

**QP Code:104109**

**Reg.No.:.....**

**PG Degree Examinations in Microbiology (MD) - May 2014**

**Paper IV - Applied Microbiology and Recent Advances in Microbiology**

**Time: 3 hrs**

**Max marks:100**

- ***Answer all questions***
- ***Draw diagrams wherever necessary***

**Essays:**

**(20)**

1. Define pentavalent vaccine. Explain in detail about the various developments in vaccine production and its administration.

**Short essays:**

**(8x10=80)**

2. How do you establish an efficient biomedical waste management sustainable programme in a tertiary care hospital.
3. Describe in detail non-cultivable techniques used in the diagnosis of micro organisms
4. Define avian influenza. Describe the epidemiology and recent infection due to avian influenza virus.
5. Give an account on the recent advances in diagnosis of MDR TB.
6. What are the various control measures as a microbiologist you will adopt to control nosocomial infection acquired from hospital sources.
7. Explain the various immune fluorescence methods and its application in microbiological diagnosis.
8. Describe the various biological safety cabinets used for the confinement of various categories of pathogens.
9. What is genetic cloning. Describe its role in genetic engineering.

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