

UG (Semester -I) Examination 2023 (Session 2023-2027)- Model Questions

Subject: Botany,

Paper- MIC-1/MDC-1

[MUM.UG(I).Bot.(MIC-1)/(MDC-1)

Time: 3 Hours

Full Marks: 70

Candidates are required to give their answers in their own words as far as practicable.

Figures in the margin indicate full marks.

Answer from all the groups as directed.

Question No.-1 is compulsory.

Section A

1. Select the correct answer from the given options: 10x2=20

(a) The alga, Chara is known as stonewort because its plant body is encrusted with

1) Calcium carbonate

2) Sodium chloride

3) Calcium Chloride

4) Magnesium chloride

(b) Who is popularly known as the "Father of Phycology"

1) Fritsch

2) Papenfus

3) Smith

4) Morris

(c) Nostoc belongs to which of the following classes of algae

1) Chlorophyceae

2) Phaeophyceae

3) Rhodophyceae

4) Cyanophyceae

(d) The chloroplast of *Oedogonium* is

1) Discoid

2) Reticulate

3) Stellate

4) Parietal

(e) Which of the following is not a described type of virus

1) A virus containing double strand DNA

2) A virus containing single strand DNA

3) A virus containing single strand RNA and single strand DNA

4) A virus containing a single strand RNA

(f) The genetic material in tobacco mosaic virus is

1) ssDNA

2) ssRNA

3) dsRNA

4) dsDNA

(g) In which of the following patterns of viral replication, viruses enters a cell, replicate and then causes the cell to burst, releasing new viruses

1) Lytic

2) Lysogenic

3) Both

4) None

(h) Which bacterial reproductive process does not involve any genetic recombination

1) Transduction

2) Conjugation

3) Binary fission

4) Transformation

(i) Which of the following is true

1) Bacterial flagella is made up of flagellin protein

2) Bacterial pili is made up of pilin protein

3) Bacterial flagella is different from eukaryotic flagella

4) All of the above

(j) Bacteriophages are

1) *Viruses*

2) *Bacteria*

3) Both

4) *None*

Section B

2. Write short notes on any four of the following: 4x5=20

(a) Reproductive organs of Chara [5]

(b) Structure of TMV [5]

(c) Economic importance of Bacteria [5]

(d) Economic importance of Viruses [5]

(e) Structure of Bacteriophage [5]

(f) Cell structure of Bacteria [5]

Section C

Answer any three questions of the following: 3x10=30

3. Describe the thallus structure and reproduction in *Oedogonium*. [5+5]
4. Describe lytic and lysogenic cycle of viruses. [5+5]
5. Give an account of genetic recombination in bacteria. [10]
6. Describe the thallus structure and reproduction in *Nostoc*. [5+5]
7. Describe different methods of asexual reproduction in bacteria. [10]