



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - DECEMBER 2017
SUBJECT: APPLIED EPIDEMIOLOGY AND BIostatISTICS (MPH - 618)
(EPIDEMIOLOGY) - REPEATERS

Friday, December 01, 2017 (10.00 - 13.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

SECTION - A (APPLIED EPIDEMIOLOGY)

Long Answer questions:

- 1) Design a case control study to test the association between smoking and cardiovascular disease. Illustrate epidemiological measure of association calculated from case control study with an example. (10)
(6+4 = 10 marks)
- 2) Explain main features of Experimental studies. Discuss different types of experimental study design. (10)
(5+5 = 10 marks)

3. Short notes:

- 3A) Explain the concept of sufficient cause with an example. (5)
- 3B) Web of causation. (5)
- 3C) Two differences between case control and cohort study with help of an example. (5)

SECTION - B (APPLIED BIostatISTICS)

Long Answer questions:

- 4) Describe ANOVA and Wilcoxon sign rank test with situations to use and assumptions? (10)
(5+5 = 10 marks)
- 5A) What are the requirements for the calculation of sample size for the comparison of two proportions? (5)
- 5B) Define test of significance, level of significance and p value. (5)
(2+1+2 = 5 marks)

6. Write short notes:

- 6A) Write a short note on correlation. (5)
- 6B) Explain Mann Whitney U test with situation to use and assumptions? (5)
- 6C) What is confidence interval? Give expression for standard error for difference in means and proportions? (5)
(2+1.5+1.5 = 5 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - DECEMBER 2017
SUBJECT: INFECTIOUS DISEASE AND SURVEILLANCE (MPH - 614)
(EPIDEMIOLOGY) - REPEATERS

Saturday, December 02, 2017 (10.00 - 13.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

Long essay questions:

- 1A) What is a reservoir of infection? What are the types of reservoirs for infection? (4)
(2+2 = 4 marks)
- 1B) How does it relate to transmission of an epidemic prone disease? Describe with an example. (6)
- 2A) When was the first Crimean Congo Hemorrhagic Fever (CCHF) case reported in India? (3)
How contagious is the disease?
(1+2 = 3 marks)
- 2B) Is there an animal reservoir? (1)
- 2C) What are the major steps taken to control CCHF? (6)
- 3A) Why is there an added emphasis on control of Rubella along with Measles? (3)
- 3B) Is the Measles Rubella campaign going to address this? Explain the recent Government of India strategy on Measles Rubella. (7)
(2+5 = 7 marks)
- 4A) What is the concept behind One Health? How does the concept of one Health help in the control of communicable diseases? (5)
(2+3 = 5 marks)
- 4B) Cite one of the emerging disease that has major animal and human component and describe how the components synchronize in the control of the disease. (5)

5. Short notes:

- 5A) YAWS (5)
- 5B) SARS (5)
- 5C) Zika Fever (5)
- 5D) Incubation Period (5)
- 5E) Epidemic Curve (5)
- 5F) Mode of Transmission-Echinococcosis (5)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - DECEMBER 2017
SUBJECT: HEALTH SERVICE ADMINISTRATION AND MANAGEMENT (MPH - 604)
(EPIDEMIOLOGY) - REPEATERS

Tuesday, December 05, 2017 (10.00 - 13.00)

Answer ALL the questions.

Budget time across questions accordingly.

Marks: 70

Duration: 180 mins.

Long essay questions:

- 1) Discuss the function of recruitment for the human resource manager. Explain three types of external recruitment with examples. (10)
- 2) Describe the role of Manager in relation to Henry Mintzberg. (10)
- 3) Discuss the essentials of quality improvement in healthcare services. (10)
- 4) If you had to evaluate the government's performance in healthcare, how would you go about it? (10)
(4+3+3 = 10 marks)

5. Short essay questions:

- 5A) Hierarchy of Six Sigma (5)
- 5B) Method of calculating EOQ when demand and lead time is stable (5)
- 5C) Steps in risk assessment (5)
- 5D) Types of Communication (5)
- 5E) Types of training (5)
- 5F) Role of information system in healthcare delivery (5)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - DECEMBER 2017

SUBJECT: HEALTH ECONOMICS (MPH - 608)
(EPIDEMIOLOGY) - REPEATERS

Wednesday, December 06, 2017 (10.00 - 13.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

- 1) There is a health education campaign to highlight to general public the benefits of regular dental check-ups (for which people must pay directly). (10)
 - i) What do you think would be the effect on the quantity demanded? Enumerate along with diagram.
 - ii) Suppose the dental clinic relocates to an area outside the city such that it is far from majority of population, thus deterring people from using the service. Illustrate the effect of demand along with a diagram.
- 2) Public Private Partnership seems to a good way to extend the range of health care services. Discuss the principles and objectives of a public private partnership. Explain the different models of PPP giving suitable examples. (10)
- 3) What are the types of economic problems encountered in the health sector? Can you think of ways in which demand for health care is different from the demand for other goods? (10)
- 4) What is meant by market equilibrium? In the market for ice cream cone at the equilibrium price is \$2 per cone and equilibrium quantity is 7cones. Explain along with diagrams the change in market equilibrium under the following conditions. (10)
 - i) Suppose the market price is above the equilibrium price. At price of \$2.50 per cone, the quantity of good supplied (10cones) exceeds the quantity demanded (4cones).
 - ii) Suppose the market price is below the equilibrium price. In this case, the price is \$1.50 per cone and the quantity of good demanded exceeds the supply.

5. Write short notes:

- 5A) Explain choice and opportunity cost and its relevance to public health. (5)
- 5B) What is an economy? What are the different ways in which an individual can derive utility from a good? (5)
- 5C) Efficiency and its types. How is efficiency and equity different from each other? Explain giving suitable examples. (5)
- 5D) What is economic evaluation? Discuss the different types of economic evaluation used in an economy. (5)
- 5E) What do you understand by the term health insurance? Discuss the advantages and disadvantages of health insurance in India. (5)
- 5F) Explain along with a diagram to show the effect of the following event on the demand for the good. Government introduced a policy which would reduce the demand for tobacco products. Public service announcements, mandatory health warnings on the packets of tobacco products. (5)

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