



**UNIVERSITY EXAMINATIONS FOR
2017/2018 ACADEMIC YEAR**

SECOND YEAR SECOND TRIMESTER EXAMINATION

FOR THE DEGREE

OF

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

SCHOOL: Public Health, Biomedical Sciences and Biotechnology

COURSE CODE: BML 424

COURSE TITLE: Medical Epidemiology and Community Health and COMMUNITY HEALTH

DATE: JULY 2018

Duration: Two (2) Hours

General instructions to candidates

1. This section consists of sections A, B and C, carrying a maximum of seventy (70) marks)
2. Answer all the questions in the university examinations booklets provided
3. Write your registration number only
4. Write your registration number on every new leaf of the examination booklet used
5. Read the instructions under each section and answer the questions accordingly

Instructions to the Candidate

1. This section has twenty questions, carrying a maximum of twenty (20) marks)
2. Each question only ONE correct answer
3. Indicate the correct answer for each question by writing the corresponding letter in the provided university examination booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQs)

Answer ALL questions by indicating "T" for true and "F" for false answers per choice

- 1. Epidemiologists are interested in learning about.....**
 - a) The causes of diseases and how to cure or control them
 - b) The frequency and geographic distribution of diseases
 - c) The causal relationships between diseases
 - d) All the above

- 2. Diseases that are always present in the community, usually at a low, more or less constant, frequency are classified as having.....pattern are classified as having a pandemic**
 - a) Endemic
 - b) Pandemic
 - c) Epidemic
 - d) All the above

- 3. Which of the following statements are true concerning epidemic diseases?**
 - a) They are usually not very contagious
 - b) At the end of the epidemic, the disease spreads at an alarming rate and then abruptly disappears
 - c) They usually appear and disappear seasonally
 - d) None of the above

- 4. A disease vector is a(n).....**
 - a) An organism that transmits a disease
 - b) A symptom of a disease
 - c) An environmental condition associated with a disease
 - d) None of the above

- 5. Which of the following causes malaria?**
 - a) Mosquitoes
 - b) Plasmodia
 - c) Red blood cells
 - d) Immunity

- 6. The following are true of the Nuremberg code:**
 - a) Required is the voluntary, well-informed, understanding consent of the human subject in a full legal capacity
 - b) The experiment should aim at positive results for society that cannot be procured in some other way
 - c) It should be based on previous knowledge (like, an expectation derived from animal experiments) that justifies the experiment
 - d) The experiment should be set up in a way that avoids unnecessary harm

7. Confidentiality of medical information is guided by:

- a) Patients should be told of the limits to confidentiality at the beginning of the physician-patient relationship and as events arise that create potential revelations
- b) Disclosure of confidential information should occur only if the patient has given informed consent or if it is necessary to protect the patient or third parties from imminent harm, in a manner consistent with relevant legal statutes
- c) Disclosure of patient information should always be limited to the requirements of the situation. This limitation is particularly relevant when state or federal privacy rules provide a lower standard of protection
- d) In their progress notes, medical practitioners should record only the information necessary for continued patient care

8. The following are true of the Helsinki Declaration:

- a) The Declaration of Geneva of the WMA binds the physician with the words, "The health of my patient will be my first consideration," and the International Code of Medical Ethics declares that, "A physician shall act in the patient's best interest when providing medical care"
- b) It is the duty of the physician to promote and safeguard the health, well-being and rights of patients, including those who are involved in medical research. The physician's knowledge and conscience are dedicated to the fulfillment of this duty
- c) Medical progress is based on research that ultimately must include studies involving human subjects
- d) The primary purpose of medical research involving human subjects is to understand the causes, development and effects of diseases and improve preventive, diagnostic and therapeutic interventions (methods, procedures and treatments). Even the best proven interventions must be evaluated continually through research for their safety, effectiveness, efficiency, accessibility and quality

9. The following are true of the Helsinki Declaration:

- a) To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries
- b) To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centers or organizations
- c) To collect, process, analyze, publish and disseminate epizootiological data relevant to the designated pathogens or diseases
- d) To provide scientific and technical training for personnel from OIE Member Countries

10. The stages of a malignant disease (cancer) is recorded using the symbols 0, I, II, III, IV. We say that the scale used is:

- a) Alphanumeric
- b) Numerical
- c) Ordinal
- d) Nominal

11. The fundamental statistical indicators are:

- a) Mean
- b) Median
- c) Variance
- d) Standard deviation

12. The average of a series of numerical values is:

- a) The sum of the values divided by their number
- b) Lower than the minimum value in the series
- c) Lower than the maximum value in the series
- d) An indicator of central tendency for the values of the series

13. Standard deviation:

- a) is the square root of variance
- b) B is measured using the unit of the variable
- c) is measured using the squared unit of the variable
- d) has values generally comparable with the average value

14. The median of a series of numerical values is:

- a) Equal to the average
- b) A graph or hart
- c) A number
- d) A frequency table

15. If a series of values consists of 21 numbers, then, for finding the median, we ordered the series ascending and we use:

- a) The 11th value in the ordered series
- b) B. The mean between the 10th and 11th values
- c) The mean between the 11th and 12th values
- d) The 10th value in the ordered series

16. The median of a series of numerical values is:

- a) A value for which half of the values are higher and half of the values are lower
- b) The value located exactly midway between the minimum and maximum of the series
- c) The most commonly encountered values among the series
- d) A measure of the eccentricity of the series

17. The science that studies the distribution, occurrence and control of health and disease in a defined population is called..

- a) Bioinformatics
- b) Epidemiology
- c) Immunology
- d) Clinical laboratory science

18. A disease that is maintained in a population at a steady, low-level frequency is

- a) Sporadic
- b) Endemic
- c) Epidemic
- d) Pandemic

19. The sudden, unexpected occurrence of disease, usually in a limited segment of a population, is called

- a) An Outbreak
- b) An epidemic
- c) A pandemic
- d) A sporadic disease

20. An increase in disease occurrence within a large population over a wide region is called

- a) An Outbreak
- b) An epidemic
- c) A pandemic
- d) A sporadic disease

SECTION B: SHORT ANSWER QUESTIONS (SAQs)

Instructions to Candidates

- This section has eight short answer questions (SAQs)
- The section carries a maximum of forty (40) marks distributed as indicated against respective questions
- Answer all the questions

1. Define, discuss and or describe the following terminologies (5 marks)
2. Discuss *the "case-control" study* (5 marks)
3. State, define and briefly discuss six uses of epidemiology (5 marks)
4. State four importances of epidemiology (5 marks)
5. About triangulation (5 marks)
 - i) Define and describe triangulation
 - ii) Why do we use triangulation in research?
6. Briefly describe (5 marks)

SECTION C: LONG ANSWER QUESTIONS (LAQs)

Instructions to candidates

- This section carries two (2) long answer questions (LAQs) with equal marks
 - It carries a maximum score of forty (40) marks
 - Answer both questions
1. With regard to epidemiological research, discuss informed consent (20 marks)
 2. With regard to medical ethics in epidemiological research, state the ten points of the Nuremberg Code (20 marks)