

**M.D. DEGREE EXAMINATION****BRANCH IV – MICROBIOLOGY****PAPER IV – MYCOLOGY AND APPLIED MICROBIOLOGY AND  
RECENT ADVANCES***Q.P. Code: 202017***Time: Three Hours****Maximum: 100 Marks****I. Essay:****(2 x 15 = 30)**

1. Define the term 'PANDEMIC'. List out the diseases that caused pandemics and discuss the etiology, pathogenesis, laboratory diagnosis and the preventive measures for any one of them.
2. Describe the various laboratory methods for the diagnosis of fungal infections. Add a special note on anti fungal susceptibility testing.

**II. Short notes:****(10 x 5 = 50)**

1. Flow cytometry.
2. R plasmids.
3. Fungal stains.
4. Erythema concentricum.
5. Chlamyospore.
6. Define piedra. Classify piedra, morphology, pathogenesis, lab diagnosis, treatment and prophylaxis of piedra.
7. Presumptive coliform test.
8. Carbohydrate assimilation test.
9. Biofilm.
10. BACTEC system.

**III. Reasoning Out:****(4 x 5 = 20)**

1. Pneumocystis jirovecii is a fungi, not a protozoan.
2. What is the role restriction endonucleases in molecular genetics?
3. Mucormycosis is more common in diabetic patients.
4. CRP is raised in inflammatory conditions.

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