POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL ADMINISTRATION) PART I EXAMINATION
MAY 2004

Date : 10th May 2004   Time : 1.30 p.m.- 4.30 p.m.

PAPER I

Answer all questions.
Answer each question in a separate answer book.

1.   Assume that you are a health administrator in a province where a recent survey has shown that there is a relatively high incidence of induced abortion among married women.
        Assuming that you have come up with at least two important evidence based reasons., indicate clearly what actions you would take to significantly reduce the high incidence rate of induced abortion in your province.   (100 marks)

2.   You have been asked to design a research project to compare the complication rate of coronary angioplasty and coronary artery bypass surgery.
        2.1.   List the predictor and outcome variables and five background variables for this study.   (50 marks)

        2.2.   Describe how an appropriate sample should be selected.   (50 marks)

3.   Describe briefly the factors you would take into consideration when developing a questionnaire for a research project.   (100 marks)

4.   Briefly explain what is meant by validity. Illustrate your answer with examples.
                                                                                        (100 marks)

5.   Describe how you will assess the quality of care in a diabetic clinic.(100 marks)

6.   Describe the steps you will take to do a literature survey for a research project.
                                                                                        (100 marks)

7,   Indicate briefly the principal content you will include in the following sections of a scientific research paper, based on the IMRAD format as accepted by most peer reviewed medical journals.

(a)   introduction
(b)   methods / methodology
(c)   discussion   (100 marks)

8.   "A coherent policy framework, encompassing legislation regulation and mass education is critical for cardiovascular disease (CVD) prevention and control, since individual behavior change is difficult in the absence of conducive environmental alterations".
Comment on the above statement.   (100 marks)

9.   Write a brief account of the influences exerted by the pharmaceutical industry on the medical profession and medical research. What would be the possible effects of such influences ?   (100 marks)

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MD (MEDICAL ADMINISTRATION) PART I EXAMINATION
MAY 2004

Date : 11th May 2004   Time : 9.30 a.m.- 12.30 p.m.

PAPER II

Answer all questions.
Answer each question in a separate answer book.

1.   "The law relating to doctor-patient relationship is influenced by changing attitudes, and approaches in medical ethics. The current trend is in favour of patient autonomy and patient rights"' Discuss.   (100 marks)

2.

   2.1.   Outline the strategic planning steps towards the development of a corporate plan for a health organization. Briefly describe the organization chosen for this purpose.   (50 marks)

   2.2.   What method of environmental analysis would you recommend ? Outline the method and justify its application.   (50 marks)

3.

   3.1.   Differentiate between leadership and management roles of a hospital administrator. Is such differentiation useful ? Why or why not ?
                                                              (50 marks)

   3.2.   In what ways should a hospital administrator strike a balance between task and people orientation at work ? Give your justification.   (50 marks)

4.

   4.1.   "Health service delivery, whether it is a public or private system, must be patient-focused". Critically examine and give reasons for your arguments.
                                                              (50 marks)

   4.2.   What management techniques would you recommend to hospitals for adoption in order to improve quality of service delivery ?   (50 marks)

5.

    5.1.   As a policy maker of the health sector explain how you would use economic evaluations in your decision making process. Elucidate your answer with examples.   (30 marks)

    5.2.   As the health manager in the public sector explain how you would use economic evaluations in your decision making process. Elucidate your answer with examples.   (30 marks)

    5.3.   What are the limitations of economic evaluations in the decision making process of the health sector ? Give examples.   (40 marks)

6.

    6.1.   Distinguish between –
        (a)   "Programme" and "Project"
        (b)   "Monitoring" and "Evaluation"
        (c)   "Efficiency" and "Effectiveness"   (60 marks)

    6..2.   Explain each of the following with examples.
        (a)   Input indicator
        (b)   Process indicator
        (c)   Output indicator
        (d)   Impact indicator   (40 marks)

MD (MEDICAL ADMINISTRATION) PART I EXAMINATION
OCTOBER 2010

Date : 11th October 2010   Time : 1.00 p.m - 4.00 p.m

PAPER I

Answer all questions.
Answer each question in a separate answer book.

1. Discuss the usefulness of "epidemiology" as a tool for medical administration.

    (20 marks)

2.

   2.1 Define "emerging infectious disease" and "re-emerging infection disease" (05 marks)

   2.2 Describe the areas that you would focus on in systematic planning for epidemic preparedness and response to an emerging infectious disease in Sri Lanka. (15 marks)

3.

   3.1 What is the formation of a preliminary research proposal ? (08 marks)

   3.2 Explain each component of a research proposal very briefly with an example from the tentative topic of your proposed MD thesis. (12 marks)

4.

   4.1. What are the specific factors that you have to take into consideration in preparing a questionnaire for a research on a health issue ? (08 marks)

   4.2. In formulation a questionnaire, what criteria have to be followed in making questions more effective ? (12 marks)

5.

