

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (HEALTH INFORMATICS) EXAMINATION**  
**DECEMBER 2021 (RESCHEDULED)**

**Date:-** 3<sup>rd</sup> December 2021

**Time:-** 12.30 p.m. - 3.30 p.m.

**ESSAY PAPER**

**Answer all four (04) questions.**

**Answer each question in a separate book.**

1. Telehealth facilitated continued care for patients and protected healthcare staff from COVID-19 by minimising social contact during the pandemic.
  - 1.1. Define Telehealth and discuss different types of Telehealth services. (30 marks)
  - 1.2. Briefly describe Telehealth services used in Sri Lanka during the COVID-19 pandemic and how they enabled and facilitated continued care. (40 marks)
  - 1.3. Discuss the enablers and barriers for Telehealth implementation in Sri Lanka. (30 marks)
2. The World Health Organisation published interim guidelines for implementing a Smart Vaccination Certificate in March 2021. The Ministry of Health nominated you, in your capacity as a Registrar in Health Informatics, to the multi-disciplinary team appointed to implement Smart Vaccination Certification in Sri Lanka.
  - 2.1. List the design principles in formulating the national vaccine record architecture for Sri Lanka and briefly describe each principle. (40 marks)
  - 2.2. List the core data set for the Smart Vaccine Certificate. (20 marks)
  - 2.3. Describe the high-level architecture which may facilitate interoperability from a paper-based vaccine record to a cross-border digital vaccination record that suits the Sri Lankan COVID-19 vaccination programme. (40 marks)

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3. The Personal Data Protection Act of Sri Lanka has been gazetted recently. The role of Controller or Processor described in the Act may lie within the duties of medical officers in health informatics and consultants in health informatics.
  - 3.1. List the other policies/acts that may overlap with the scope of the Act when health data is considered. (20 marks)
  - 3.2. Briefly discuss the “Rights of Data Subjects” described in the Act with regard to medical data and health information systems. (50 marks)
  - 3.3. Write a brief note on de-identification of personal and medical/health data in medical research. (30 marks)
  
4. International development agencies promote and fund development of health information systems in developing countries on open source software platforms. They advise governments to adopt open source software platforms to fast track implementation of national health information systems.
  - 4.1. Compare and contrast the advantages and disadvantages of developing systems on open source platforms against systems using custom (bespoke) software in the health sector. (60 marks)
  - 4.2. Explain how open source software can contribute to the sustainability of health information systems in developing countries. (40 marks)