SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

Time : 3 Hrs. **Ph.D Examination June-2012** **Max. Marks : 100**

Microbiology

Paper – I

QP Code: PHD 2201

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

10 X 10 = 100 Marks

1. How are bacteria lyophilized?
2. Describe different types of Escherichia coli
3. Current guidelines of clinical laboratory standard institution (CLSI) for determination of minimum inhibitory concentration in gram negative bacteria.
4. Describe the commercial methods for detection of extended spectrum betalactamase (ESBLs) in bacteria
5. What are the screening tests for detection of ESBLS. Discuss their merits and demerits
6. Multilocus sequence typing (MLST) of ESBLS producing bacteria
7. Multiplex PCR in identification of ESBL genotypes
8. Structure of gram negative cell wall and associated antigens
9. Describe the factors that affect polymerase chain reaction
10. Add a note on pyrosequencing of DNA

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Microbiology

Paper – II

QP Code: PHD 2202

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

10 X 10 = 100 Marks

1. Classify Enterobacteriaceae

2. Describe Mechanisms of drug resistance in Bacteria

3. Classify Beta Lactam Antibiotics with a note on Mechanism of action

4. Classify extended spectrum Beta Lactamase (ESBLs)

5. What are the risk factors for ESBLS?

6. Klebsiella pneumoniae carbapenamases (KPC)

7. Discuss the control measures for ESBLs infections

8. Classify MetalloBetaLactamases (MBLs)

9. Describe the laboratory methods to detect MBLs

10. New Delhi MetaBetaLactamases

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