

N.B. All questions are compulsory

Numbers to the right indicate marks

Draw neat labeled diagram wherever necessary

Total marks: 60

Duration: 2.0 hours

16

Q.1 Answer any four of the following

- a. Elaborate on applications of Biotechnology in the Pharmaceutical industry.
- b. Give a brief account on traditional and modern biotechnology.
- c. Write a short note on Blue biotechnology.
- d. What is the role of DBT and the Indian Government in Biotechnology?
- e. Write a short note on Bt cotton.
- f. What is Green biotechnology? Elaborate on any two techniques used in it.
- g. What is the characteristic of Golden rice? Why and how was it produced?
- h. Justify: Public support is a crucial component for introduction of new technology and product into the society.

Q.2 Answer any four of the following

16

- a. Write a note on characteristic features of kingdom fungi.
- b. Elaborate on features of organisms in Kingdom Protista.
- c. What are Seven levels of classification? Add a detailed account on Kingdom Archaeobacteria.
- d. Write the applications of *Drosophila* as a model organism.
- e. State any two characteristics and two applications of earthworm.
- f. Write a short note on *Arabidopsis thaliana*.
- g. State the applications of microalgae and cyanobacteria.
- h. What makes zebrafish a suitable model organism for biological studies?

Q.3 Answer any four of the following

16

- a. Write a short note on fermented milk.

