



MANIPAL UNIVERSITY

FIRST SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - NOV/DEC 2017 SUBJECT: INTRODUCTORY BIOSTATISTICS FOR PUBLIC HEALTH (MPH 603) (REGULAR)

Tuesday, November 28, 2017 (10.00 - 13.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

- 1) Describe ordinal and nominal variables. Classify the following variables based on their measurement scale (Nominal, ordinal, interval and ratio). (i) Height (in cm) (ii) Blood group (iii) Temperature (iv) Severity of pain. (5)
- 2) State the axiomatic definition of probability. (5)
- 3) List out the characteristics of normal distribution with the help of a neat diagram. (5)
- 4A) The duration time duration of time for the first exposure to HIV infection to AIDS diagnosis is called the incubation period. The incubation periods of a random sample of 8 HIV infected individuals (in years) is given below: (5)
8.5 12 10.5 10 6.3 13 12 7.7
Calculate the standard deviation of the incubation period.
- 4B) Differentiate rates and proportions with examples. (5)
- 5A) Following data represents the duration (in days) of chicken pox disease in 9 patients. (2)
14 15 14 16 17 13 15 12 14
Calculate the value of: Sample mean
- 5B) Following data represents the duration (in days) of chicken pox disease in 9 patients. (1)
14 15 14 16 17 13 15 12 14
Calculate the value of: Mode
- 5C) Following data represents the duration (in days) of chicken pox disease in 9 patients. (1)
14 15 14 16 17 13 15 12 14
Calculate the value of: Range
- 5D) Following data represents the duration (in days) of chicken pox disease in 9 patients. (2)
14 15 14 16 17 13 15 12 14
Calculate the value of: 50th percentile
- 5E) Following data represents the duration (in days) of chicken pox disease in 9 patients. (4)
14 15 14 16 17 13 15 12 14
Calculate the value of: Interquartile range
- 6A) **Write short note on:** Binomial distribution (5)
- 6B) **Write short note on:** Poisson distribution (5)
- 7A) From the 2 x 2 table given below, calculate and interpret: Odds of the disease (2)
- | Smoking | Lung cancer | |
|---------|-------------|-----|
| | Yes | No |
| Yes | 60 | 20 |
| No | 30 | 270 |
- 7B) From the 2 x 2 table given below, calculate and interpret: Relative risk (2)

Smoking	Lung cancer	
	Yes	No
Yes	60	20
No	30	270

7C) From the 2 x 2 table given below, calculate and interpret: Attributable risk (3)

Smoking	Lung cancer	
	Yes	No
Yes	60	20
No	30	270

7D) From the 2 x 2 table given below, calculate and interpret: Population attributable risk (3)

Smoking	Lung cancer	
	Yes	No
Yes	60	20
No	30	270

8) In an outbreak situation how do you frame a hypothesis? What are its different forms and (10)
what do you do to prove or disprove a hypothesis?
(4+3+3 = 10 marks)

9) Importance of Time in epidemiological analysis. (5)

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MANIPAL UNIVERSITY

FIRST SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - NOV/DEC 2017
SUBJECT: SURVEY METHODS, DATA COLLECTION AND MANAGEMENT (MPH 605)
(REGULAR)

Wednesday, November 29, 2017 (10.00 - 13.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

- 1) Describe four uses of health information in Public Health? List three major sources of health information in India and two measurements available from each of these sources? (10)
(4+6 = 10 marks)
- 2) What is stratified random sampling? List the merits and demerits of this technique. (10)
Differentiate stratified random sampling and cluster sampling techniques with help of a suitable example
(3+3+4 = 10 marks)
- 3) Explain the use of questionnaire in survey research? Explain major steps in designing a questionnaire? List types of questions used in a quantitative questionnaire (10)
(3+3+4 = 10 marks)
- 4) Explain the data collection process in large scale surveys. List two health indicators each from District Level Household Surveys and District Level Facility Surveys? (10)
(6+4 = 10 marks)

5. Write short notes:

- 5A) Write a short note on Sample Registration System of India. (5)
- 5B) Write a short note on 30x30 by 2-stage cluster sampling. (5)
- 5C) Advantages and disadvantages of Non-random Sampling methods. (5)
- 5D) Explain three types of non-random sampling methods. (5)
- 5E) Explain the methods used to collect qualitative data. (5)
- 5F) Open-ended and Close-ended questions in a questionnaire. (5)

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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION - NOV/DEC 2017
SUBJECT: SOCIAL AND BEHAVIORAL SCIENCES (MPH 609)
(REGULAR)

Thursday, November 30, 2017 (10.00 - 13.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

1) Long Questions.

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| 1A) | Briefly explain the role of social and behavioral science in the field of Public Health. | (10) |
| 1B) | Discuss in detail the steps of intervention mapping approach with a suitable examples. | (10) |
| 1C) | Discuss the impact of Social and cultural factors on health of the community. | (10) |
| 1D) | Discuss in detail the social determinants of health behavior with examples. | (10) |

2) Write short notes:

- | | | |
|-----|--|-----|
| 2A) | Community health needs assessment | (5) |
| 2B) | Health for All | (5) |
| 2C) | Ethical principles in community research | (5) |
| 2D) | Health belief model | (5) |
| 2E) | Community empowerment | (5) |
| 2F) | Procede model | (5) |

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