

2019 Scheme

Q.P. Code: 316001

Reg. no.:

Third Professional MBBS Part I Degree Supplementary Examinations April 2026 Community Medicine Paper I

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 answered only in the OMR sheet provided 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. **For marking the correct responses use X mark only**

Question numbers i-v are single response questions

- The term "risk factor" in epidemiology refers to:
 - A condition that always causes a disease
 - A factor associated with an increased likelihood of developing a disease
 - An event that directly prevents disease occurrence
 - A diagnostic test for disease prevalence
- Screening is a type of
 - Primordial prevention
 - Primary prevention
 - Secondary prevention
 - Tertiary prevention
- Open vial policy is applicable to
 - Measles Vaccine
 - Oral Polio Vaccine (OPV)
 - Pentavalent Vaccine
 - Tetanus Toxoid (TT)
- In demographic terms, a population with a higher proportion of elderly individuals is classified as:
 - Youthful
 - Stable
 - Aging
 - Expanding
- What is the key role of screening in public health
 - Diagnosis of disease
 - Treatment of disease
 - Early detection of disease
 - Reducing exposure to risk factors

Question numbers vi-x are case scenario-based questions

A 42-year-old male, employed in a battery manufacturing plant, presents to the community health clinic with complaints of chronic fatigue, abdominal pain, irritability, difficulty concentrating, and tingling sensations in his hands and feet. He reports working in this place for the past 10 years without proper personal protective equipment. On physical examination, pallor is noted, and his neurological exam reveals decreased sensation in the distal extremities. Laboratory investigations reveal microcytic hypochromic anaemia and slightly elevated serum creatinine

- What is the most likely diagnosis for this patient based on his occupational exposure and clinical presentation
 - Chronic kidney disease
 - Lead poisoning
 - Vitamin B₁₂ deficiency anaemia
 - Iron deficiency anaemia
- What is the most appropriate next step in the management of this patient
 - Blood transfusion
 - Chelation therapy
 - High-dose iron supplementation
 - Antioxidant therapy
- What preventive measures should be implemented at the workplace to reduce lead exposure
 - Periodic employee health check-ups and regular testing for lead levels
 - Provision of personal protective equipment and enforcing hygiene practices
 - Implementing ESI services to these workers
 - Regular nutritional supplementation for workers exposed to lead
- Which of the following laboratory findings is a sensitive parameter for hematological response to this condition
 - Elevated liver enzymes and high bilirubin levels
 - Low haemoglobin with normal serum iron levels
 - Increased basophilic stippling of erythrocytes
 - Hyperkalaemia and hypocalcaemia
- What is the primary pathophysiological mechanism leading to anaemia in this patient
 - Chronic blood loss due to gastrointestinal irritation
 - Suppression of erythropoietin production in the kidneys
 - Impairment of heme synthesis in the bone marrow
 - Increased destruction of red blood cells in the spleen

(PTO)

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

- a) Both A and R are true, and R explains A c) A is true, but R is false
b) Both A and R are true, but R does not explain A d) A is false, but R is true

- xi. **Assertion:** Vaccination programs target both primary and secondary prevention levels.
Reason: Vaccines help reduce disease transmission and mitigate complications in infected individuals.
- xii. **Assertion:** Screening for hypertension is a form of tertiary prevention.
Reason: Screening aims to detect disease early to prevent complications.
- xiii. **Assertion:** Bio-medical waste management is crucial to preventing hospital-acquired infections.
Reason: Proper segregation and disposal of waste reduce the risk of pathogen transmission.
- xiv. **Assertion:** Eating Rice and Dhal lead to supplementary action of protein.
Reason: Rice is deficient in Methionine and Dhal is deficient in Lysine.
- xv. **Assertion:** Demographic transition describes changes in birth and death rates over time.
Reason: Improved living conditions are associated with higher mortality rates in developing countries.

