2013

M.Sc.

4th Semester Examination

BIOTECHNOLOGY

PAPER—BIT-403

(PRACTICAL)

Full Marks : 40

Time : 4 Hours

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

(Agriculture & Aquaculture Biotechnology)

1. Demonstrate micropropagation and perform the same with shoot tip culture 5+5

[Demo.—5 ; Experiment—5]

2. Perform the xylogenesis procedure in plant with the supplied sample. 10

[Experiment—5 ; Result—5]

3. Prepare an extract of Pituitary gland and inject it into the supplied fish.

10

[Homogenisation—4 ; Sample Preparation —4 ; Injection—2]

Or

Isolate the genomic DNA from the supplied fish sample.

5+5

[Procedure—5 ; Isolation—5]

4. Submission of Laboratory Note Book.

5

5. Viva Voce.

5

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(Food Biotechnology)

Answer *all* questions.

1. Quantify lactose present in the supplied milk sample using Benedict Quantitative Reagent (BQR) and express your results in gm%. Write the principle of the method. 15

2. Estimate calcium present in the supplied milk by EDTA method using calcon indicator. Write the principle of the method. Express your result in percentage. 15

3. Laboratory Note Book. 5

4. Viva Voce. 5

(*Medical Biotechnology*)

Answer *all* questions.

1. Conduct the ELISA experiment and make a standard curve of supplied antigen and estimate antigen content in supplied serum/plasma. Write proper explanation and interpretation.

15

2. Fractionate the supplied tissue homogenetic with suitable centrifugation technique for preparation of subcellular fraction and identify mitochondria by either biochemical or histological method.

15

3. Laboratory Note Book.

5

4. Viva Voce.

5