

# MANIPAL UNIVERSITY

## SECOND SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION – DECEMBER 2015

**SUBJECT: MCH – 608: EPIDEMIOLOGY IN MATERNAL AND CHILD HEALTH  
(SPECIALIZATION: MATERNAL AND CHILD HEALTH)**

Saturday, December 19, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 70

✍ **Write long essays on:**

1. Draw the basic study design of a prospective cohort study. What are the types of cohort studies? Write in detail about ambi-directional cohort study. (3+2+5 = 10 marks)

2. What are the various types of bias affecting internal validity? Explain in detail. (10 marks)

3. This is data revealing the association of drinking water contamination with tetrachloroethylene (PCE) that was consumed by mothers prenatally to delivery of low birth weight babies. In this analysis, PCE exposure is recorded at four levels: Level 1: 0-39 g/day, Level 2: 40-79 g/day, Level 3: 80-119 g/day, and Level 4: 120+ g/day.

The total no. of cases and controls for level 1 was 415, while cases included 29.

For level 2, cases were 75 and controls 280.

Level 3 had a total of 138 cases and controls with 87 controls.

Those in level 4 were a total of 67, while cases were 45.

Calculate the dose-response relationship associated with each level of *PCE exposure* taking the lowest level of *exposure* as reference. Is there evidence of a dose-response relationship associated with each level of PCE consumption?

(6+4 = 10 marks)

4. Write in detail regarding I.D.S.P. (10 marks)

5. **Write short notes on:**

5A. Accuracy

5B. Measurement of outcome in unmatched case-control study

5C. List the toxicological concepts

5D. Ecological fallacy

5E. Rationale for H.I.V. sentinel surveillance among ANC clinic attendees

5F. AFP surveillance system performance indicators

(5 marks × 6 = 30 marks)



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**MANIPAL UNIVERSITY**  
**SECOND SEMESTER MASTER OF PUBLIC HEALTH**  
**DEGREE EXAMINATION – DECEMBER 2015**

**SUBJECT: MPH – 608: HEALTH ECONOMICS**  
**(SPECIALIZATION: EPIDEMIOLOGY)**

Saturday, December 19, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 70

**✍ Write long essays on:**

1. Explain price elasticity of demand. Discuss along with diagrams the three conditions arising in elasticity of demand. Give suitable examples in each.
2. How is the impact of health problems measured in economic evaluation? List out the different categories of resources useful in health sector.
3. Enumerate the need of health care in developing economics.
4. Discuss the challenges and prospects of health insurance in India.

(10 marks × 4 = 40 marks)

**5. Write short notes on:**

- 5A. Discuss efficiency and its types. How is efficiency and equity different from each other?
- 5B. Explain the concept of wants and demand. What are the determinants of demand? Explain the slope of demand curve along with a diagram.
- 5C. What are the prerequisite conditions to enter into PPP? List out the principles and objectives of public private partnership.
- 5D. Health sector in India faces variety of economic problems. Discuss these problems in detail.
- 5E. Give an example of government created monopoly. Is creating this monopoly a bad public policy? Explain.
- 5F. Define utility. What are the different ways to derive maximum utility from the alternate use of resources?

(5 marks × 6 = 30 marks)



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# MANIPAL UNIVERSITY

## SECOND SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION – DECEMBER 2015

SUBJECT: MPH – 610: INFECTIOUS DISEASE EPIDEMIOLOGY  
(SPECIALIZATION: EPIDEMIOLOGY)

Saturday, December 19, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 70

✍ **Long answer questions.**

1. What is an epidemic? Discuss the steps followed in investigation of an epidemic.
2. What do you mean by reservoir of infection? Discuss the measures to control reservoir of infection.
3. Describe the epidemiology of Novel Influenza A H1N1 and discuss its preventive and control measures.
4. Describe the preventive and control measures for Malaria infection.

(10 marks × 4 = 40 marks)

5. **Short notes:**

- 5A. Adverse events following immunization
- 5B. Salk versus Sabin vaccine
- 5C. MDR - TB
- 5D. Measures to reduce perinatal transmission of HIV
- 5E. Serological response to Hepatitis B infection
- 5F. Syndromic approach to STD

(5 marks × 6 = 30 marks)

