

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

**MSc (MEDICAL ADMINISTRATION) EXAMINATION**  
**JANUARY 2011**

**Date :** 25<sup>th</sup> January 2011

**Time :** 1.00 p.m.– 4.00 p.m.

**SECTION A**

**PAPER I**

**Answer all five questions.**

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

1. You are the newly appointed Medical Superintendent of District General Hospital A. It was brought to your notice that there was a shortage of drugs for patients attending medical clinics for management of diabetes mellitus in the past year. In order to rectify this problem, you want to conduct a research at your institution level to find out the causes for this drug shortage.

Two Visiting Physicians are working in the hospital and one of them was appointed last year. Medical clinics are conducted on every Tuesday and Thursday from 8 a.m -1 p.m. There is a diabetic clinic conducted every other Friday from 2 p.m – 4 p.m. Several activities have taken place in the hospital to improve the quality of services. In the clinics, an appointment system was introduced, which has cut down the waiting time of patients. Further, drugs packeting system is operational in the pharmacy. There is an electronic numbering system at the pharmacy to call patients.

Each day 600 patients attend the medical clinic. The attendance to diabetic clinic is 400/day. Approximately 55% of patients attending the medical clinic take treatment for Diabetes Mellitus.

There is separate pharmacy for clinic patients. Three pharmacists work in this pharmacy. There was a shortage in all diabetic drugs last year but there was a severe shortage for mixtard insulin. There was a period of 2 months in the past year when mixtard insulin was not available.

- 1.1 Based on your knowledge, construct a problem analysis diagram.  
(10 marks)
- 1.2 What is the problem / problems you select for the research?  
Give reasons for your selection (05 marks)
- 1.3 Based on the available information develop a problem statement.  
(15 marks)

- 2.
- 2.1 What steps would you take as a medical administrator to set up a productivity and quality improvement programme in your hospital ? (20 marks)
- 2.2 What steps would you take as a medical administrator to improve customer care and public relations in your hospital ? (10 marks)
3. The trend in non Communicable Diseases (NCD) is increasing in the past years.
- 3.1 List out the possible reasons in relation to demographic and epidemiological transition. (15 marks)
- 3.2 A research was conducted to find out the knowledge on NCD among staff officers working at government institutions. The total knowledge was categorized as “poor” when it was less than mean – ISD. Others were categorized as “satisfactory” knowledge. The researcher wants to test whether there is a relationship between knowledge on NCD and gender. A table summarizing knowledge according to gender is given below.

**Table 1 : Distribution of knowledge on NCD according to gender.**

Gender	Knowledge on NCD		Total	Mean knowledge score = SD
	Satisfactory(%)	Poor (%)		
Males*	100 (50.5%)	98 (49.5%)	198 (100.0%)	48.3 =10.5
Females	125 (62.5%)	75 (37.5%)	200 (100.0%)	58.8 = 8.6
Total	225 (56.5%)	173 (43.5%)	398 (100.0%)	54.3 = 9.4

\* For males group there were two non respondents.

Chi – square statistical test was applied on the data and the output was,  
 $\chi^2_{df 1} = 0.5.826; P = 0.02$

- (a) Write the null and the alternate hypotheses. (05 marks)
- (b) What are the possible statistical test that could have been applied to test whether there is a significant difference in the knowledge among males and females ? (03 marks)
- (c) What is the statistical test you would have chosen for this purpose ? Give reasons. (02 marks)
- (d) How do you interpret the results based on chi value ? (05 marks)

4.
  - 4.1 What is meant by health sector reforms ? (10 marks)
  - 4.2 Explain the role of the “New Public Management” in the process of health sector reforms with particular emphasis on Sri Lanka. (20 marks)
5.
  - 5.1 What is meant by “capacity building”? (10 marks)
  - 5.2 How does the vision of a manager (administrator) of a hospital affect the capacity building process of that hospital ? Explain your answer with examples. (20 marks)

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**SECTION A**

**PAPER II**

**Answer all questions.**

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

1. Distinguish between cost – benefit analysis and cost –effectiveness analysis by using a hypothetical set of data. (10 marks)
2. Distinguish between “efficacy” and “community effectiveness” with an example. (10 marks)
3. List out indirect cost incurred by the patient and his/her household members in seeking care for an illness. (10 marks)
4. Briefly explain the steps followed in undertaking a cost apportionment analysis of hospital overheads with examples. (10 marks)
5. What are the conditions under which a “supplier induced demand” could occur ? (10 marks)
6. Discuss the usefulness of in-depth interviews. (10 marks)
7. When would you use Focus Group Discussion in research ? (10 marks)
8.
  - 8.1 What are the advantages and disadvantages of cluster sampling ? (05 marks)
  - 8.2 What is design effect ? (05 marks)
9. What are the steps taken to improve validity of Data ? (10 marks)
10. Briefly outline the basic characteristics of medical pluralism in Sri Lanka. (10 marks)
11. As the director of a teaching hospital, list out the steps that you would take to improve the office management in your hospital. (10 marks)

