

(LD 120)

OCTOBER 2013

Sub. Code: 2017

**M.D. DEGREE EXAMINATION  
BRANCH IV – MICROBIOLOGY  
MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT  
ADVANCES**

*Q.P. Code : 202017*

**Time: Three Hours**

**Maximum: 100 marks**

**I. Essay: (2X10=20)**

1. Discuss automated methods employed in diagnosis of tuberculosis.
2. Define opportunistic fungal infections. Enumerate common predisposing factors. Outline laboratory diagnosis of these agents.

**II. Short Questions: (8X5=40)**

1. What is microarray? Describe its principle and applications in microbiology.
2. What are mycotoxins? Discuss mycotoxicosis.
3. Classify antifungal agents. Discuss the methods of anti-fungal susceptibility testing.
4. Role of microbiologist in Hospital Infection Control Committee.
5. Dermatophytes.
6. What are edible vaccines? Discuss the current status and future of edible vaccines.
7. Epidemiology and lab diagnosis of *Penicillium marneffeii*.
8. Nosocomial infections.

**III. Reasoning Out: (4X5=20)**

1. *Cryptococcus neoformans* forms brown colonies on bird seed agar.
2. Uni-directional workflow is must in molecular laboratories.
3. Pertussis causes are increasing in adolescents and young adults.
4. Biomedical waste management is mandatory in all hospitals.

**IV. Very Short Answers: (10X2=20)**

1. Post exposure prophylaxis after needle stick injury.
2. Real time PCR.
3. Madura foot.
4. Microscopy in fungal infections.
5. Virus like particles.
6. Immunomodulators.
7. Blotting techniques.
8. Biofilms.
9. Competitive ELISA.
10. Dimorphic fungi.

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