

SOCIAL AND PREVENTIVE MEDICINE
PAPER-I

Time: 3 hours
Max. Marks:100

SPM/J/20/45/I

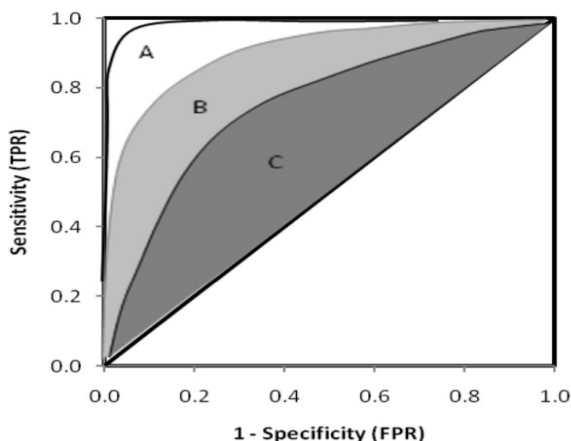
Important Instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. a) Explain with suitable examples the role of various cultural factors in health and disease with special focus on maternal and child health related issues. 6+4
b) Write a note on Poverty Line and its public health significance in our country.
2. a) Discuss with examples the uses of Epidemiology in support of Public Health. 4+6
b) Mathematical Models for Infectious Diseases: Types, role of assumptions, uses, principles of good practice in modelling – in the context of SARS-nCoV2.

3. 2+3+5



- a) Briefly describe the ROC curve.
- b) Interpret the results of Test A, B, C from above given figure of ROC curve.
- c) What are the biases that can affect the ROC curve results?

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4. a) A study compared post-operative infection rates in a standard surgical procedure with those for a new procedure. The study protocol claimed that roughly equal numbers of patients from 10 preoperative assessment clinics were to be randomly allocated to undergo either the new treatment or the standard procedure. Make a flow diagram of the type of study described here? 3+2+5
- b) In each clinic, the first 20 patients received the new treatment, while the next 20 patients were allocated the standard procedure. Critically review on this allocation procedure.
- c) The results of the study showed that 24 out of 100 patients who underwent the standard procedure developed infection, while 16 out of 100 patients who received the new procedure developed infection. Calculate an appropriate measure of risk for these results and draw inferences.
5. a) Characteristics of health indicators. 3+7
- b) Enumerate the morbidity indicators and their application.
6. You are working as Medical Officer in-charge of a Primary Health Centre, which organizes a vaccination session every Wednesday. One day, after vaccination, a child returns back with severe local reaction at the site of injection. You categorized it as an Adverse Event Following Immunization (AEFI) and started investigation. 1+2+4+3
- a) What are the points that would characterize this case as an AEFI?
- b) What are the possible types of Adverse Events Following Immunization that the child may have had based on cause specific categorization according to WHO?
- c) For conducting an investigation of this AEFI, what steps should be followed?
- d) What are the actions to be taken in each of these steps during investigations?
7. a) Briefly describe Changing concepts in Public Health. 5+(2.5+2.5)
- b) Define the term Social Pathology and Social Therapy with suitable examples.
8. a) Types of Epidemics. 2.5x4
- b) Epidemic curve.
- c) Median incubation period.
- d) Secular trend.
9. a) Public health strategies to influence determinants of health care seeking behavior. 5+5
- b) Efficiency and Equity in the context of Universal Health Coverage (UHC).
10. a) Differences between Screening and Diagnostic Tests. 4+6
- b) Explain the assessment of the 'Validity (accuracy) of a Screening Test' using a suitable example comparing a screening test with a gold standard.
