MANIPAL UNIVERSITY
FIRST SEMESTER MASTER OF PUBLIC HEALTH
DEGREE EXAMINATION – NOVEMBER 2015
SUBJECT: MPH – 601: BASIC EPIDEMIOLOGY

Monday, November 23, 2015

Time: 10:00 – 13:00 Hrs.   Maximum Marks: 70

✍   **Write essay on:**

1.   Explain in detail the measures of disease frequency with suitable examples and their uses.

(10 marks)

2.   Elaborate on the steps involved in conducting a cross-sectional study.

(10 marks)

3.   What is screening? Discuss the various criteria for screening.

(10 marks)

4A.   What does the odds ratio measure?

4B.   A study was conducted to look for an association between exposure to high fat diet and breast cancer in women with the results as shown below:

Exposure	Cases	Controls
High fat diet	75	25
No high fat diet	25	75

Calculate the odds ratio and interpret your result in terms of high fat diet exposure and breast cancer development.

(3+7 = 10 marks)

5.   **Write short notes on:**

5A.   Strength of association

5B.   Secondary prevention

5C.   Lead time bias

5D.   Spectrum of health

5E.   Spurious association

5F.   Demographic cycle

(5 marks × 6 = 30 marks)

MANIPAL UNIVERSITY

FIRST SEMESTER MASTER OF PUBLIC HEALTH
DEGREE EXAMINATION – NOVEMBER 2015

SUBJECT: MPH – 603: INTRODUCTORY BIOSTATISTICS FOR PUBLIC HEALTH

Tuesday, November 24, 2015

Time: 10:00 – 13:00 Hrs.   Maximum Marks: 70

1A.   Differentiate rates and proportions with examples.

1B.   What do you mean by a random experiment? State the classical definition of probability.

(5+(2+3) = 10 marks)

2A.   Define a Binomial random variable. List out the assumptions and properties of Binomial distribution.

2B.   A screening program was adopted for the diagnosis of jaundice among newborn babies in a maternity hospital. Suppose 10 newborns were screened, then what is the probability that exactly 2 newborns diagnosed as jaundice positive, if the probability of getting jaundice is 0.3?

(5+5 = 10 marks)

3A.   What do you mean by dispersion? Explain quartile deviation and standard deviation as measures of dispersion.

3B.   Ten HIV positive patients were treated with highly active antiretroviral therapy for at least six months and the baseline CD4 T cells counts ($x10^6$/L) are listed below.

205, 207, 227, 175, 160, 230, 185, 164, 158, 190

Calculate the quartile deviation for this data.

((1+6)+3 = 10 marks)

4.   The following data represent the duration in months of follow up care after the surgery for lumbar spondylolysis.

43	67	79	70	30	68	23	77	70	28
52	75	54	72	23	69	75	74	67	70
26	72	76	58	62	76	60	75	77	71
45	73	61	59	56	71	73	37	65	78
35	61	49	29	71	65	74	78	67	72

4A.   Construct a frequency table with class intervals 20-30, 30-40, …

4B.   Construct a frequency polygon to represent this data.

(6+4 = 10 marks)

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5.   **Write short notes on:**

5A.   Importance of statistical methods in public health
5B.   Qualitative and quantitative variables
5C.   Normal distribution
5D.   Applications of Baye's theorem in Epidemiology
5E.   Interval and ratio scales of measurements with examples
5F.   Median and geometric mean

(5 marks × 6 = 30 marks)

MANIPAL UNIVERSITY

FIRST SEMESTER MASTER OF PUBLIC HEALTH
DEGREE EXAMINATION – NOVEMBER 2015

SUBJECT: MPH – 605: SURVEY METHODS, DATA COLLECTION & MANAGEMENT

Wednesday, November 25, 2015

Time: 10:00 – 13:00 Hrs.   Maximum Marks: 70

✍ **Answer ALL the questions.**

1A. Discuss the advantages of sampling over census.

1B. List the advantages and disadvantages of probability sampling over non-probability sampling.

(5+5 = 10 marks)

2A. Discuss the use of pilot study in survey research.

2B. Briefly explain the guidelines to be followed while constructing a questionnaire.

(5+5 = 10 marks)

3A. Explain the use and limitations of open-ended and closed-ended questions in a questionnaire.

3B. Differentiate stratified and cluster sampling techniques.

(5+5 = 10 marks)

4. **Differentiate the following:**

4A. Statistic and parameter

4B. Simple random and systematic random sampling

4C. Quota sampling and convenience sampling

4D. Sampling and non-sampling errors

(5 marks × 4 = 20 marks)

5. **Write short notes on:**

5A. PPS sampling

5B. Multiphase sampling with example

5C. Sampling strategies adopted for National Family Health Surveys

5D. Relative efficiency of sampling methods

(5 marks × 4 = 20 marks)

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FIRST SEMESTER MASTER OF PUBLIC HEALTH
DEGREE EXAMINATION – NOVEMBER 2015

SUBJECT: MPH – 607: ENVIRONMENTAL AND OCCUPATIONAL HEALTH

Thursday, November 26, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 70

✍ **Answer ALL questions.**

1. **Long answer question:**

1A. What are the different sources of Ionizing radiation? Describe the measures to prevent adverse health effects due to radiation.

1B. Describe the steps involved in purification of water by slow sand filter.

1C. Define Occupational Health. Describe the different measures for prevention of Occupational disease.

1D. Enumerate the labor laws in India. Discuss the salient features of ESI Act, 1948.

(10 marks × 4 = 40 marks)

2. **Write short notes on:**

2A. Social security schemes in India

2B. Occupational dermatoses

2C. Ergonomics

2D. Control of ground water pollution

2E. Water quality standard related to acceptability aspect

2F. Kyoto protocol

(5 marks × 6 = 30 marks)

MANIPAL UNIVERSITY

FIRST SEMESTER MASTER OF PUBLIC HEALTH DEGREE EXAMINATION – NOVEMBER 2015

SUBJECT: MPH – 609: SOCIAL AND BEHAVIORAL SCIENCES

Friday, November 27, 2015

Time: 10:00 – 13:00 Hrs.

Maximum Marks: 70

✍ **Write essay on:**

1. Discuss the key concepts in community organisation and community building practice.

2. Stress is a significant mental health concern in the rapidly changing society – Discuss.

3. "In a short period, there was sudden increase in harmful alcohol use among young people between the age group 16 – 24 years in Udupi". Design an intervention to reduce the alcohol use among young people.

4. Culture practices have significant bearing on the health of the community – Justify.

(10 marks × 4 = 40 marks)

5. **Write short notes on:**

5A. Religion and health
5B. Gender and health
5C. Influence of education on health
5D. Basic ethical principles in community research
5E. Assessing health needs in communities
5F. The relevance of social and behavioural sciences for public health

(5 marks × 6 = 30 marks)