

1. a) Discuss the role of statistics in health sciences research.  
b) Discuss the challenges of research in homoeopathy.
2. The state government has commissioned you to find the effectiveness of Ferrum Phos to improve anaemia among antenatal mothers. The past records of the antenatal mothers are available in the health department.  
a) How will you select the case and controls for the study?  
b) Discuss the advantages and disadvantages of case-control studies.
3. Design a qualitative study using any homeopathic approach for mental health.
4. a) Define incidence rate, prevalence rate, odds ratio and relative risk.  
  
b) A homeopathic researcher studied the prevalence of liver cirrhosis among 5000 men who were chronic alcoholic. 125 men were already diagnosed with alcoholic liver cirrhosis at the start of the study period. Over next two years, 75 men developed liver cirrhosis. What is the incidence rate of disease over the study period?
5. As researcher you are supposed to conduct a drug proving for a homoeopathic drug xyx. List the ethical issues in drug proving and precautions you will take.
6. An epidemiological research was conducted to find association between coffee drinking and gastritis. The researcher selected all his study subjects from a super specialty hospital that is specialized in Gastroenterology. Comment on the sample selection and source of sample.
7. A funding agency has advertised a Requests for Proposal (RFP) to conduct a hospital based research on use of homoeopathic drugs for treatment of Chronic Tonsillitis. A previous study has shown that prevalence of tonsillitis is 20%, Calculate the required sample size with 5% level of significance, 80% power and 10% precision. What is the net sample size?
8. Write short notes on the following
  - a) Cross tabulation
  - b) Multivariate analysis.
9. Explain test of hypothesis.
10. Interpretation is fundamental component of research process. Justify.

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