



International Institute of Health Management Research (IIHMR), New Delhi

PGDM (HOSPITAL AND HEALTH MANAGEMENT)

(2024-2026 PGDM Batch)

RE-SUPPLEMENTARY EXAM (3rd Semester)

HEM 702-Applied Epidemiology

Date: 15-06-2026

Timing & Duration: 02:30 - 05:30 P.M. (3 Hrs.)

Max. Marks: 100

Instructions:

- Budget your time as per the marks given for each question and write your answer accordingly.
 - Don't write anything on the Question Paper except writing your Registration No.
 - Mobile Phones are not allowed even for computations.
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Part-A: Q.1 to Q.10 (10 questions x 2 Marks = 20 Marks)

1. Incidence rates can be calculated from cross-sectional studies.
 - a. True
 - b. False
2. Study designs which combine features of two or more classical epidemiological designs are called _____.
3. When the sample selected for a study is not representative of the population from which it is selected, the type of bias which is introduced is:
 - a. Selection bias
 - b. Information bias
 - c. Confounding
 - d. Effect modification
4. If there is an association between two attributes, it automatically implies that one is a causative factor for the other.
 - a. True
 - b. False
5. The team which is constituted to investigate and control a disease outbreak is called _____.
6. Which of the following is an example of a secondary prevention strategy in epidemiology?
 - a. Vaccination campaign
 - b. Health education program
 - c. Disease screening and management
 - d. Genetic counseling for at-risk individuals

7. Logic model is commonly used in
 - a. Outbreak investigation
 - b. Program evaluation
 - c. Disease modelling
 - d. All of the above
8. The effect of a health programme on health status of the population is known as its
 - a. Efficiency
 - b. Output
 - c. Relevance
 - d. Impact
9. Under the national vector borne disease control programme, fortnightly house-to-house fever survey is an example of _____ type of surveillance.
10. Spatial analysis of disease distribution is done with the help of:
 - a. Spot map
 - b. Epidemic curve
 - c. Line diagram
 - d. Pie chart

Part-B: Q.11 to Q.15 (4 questions x 5 Marks = 20 Marks) - Attempt any four

11. Explain how you will assess the performance of a screening test with a suitable example. (5)
12. Explain the chain of infection. Explain with a suitable example how the chain of infection is useful in the control of an outbreak. (3+2)
13. What is serial testing and parallel testing in context of disease screening? Which one is used if we want to improve sensitivity? (3+2)
14. What is the difference between morbidity and mortality? Name and explain two commonly used measures of morbidity. (1+4)
15. Define secondary attack rate. How is it measured? Why is it considered a useful measure in a disease outbreak? (1+2+2)

Part-C: Q.16 to Q.20 (4 questions x 15 Marks = 60 Marks) - Attempt any four

16. Explain the difference between the following: (5x3)
 - a. Concordant and discordant pairs in pair matched analysis
 - b. Forward and backward techniques of preparing a logic model
 - c. Passive surveillance and sentinel surveillance
 - d. Index case and primary case in an outbreak
 - e. Literature search and critical appraisal
17. The ASHA reports that five children in her village complained of loose stools and vomiting in the past week. Describe the steps of outbreak investigation with respect to this case. (15)
18. What is the national programme in India on disease surveillance called? Discuss two special surveillance systems operating under National Health Mission in India. (1+7+7)

-: 3 :-

19. Describe the steps you will undertake to plan and conduct the evaluation of any National Health Programme of your choice in a state in India. (15)
20. The population of a PHC as on 31.03.2026 was 40,000 and following data of events were available for the year. Calculate the relevant vital indices. (15)
 - No. of live births - 800
 - No. of deaths - 320
 - No. of maternal deaths - 8
 - No. of infant deaths - 20
 - No. of deaths in infants less than 28 days of age - 10