Write short notes on:

1. a) What is sampling?  
   b) Enumerate different methods of sampling.  
   c) Cluster sampling.  
   d) What are sampling and non sampling errors?

2. a) Define incubation period.  
   b) Differentiate between intrinsic and extrinsic incubation period.  
   c) Enumerate the factors influencing incubation period of measles?  
   d) Enumerate the complications of measles.  
   e) Mention the type of measles vaccine, its dose, route of administration and the age when it is given.

3. a) Epidemiology of Dengue fever.  
   b) Mention the criteria for making clinical diagnosis of Dengue haemorrhagic fever (DHF).  
   c) How will you manage a case of DHF?  
   d) Measures for control of dengue fever in community.

4. a) Interaction of tuberculosis and HIV.  
   b) How would you diagnose tuberculosis in patient with HIV?  
   c) Outline management of HIV and TB coinfection.

5. a) What is crude death rate?  
   b) What is its limitation?  
   c) What are adjusted or standardized rates?  
   d) Methods of standardization along with examples.

6. Submit a plan of Randomized Control Trial with an illustrative example.

7. a) Rota virus vaccine  
   b) Hepatitis B vaccine  
   c) Inactivated Polio vaccine

P.T.O.
8. a) Outline epidemiological determinants of Leishmaniasis. 
    b) Mention the mode of transmission, clinical features and control measures. 

9. a) Define epidemic. 
    b) Steps in investigation and containment of an outbreak. 

10. a) What is screening? 
    b) Various types of screening. 
    c) What are the uses of screening? 
    d) Enumerate the criteria a screening test should fulfill.