

M.Sc.

2016

4th Semester Examination

BIOTECHNOLOGY

PAPER—BIT-403

Full Marks : 40

Time : 4 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Special Paper

(Pharmaceutical & Medical Biotechnology)

Answer all questions.

1. You are given a mixture of Proteins, perform SDS-PAGE and transfer onto membrane following Western Blot Method.

[Principle-4, Procedure-5, Result-6]

15

(Turn Over)

2. Estimate hormone content of a given sample using semi-auto analyzer and method described by the company.
[Principle-4, Procedure-5, Result-6] 15

Or

Fractionate Supplied Tissue sample and prepare mitochondrial fractions and show by staining the organalle.

[Principle-4, Procedure-5, Result-6] 15

3. Laboratory Note Book. 5
4. Viva-Voce. 5

Special Paper

(Agriculture & Aquaculture Biotechnology)

Answer all questions.

1. Demonstrate the experiment for Artificial seed preparation with supplied sample.

[Requirements-2, Demonstration-2, Procedure-2, Precaution-2]

10

2. Isolate the fish genomic DNA with sample provided.
[Requisition-2, Procedure-3, Result-4, Comment-1] 10

Or

Prepare an extract of pituitary gland and demonstrate the injection of same into the supplied fish.

[Requisition-2, Procedure-6, Injection-2] 10

3. Perform the experiment to isolate vesicles and arbuscules mycorrhiza from supplied plant root,

[Requisition-2, Procedure-3, Slide-2, Drawing-2, Comment-1]
10

Or

Demonstrate the callus subculture techniques with the sample provided.

[Requisition-2, Procedure-3, Demonstration-3, Comment-2]
10

4. Laboratory Note Book. 5
5. Viva-Voce. 5

Special Paper**(Food Biotechnology & Bioprocess Technology)**

Answer all questions.

1. Determine the Phosphorous content per gram of supplied milk sample.
[Principle-3, Procedure-5, Result-5, Comment-2] 15
2. Estimate the total carbohydrate content per gram of supplied milk sample.
[Principle-3, Procedure-5, Result-5, Comment-2] 15
3. Laboratory Note Book. 5
4. Viva-Voce. 5