

Rajiv Gandhi University of Health Sciences

I Semester Master in Public Health Degree Examination – OCT-2019

[Time: 3 Hours]

[Max. Marks: 100]

Principles of Epidemiology

Q.P. CODE: 9762

(QP contains two pages)

Your answers should be specific to the questions asked. Draw neat, labeled diagrams wherever necessary.

LONG ESSAY

3 X 10 = 30 Marks

1. An epidemiologist conducted a study to examine the relationship between oral contraceptive pills and uterine tumors. He followed women who use and do not use oral contraceptive pills over a five year period. He found that 85 of the 450 individuals who use oral contraceptive pills developed uterine tumor, while 225 of 3050 individuals who do not use oral contraceptive pills developed uterine tumor. Answer the following questions based on the above data.
 - a) What type of study is this?
 - b) What is the incidence among the exposed?
 - c) What incidence of is among unexposed?
 - d) What is relative risk?
2. Classify epidemiological study designs. Design a Randomized control trial for studying Drug A and Drug B.
3. Recently in Bangalore a festival was organized in a temple, following which there was episode of outbreak. An epidemiologist identified that 84 cases with onset of sign and symptoms of diarrhea was observed during the Bangalore temple festival. It was observed that 74 cases were detected, all had eaten lunch at temple. Nearly 15 members did not eat lunch, none became ill. Calculate the attack rate for those who ate lunch and those who did not. What do you infer from the data available

SHORT ESSAY (Answer any ten)

10 X 05 = 50 Marks

4. Discuss YPLL as epidemiological measure.
5. Compare and discuss the effect modification with confounding.
6. Explain any two types of association with suitable example.
7. Define bias. Discuss measurement bias with suitable example.
8. How will you evaluate a screening test?
9. Health authorities in a municipal corporation reported that 25 dengue cases required hospitalization in a community of 65000 during a recent national holiday. Eight additional cases of Dengue were reported during the following month, and two of these died. What was the prevalence rate of dengue cases requiring hospitalization on holiday and for the period as whole?
10. Explain the relationship of incidence and prevalence with suitable example.
11. Discuss the levels of prevention and give examples.
12. Discuss role of spot map in epidemiology.
13. A note on rate, ratio and proportion.
14. Explain epidemic curves and types of outbreak with examples.
15. In year 2002, a researcher conducted a case control study and explored an association between coffee drinking and angina pectoris. The following data were reported. Among the study population 150 men and women who consumed coffee reported with symptoms of angina. 75 men and women did not develop any symptoms of angina. Among the 300 controls 45 men and women were diagnosed and treated for angina.
 - a) Design a 2 X 2 table
 - b) Calculate the odds ratio and also interpret the results of odds ratio.

OBJECTIVE TYPE (MCQ's, One word, True/False or One/Two Sentence)

10 X 02 = 20 Marks

16. Public health surveillance does not include the following activities
 - a) Data collection
 - b) Data analysis

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- c) Disease control
- d) Data dissemination.
- 17. Secondary prevention of diseases does Not focus on
 - a) Early detection and quick treatment
 - b) Screening for diseases
 - c) Restore or improve health
 - d) Therapeutic and rehabilitative measures.
- 18. Randomization can be used to control for confounding and selection bias in clinical trials True /False.
- 19. A cause must always precede an outcome. True/False.
- 20. Which of the following is not a primary requirement for the conducting screening for disease control?
 - a) Prevalence of the disease should be high in the subclinical population under study.
 - b) The government should fund the program
 - c) There should be a favorable prognosis for early treatment of the disease
 - d) The disease should be serious.
- 21. Define cause specific mortality rate.
- 22. In a cohort study, the study population includes persons eligible to be selected but who would have been lost to follow-up if actually followed. True / false
- 23. Attributable Risk ratio.
- 24. For a cohort study, define:
 - a) Individual risk
 - b) Relative risk
- 25. Define the term *cyclic variation*.

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