella
  - (d) all

**Que. 2 Fill in the Blanks:** [ 10- 1, 2, 3 ]

(0.5 Marks)

- a. \_\_\_\_\_ in the plant cell provide space to store excess water and waste products.
- b. Group of cells performing a specific function are called \_\_\_\_\_.

- c. A common fungus used in preparing the bread is \_\_\_\_\_.
- d. Taxonomy of fungi is based on \_\_\_\_\_.
- e. \_\_\_\_\_ is the first terrestrial plants to possess the vascular tissues.
- f. The female sex organ of bryophyte is \_\_\_\_\_.

**Que. 3 Difference between (Explain any two).**

**(1 Marks)**

- a. Eukaryotes and Prokaryotes [ 0-3 ]
- b. Plant cell and Animal cell [ 0-1 ]
- c. Rough endoplasmic reticulum and Smooth endoplasmic reticulum. [ 0-2 ]

**Que. 4 Explain (Any three)**

**(2 Marks)**

- a. Main criteria of Five Kingdom classification? Explain. [ 0-1 ]
- b. Endomembrane system. [ 0-2 ]
- c. Double Fertilization [ 0-1 ]
- d. Universal Rules of nomenclature. [ 0-1 ]
- e. Sexual Cycle of Kingdom Fungi. [ 0-1 ]