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

- xvi. Reference Indian Adult man has
1) Age between 19 – 39 years 2) Height of 177 cm 3) Weight of 55 kg 4) Free from disease
a) 1 and 2 are correct c) 1, 2 and 3 are correct
b) 3 and 4 are correct d) 1, 2 and 4 are correct
- xvii. Key steps in biomedical waste management include:
1) Source segregation 2) Deep burial for all waste
3) Disinfection and safe disposal 4) Recycling of plastic and glass waste
a) 1, 2 and 3 are correct c) 1, 3 and 4 are correct
b) 1, 2 and 4 are correct d) 2, 3 and 4 are correct
- xviii. Principles of Health Education includes
1) Credibility 2) Motivation 3) Comprehension 4) Cost effectiveness
a) 1, 2 and 3 are correct c) 1, 3 and 4 are correct
b) 1, 2 and 4 are correct d) 2, 3 and 4 are correct
- xix. Key methods for calculating demographic rates include:
1) Life tables 2) Census data 3) Vital registration systems 4) Direct interviews with key informants
a) 1, 2 and 3 are correct c) 1, 3 and 4 are correct
b) 1, 2 and 4 are correct d) 2, 3 and 4 are correct
- xx. Carriers may be classified based on type as
1) Incubatory 2) Healthy 3) Temporary 4) Chronic
a) 1 and 2 are correct c) 3 and 4 are correct
b) 2 and 3 are correct d) 1 and 4 are correct

Essays:

(2x10=20)

2. Explain the health risk of biomedical waste handlers working at Government Medical College Hospital. Explain the treatment and disposal technologies for healthcare waste.
3. A researcher selected a group of stroke patients and compared with a group of normal study participants regarding history of diabetes and other risk factors of stroke. The researcher estimated the risk measure of association as 2.3 for diabetes from this study.
a) What is the study design used by the Researcher and why that design is appropriate.
b) What is the formula for calculating the risk measure of association in this study design.
c) Interpret the risk measure of association for diabetes of 2.3.
d) What are the biases associated with this design.
e) List Two advantages and Two disadvantages of this design.

(2+2+1+3+2)
(6x6=36)

Short Essays:

4. Briefly explain the determinants of health.
5. Human Development Index (HDI).
6. Chlorination of water using double pot method and its public health importance.
7. Impact of psychosocial hazard on workers performance.
8. Methods of Nutritional Status Assessment.
9. What's the formula used to calculate attributable risk and population attributable risk.

Short Answers:

(6x4=24)

10. Chlorination of wells.
11. Discuss the medico legal issues that can occur in physician – patient relationship.
12. Impact of acculturation on health.
13. List the diseases transmitted by sand fly and control measure for sand fly.
14. Bradford Hill criteria's for causality.
15. Biological effects of exposure to radiation.

CORRECTION / NO-CORRECTION FILE
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QPCODE: 316001

Dated: 06-04-2026

Question No. 1 (iii)

Replaced with "Open vial policy is applicable to all EXCEPT

- a) Measles Vaccine c) Pentavalent Vaccine**
b) Oral Polio Vaccine (OPV) d) Tetanus Toxoid (TT)."

Question No. 1 (viii)

Replaced with "What preventive measures should be implemented at the workplace to reduce lead exposure all EXCEPT

- a) Periodic employee health check-ups and regular testing for lead levels**
b) Provision of personal protective equipment and enforcing hygiene practices
c) Implementing ESI services to these workers
d) Regular surveillance of lead levels at work place."

Question No. 1 (xi)

Replaced with "Assertion: Vaccination programs target primary prevention.

Reason: Vaccines help reduce disease transmission and mitigate complications in infected individuals."

Question No. 1 (xvi)

Replaced with "Reference Indian Adult man has

- 1) Age between 19 – 39 years 2) Height of 177 cm 3) Weight of 55 kg 4) Free from disease**
a) 1 and 3 are correct c) 1, 2 and 3 are correct
b) 3 and 4 are correct d) 1, 2 and 4 are correct."

Question No. 1 (xx)

Corrected as "Carriers may be classified based on TYPE as

1) Incubatory 2) Healthy 3) Temporary 4) Chronic

a) 1 and 2 are correct c) 3 and 4 are correct

b) 2 and 3 are correct d) 1 and 4 are correct."

Corrections/Modifications/Replacement of Questions if any shall be made available to all students. Take the print out of the Correction File in such cases and distribute to all students.

(Sd/-)

CONTROLLER OF EXAMINATIONS