12. Provide reasons for the significant gender gap in life expectancy in present Sri Lanka. (10 marks)
  
13.
  - 13.1 what is the Chain of command within an organization ? (04 marks)
  
  - 13.2 List out five of the barriers of effective communication in public sector hospital. (06 marks)
  
14. As the director of a teaching hospital what steps would you take to develop the human resources of your hospital ? (10 marks)
  
15. Discuss briefly whether employee satisfaction is related to positive customer outcomes. (10 marks)

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**SECTION B**

**PAPER I**

Answer **all five** questions.

Answer each question in a separate book.

1. A divisional hospital that has a total bed strength of 80 beds revealed the following statistics for inpatient utilization (the figures are averaged for a 5 year period)

1.1. Mean Bed Occupancy rate (BOR) for the hospital – 60%

1.2 Male ward BOR – 55%

1.3 Female ward BOR – 60%

1.4 Average length of stay 3.5 days

A local politician wishes to improve the hospital and intends to increase the bed capacity to 100 beds.

Discuss what advice you would give the local politician on improvements that may be required. (30 marks)

2.

2.1. What is employee involvement ? Give five practical examples. (10 marks)

2.2. Outline the steps you would take as a medical administrator to improve the employee discipline of your hospital. (10 marks)

2.3. List out the main steps that you would take to conduct a preliminary investigation on misconduct of an employee. (10 marks)

3.

3.1. How can functional conflict be created ? (05 marks)

3.2. When is organizational conflict constructive ? (05 marks)

3.3. What are the destructive outcomes of conflict ? (10 marks)

3.4. What steps should a medial administrator take to manage and resolve conflict in health care organization ? (10 marks)

4. The district of Nuwara-Eliya has reported s highest Maternal Mortality Rate for the year 2007 (73.6 per 100,000 live births).
- 4.1. Describe the possible factors that have led to the high Mortality Rate. (15 marks)
- 4.2. As the RDHS of Nuwara-Eliya what measures could you take to reduce preventable maternal deaths. (15 marks)
- 5.
- 5.1. What is a pandemic ? (05 marks)
- 5.2. List general preventive measures you would advocate to prevent community spread of a HINI influenza outbreak. (10 marks)
- 5.3. Ministry of Health has alerted all the Heads of the health institutions that a few cases of confirmed Pandemic HINI influenza has been reported. As a Head of Tertiary Care Health Institution, describe the measures you would take to face the impending HINI out break. (15 marks)

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**SECTION B**

**PAPER II**

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1. Discuss the role of the hospital administrator in implementing Baby Friendly Hospital Initiative concept. (10 marks)
2. Describe the impact of the increased Total Fertility Rate from 1.9 (20000 DHS) to 2.3 in 2007. (10 marks)
3.
  - 3.1 Define Disease Surveillance. (05 marks)
  - 3.2 Describe briefly the routine disease surveillance system for notifiable diseases in Sri Lanka. (05 marks)
4. A provincial Director of Health Services intends to introduce a system of clinical audit. Outline step that he/she should take to introduce such a system. (10 marks)
5. Discuss the importance of research in national programme development giving examples. (10 marks)
6. Write short notes on Indoor Mortality and Morbidity return. (10 marks)
7.
  - 7.1 Briefly explain what is a health indicator ? (05 marks)
  - 7.2 List out five indicators that could be used to measure quality of health care provided in an outpatient department. (05 marks)
8. List out advantages and disadvantages of a computerized health information system. (10 marks)
9.
  - 9.1 What is results based planning? (05 marks)
  - 9.2 What is resource based planning? (05 marks)
10. Discuss usefulness of output indicators and outcome indicators. (10 marks)



11. What is the difference between leadership and management ? (10 marks)
  
12. As a medical administrator, what action would you take to improve the financial management system for the effective utilization of public funds in your organization. (10 marks)
  
13. What steps would you take as a medical administrator if the allocation for the payment of overtime for the claims of nursing staff is not sufficient ? (10 marks)
  
14.
  - 14.1 What is effective supervision ? (04 marks)
  - 14.2 What are the qualities of a good supervisor ? (06 marks)
  
15. Explain how a medical administrator can build trust in organizational relationships. (10 marks)