

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL ADMINISTRATION) PART I EXAMINATION
JANUARY 2018

Date:- 8th January 2018

Time:- 1.00 p.m. – 4.00 p.m.

PAPER I

Answer question **one (01)** and **three (03)** other questions.
Answer each question in a separate book.

1. A tertiary care hospital reported a higher rate of adult Dengue deaths compared to the other tertiary care hospitals. Director dengue control program wants evidence based actions to be taken.

As the Director of the tertiary care hospital outline a research proposal to address this issue. (80 marks)

2.

- 2.1. Find x, y, z. Take the mean as 23. (06 marks)

$$1 \mid 09x$$

$$2 \mid 9y$$

$$3 \mid z$$

- 2.2. Indicate the scale of measurement for the following variables.
Height, religion, ethnicity, pain, Socio-economic status (05 marks)

- 2.3. Write short notes on the following:

2.3.1. Coefficient of Determination (R^2) (03 marks)

2.3.2. Normal Distribution (03 marks)

2.3.3. Coefficient of Variation (CV) (03 marks)

2.4. A quality control inspector found the following defective parts on 15 different days on an assembly line.

03	10	08	04	06	10	12	06	10	07	11	09
04	13	11									

2.4.1. What is best mean, the median and the modal number of defective parts? (03 marks)

2.4.2. What is best measure of the centre for this data? (02 marks)

2.4.3. Calculate the range for this data. (01 mark)

2.4.4. Find the upper and the lower quartile. (02 marks)

2.4.5. What is the inter-quartile range? (01 mark)

2.4.6. What is the semi inter-quartile range? (01 mark)

2.5. At an examination it was felt appropriate to pass 75% of the candidates. From previous years the average marks obtained at the examination was known to be 68% with a standard deviation of 14. What must the pass mark be if the above is to be achieved? (10 marks)

3.

3.1. A 75 year old previously healthy woman is admitted to hospital with a severe pneumonia and needs admission to the Intensive Care Unit for intubation and ventilation. The patient does not wish to be intubated. Discuss the main ethical principles and factors to be considered when attempting to resolve this ethical dilemma. (20 marks)

3.2. As the Director of a District General Hospital, discuss the steps you will take to establish a Research Ethics Committee (Ethics Review Committee) in your institution to function effectively and ethically. (10 marks)

3.3. Discuss how you would prevent or minimize conflict of interest in your institution among

3.3.1. Hospital Consultants

3.3.2. Researchers

(10 marks)

4. "Social Health Insurance is a feasible alternative to address the rising health care costs in the government sector". Critique this statement. (40 marks)
- 5.
- 5.1. What are the key determinants of a health policy? (05 marks)
 - 5.2. What are the basic goals of a health policy? (05 marks)
 - 5.3. Outline the stages of the health policy process. (10 marks)
 - 5.4. Discuss the importance of stakeholder engagement in the health policy process. (20 marks)
- 6.
- 6.1. Discuss the challenges you may have to face as a Director of a District General Hospital when introducing an electronic medical record system. (20 marks)
 - 6.2. Discuss how you will overcome these challenges when implementing this electronic medical record system. (20 marks)

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MD (MEDICAL ADMINISTRATION) PART I EXAMINATION –
JANUARY 2018

Date :- 9th January 2018

Time :- 9.00 a.m. – 12.00 noon

PAPER II

Answer question one (01) and three (03) other questions.
Answer each question in a separate book.

1. The Ministry of Health has decided to establish a new Cardiology Unit including all modern facilities in Jaffna District. As a management consultant you are requested to analyse the potential competition using Porters five forces model before starting this project.
 - 1.1. Outline the components of the five forces model. (15 marks)
 - 1.2. Discuss the components of the above model highlighting the importance in relation to this project. (40 marks)
 - 1.3. Briefly outline how you will report the results of the analysis to the Ministry of Health. (25 marks)
2. District General Hospital X has two haematology analyzers in the laboratory. During an inspection, Regional Director of Health Services (RDHS) found that one analyzer cannot be used due to a breakdown.
 - 2.1. Calculate instantaneous availability of these equipment in the particular day. (05 marks)
 - 2.2. RDHS decided to find out other sources of downtime and instructed the Medical Superintendent to carry out a study to find out following measures.
What are your considerations for calculating
 - 2.2.1. Inherent availability (05 marks)
 - 2.2.2. Achieve availability (05 marks)
 - 2.2.3. Operational availability (05 marks)
 - 2.3. Discuss the importance of following measures in relation to performance of medical equipment
 - 2.3.1. Mean Time Between Failure (MTBF) (10 marks)
 - 2.3.2. Mean Time Taken for Repair (MTTR) (10 marks)

Contd..../2-

3. The adolescents in the country are a vulnerable group requiring specific health care interventions.
 - 3.1. What are the issues faced by present day adolescents in Sri Lanka? (15 marks)
 - 3.2. As a Regional Director of Health Services how would you set up a plan to address these adolescent health issues. (25 marks)
4. Outline the mechanisms adapted in an Office of the Regional Director of Health Services (RDHS) to monitor and evaluate the performance of health services delivery in the district. (40 marks)
5. You are the Director of a tertiary care maternity hospital. You are informed that there is an increase of patients especially pregnant women coming with flue like symptoms. Epidemiology Unit of the Ministry of Health has announced that there may be an outbreak of H1N1 in the country.
 - 5.1. As a Director of this hospital, what are the problems you may be anticipating? (15 marks)
 - 5.2. List out and briefly discuss measures you will take to overcome these problems identified due to the outbreak in the hospital. (25 marks)
6.
 - 6.1. Using the WHO Health Systems framework discuss the strengths and weaknesses of the present public sector health system of Sri Lanka. (20 marks)
 - 6.2. Briefly give your recommendations for policy objectives for a medium term plan to improve efficiency and effectiveness of this system? (20 marks)