III Professional MBBS Part I Degree Supplementary (SAY) Examinations May 2025
Community Medicine Paper I
(2019 Scheme)

Time: 3 Hours   Total Marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
- *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

1. **Multiple Choice Questions**   **(20x1=20)**

The MCQ questions (Q.No. i to Q.No. xx) shall be written in the space provided for answering MCQ questions at page No. 51 of the answer book (the inner portion of the back cover page (PART III)). Responses for MCQs marked in any other part/page of the answer book will not be valued

Question numbers i-v are single response questions

i. Water pump in broad street in London was identified as the source of cholera by
   a) William Farr   b) John Snow   c) John Grunt   d) Hippocrates

ii. An example of a live attenuated vaccine is
   a) Hepatitis B   b) Pertussis   c) Measles   d) Diphtheria

iii. Fish fat is a dietary source of
   a) Vitamin E   b) Vitamin K   c) Vitamin D   d) Vitamin B_1

iv. The duration of electricity supply required in a day to keep the vaccines effective in an ice-lines refrigerator (ILR) is
   a) 4 hours   b) 10 hours   c) 8 hours   d) 2 hours

v. Interruption of transmission of disease
   a) Elimination   b) Control   c) Eradication   d) Extermination

Question numbers vi-x are case scenario-based questions

100 children with bronchopneumonia were taken and, 100 children with the same age and sex who did not have bronchopneumonia were taken and history of vitamin A rich food intake was assessed.

vi. The study design is
   a) Randomised control trial   b) Cohort   c) Case control   d) Case-cohort

vii. The bias in case control is
   a) Confounder bias   b) Berke Sonian bias   c) Selection bias   d) All of the above

viii. Matching help to prevent
   a) Confounder bias   b) Selection bias   c) Berke Sonian bias   d) Recall bias

ix. The measure of risk in case control study is
   a) Odds ratio   b) Relative risk   c) Attributable risk   d) Hazard ratio

x. An odds ratio of one indicates
   a) Protective effect   c) No association
   b) High risk   d) No inference can be made

Question numbers xi-xv consist of two statements-Assertion (A) and Reason (R). Answer these questions by selecting the appropriate options given below.

xi. Assertion: Case fatality rate is a measure of virulence of the disease
   Reason: Rabies has low case fatality rate
   a) Both A and R are true and R is the correct explanation of A   c) A is true, R is false
   b) Both A and R are true and R is not the correct explanation of A   d) A is false, R is true

xii. Assertion: Predictive value of a screening test depends on the prevalence of the disease
   Reason: Sensitivity and specificity are the measures of validity of a screening test
   a) Both A and R are true and R is the correct explanation of A   c) A is true, R is false
   b) Both A and R are true and R is not the correct explanation of A   d) A is false, R is true

xiii. Assertion: Waste sharps are disposed in puncture proof, leak proof and tamper proof containers
   Reason: Waste sharps are a health hazard to health care workers
   a) Both A and R are true and R is the correct explanation of A   c) A is true, R is false
   b) Both A and R are true and R is not the correct explanation of A   d) A is false, R is true

xiv. Assertion: In a simple random sampling technique, every member of the population has an unequal chance of being selected in the sample
   Reason: A list of members in the sampling frame is necessary for selection of the sample
   a) Both A and R are true and R is the correct explanation of A   c) A is true, R is false
   b) Both A and R are true and R is not the correct explanation of A   d) A is false, R is true

xv. Assertion: The active search for disease in apparently healthy people is screening
   Reason: The benefit of screening is that early diagnosis is possible
   a) Both A and R are true and R is the correct explanation of A   c) A is true, R is false
   b) Both A and R are true and R is not the correct explanation of A   d) A is false, R is true

Question numbers xvi-xx are multiple response type questions read the statements and mark the answers appropriately

xvi. Prevalance as a measure of disease frequency is influenced by
1) Duration of the disease
2) Incidence of the disease
3) Fatality of the disease
4) Variation in the population size
a) 1, 3, 4 are correct   b) 1, 2, 4 are correct   c) 1, 2, 3, 4 are correct   d) 1, 2 are correct

xvii. The advantages of an occupational cohort subgroups in a cohort study all EXCEPT
1) Easy access to study participants
2) Easy follow-up of participants
3) Participants are cooperative
4) Selecting a comparison group is difficult
a) 1, 3, 4 are correct   b) 1, 2, 3 are correct   c) 1, 2, are correct   d) 1, 2, 3, 4 are correct

xviii. The types of formulations of essential medicine are
1) Immediate release tablets
2) Enteric coated tablets
3) Hard and soft gelatin capsules
4) Oral liquids/injectable/Topical forms
a) 1, 3, 4 are correct   b) 1, 2, 3 are correct   c) 1, 2 are correct   d) 1, 2, 3, 4 are correct

xix. Residual chlorine after disinfection of water is tested by
1) Orthotolidine Arsenic test
2) Orthotolidine test
3) Methylene blue test
4) Chlorotex test
a) 1, 3, 4 are correct   b) 1, 2, 3 are correct   c) 1 and 2 are correct   d) 1, 2, 3, 4 are correct

xx. The relation in size between two random quantities is expressed as
1) Doctor population ratio
2) Sex ratio at birth
3) Child sex ratio
4) Doctor nurse ratio
a) 1, 3, 4 are correct   b) 1, 2, 3 are correct   c) 1, 2 are correct   d) 1, 2, 3, 4 are correct

Essays: **(2x10=20)**
2. Three children in a village reported to the medical officer with history of vomiting and fever since two days. They were 2 years, 5 years and 7 years old.
   a) What are the differential diagnosis of the cases.
   b) How will you manage the cases.
   c) List the steps of investigating this epidemic.   (2+5+3)
3. Define health education. Discuss the principles of health education. List the barriers to communication.
                                                                                                       (2+5+3)

Short Essays: **(6x6=36)**
4. Define biomedical waste. List the sources of biomedical waste. Discuss the role of personal protective devices while handling biomedical waste.
5. Classify epidemiological study designs. Describe the advantages of randomization in an experimental study.
6. Discuss the Vitamin A prophylaxis program. List the sources of vitamin A in an Indian diet.
7. Genetic counselling.
8. List the stages in demographic cycle. Discuss birth and death registration in India.
9. Epidemic dropsy.

Short Answers: **(6x4=24)**
10. What is fiduciary duty and how is it applicable to doctors. What are the penalties a doctor can be given in case of breach of fiduciary duty. State with an example.
11. Principles of Primary Health Care.
12. Sickness benefit in the Employees State Insurance Act.
13. Trans fatty acids.
14. Measure of central tendency.
15. Hazards prevention and control of air pollution.

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