

UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES
FOURTH YEAR SECOND SEMESTER EXAMINATION - APRIL 2020



MLSEP 4241 EPIDEMIOLOGY

DATE: 24.07.2020

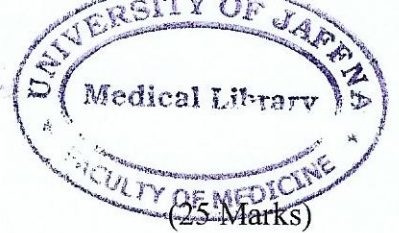
DURATION: 1 Hour

ANSWER ALL FOUR QUESTIONS

1. The COVID – 19 pandemic has shed light on the importance of having a strong **public health surveillance** system.
 - 1.1 Define the term public health surveillance. (10 Marks)
 - 1.2 Explain the difference between active and passive surveillance with examples. (20 Marks)
 - 1.3 In March 2020, the Director General of World Health Organization had a simple message on COVID-19 control for all countries: “Test, test, test.” Critically reflect on this statement. (30 Marks)
 - 1.4 Discuss the strengths and weaknesses of laboratory surveillance in Sri Lanka using enteric fever as an example. (40 Marks)

2. The Ministry of Health reported that the incidence of dengue was 215 per 100,000 population and the prevalence was 232 per 100,000 population in a district for the year 2019.
 - 2.1 Explain why the incidence and prevalence for dengue are almost the same for a year. (30 Marks)
 - 2.2 Explain why hospital admission for dengue is not an appropriate calculation of incidence of the disease. (35 Marks)
 - 2.3 As a Medical Laboratory Technologist of a Teaching Hospital, you wish to study the different strains of dengue viruses causing different outbreaks. Propose a suitable study design with adequate justifications. (35 Marks)

3. A screening test is performed as a preventive measure to detect a potential health problem or disease in someone that doesn't yet have signs or symptoms. The purpose of screening is early detection; helping to reduce the risk of disease, or to detect a condition early enough to treat it most effectively.
 - 3.1 Name four measures used to assess the ability of a screening test. (20 Marks)
 - 3.2 Briefly describe the characteristics of an ideal screening instrument which can be used for community based screening of a disease. (50 Marks)
 - 3.3 Discuss the role of medical laboratory technologist in cervical cancer screening program in Sri Lanka. (30 Marks)



- 4. Write short notes on
 - 4.1 Case fatality rate (25 Marks)
 - 4.2 Quarterly Epidemiological Bulletin (25 Marks)
 - 4.3 Sentinel sites (25 Marks)
 - 4.4 Chronic carriers (25 Marks)