

2013

MICROBIOLOGY — HONOURS — PRACTICAL

SECOND PAPER

(GROUP — B)

Full Marks — 50*The figures in the margin indicate full marks**For the following experiments, write down only the procedure and observed results.*

1. (a) Carry out the Gram-staining of the microorganism in supplied culture broth. Note the sample number in your answer script and report on its —
- (i) Gram character 4
- (ii) General cell morphology and cellular arrangements (slides are to be submitted). 6
- Or*
- (b) Stain the endospores and report on its position in the cell (slides are to be submitted). 10
- Or*
- (c) Carry out the capsule staining of the supplied microorganism (slides are to be submitted). 10
2. Determine the number of yeast cells present per ml of the supplied culture by a hemocytometer and calculate the standard deviation of your observations. Demonstrate 10-fold serial dilution of supplied culture in three test tubes with decreasing cell number. Demonstrate the procedure of pour plate technique with two most dilute samples. 5+5+5
- Or*
- Determine the unknown concentration of the supplied amino acid by formol titration. 15
3. Determine the size of the supplied bacteria by a micrometer. 10
- Or*
- Identify the supplied amino acid by Thin Layer Chromatography against the supplied standards. 10
- Or*
- Identify the supplied biomolecule by using qualitative methods. 10
4. Laboratory Notebook. 5
5. Viva Voce. 10