    5.1   Provide a brief put precise definition of literature review.   (06 marks)

    5.2   "Reviewing literature can be time-consuming, daunting and frustrating but it is also rewarding. A literature review has a number of functions …………." (Ranjith Kumar).
            Briefly explain the functions of a literature review.   (14 marks)

6

    6.1   Briefly define the two terms "validity" and "reliability".   (08 marks)

    6.2   "A researcher, who was interested in studying health seeking behavior of NCD patients in the estate sector, selected an estate in the Uva Province for his study on the basic of convenience. When he was conducting interviews with patients, he found that most of them sought treatment from the General Hospital, Badulla because it is located very close to that estate. Thereafter, he took a decision to purposively select another estate off Dikoya, Hatton, in which most of the patients sought treatment from the medical center in that estate. How do you assess this decision in the context of validity of this research ?   (12 marks)

7.

    7.1   What is epistemology ?   (05 marks)

    7.2   Why medical administrators should respect for knowledge rather that belief ?   (15 marks)

8.   Measurements on cumulative radiation dosage were made on workers at an atomic weapons plant over a six-month period. In order to compare the mean cumulative radiation (CR) dosages at two different locations, A and B with 300 and 600 workers respectively , a sample of the data was drawn and analysed.

8.1   State the most suitable sampling technique to compare the mean CR dosages of the workers at two locations. Also, calculate the sub sample sizes corresponding to A and B locations to have a sample size of 24 for the applied sampling method.   (06 %marks)

Answer the following questions based on the SPSS output, which is given below, obtained for the CR dosages of the workers of the sub samples drawn from each location.

Group Statistics

	Location	N	Mean	Std. Deviation	Std. Error Mean
RadDosage	A	8	25.1250	4.25735	1.50520
	B	16	31.5625	4.21060	1.05265

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
									95% Confidence Interval of the Difference	
	F	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
RadDosage Equal Variances assumed	.036	.852	-3.518	22	.002	-6.43750	1.82971	-10.23208	-2.64292

In order to compare the mean CR dosages of the workers between the locations A and B,

8.2   State the appropriate statistical procedure (Independent or paired t – test), the null hypothesis and the alternative hypothesis.   (03 marks)

8.3   Interpret the SPSS computer output, to test whether there is a significant difference in the mean CR dosages of the workers at the two locations (use 5% significant level).   (07 marks)

8.4   Is there a significant difference of mean CR dosages of the workers at the two locations at 1% significant level ?   (02 marks)

8.5   Is it fair or not to use equal variances in the test ? Why ? Or Why not ?   (02 marks)

9. Richard Doll, a British investigator of the relationship between smoking and lung cancer, compiled the following information on per capita cigarette consumption in 1930 and lung cancer 20 years later (in 1950) for a number of countries as shown below.

Countries	Cigarette consumption in 1930	Deaths per 100,000 in 1950
USA	1300	20
Great Britain	1100	46
Finland	1100	35
Switzerland	510	25
Canada	500	15
Holland	490	24
Australia	480	18
Denmark	380	17
Sweden	300	11
Norway	250	9
Iceland	230	6

Using the SPSS output given below for the above data, answer the given questions.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737[a]	.544	.493	8.34878

a. Predictors: (Constant), CC 1930

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	747.409	1	747.409	10.723	.010[a]
	Residual	627.319	9	69.702		
	Total	1374.727	10			

a. Predictors: (Constant), CC 1930
b. Dependent Variable: Deaths 1950

Coeffcients[a]

Model		Unstandardized Coefficients		Standardized Coeffcients	t	Sig.
		B	Std.Error	Beta		
1	(Constant)	6.756	4.906		1.377	.202
	CC 1930	.023	.007	.737	3.275	.010

a. Dependent Variable: Deaths 1950

9.1   Explain the sample correlation coefficient between cigarette consumption in 1930 and lung cancer in 1950 and interpret.
(06 marks)

9.2   State the regression equation for the data and interpret (using outputs of Coefficients and ANOVA).   (04 marks)

9.3   State the R^2 and interpret.   (04 marks)

9.4   Test: $H_{o:}\ \beta = 0$ vs $H_{1:}\ \beta \neq 0$ at the 5% significant level
(02 marks)

9.5   Test: $H_{o:}\ a = 0$ vs $H_{1:}\ \alpha \neq 0$ at the 5% significant level
(02 marks)

9.6   Estimate the number of deaths due to lung cancer in1950, for a country with cigarette consumption in 1930 is 600.   (02 marks)

10.

10.1   State the four main principles of medical ethics.   (05 marks)

10.2   In the following Example of an ethical dilemma, identify the ethical principles that were in conflict and comment on the actions taken by the doctors. Suggest mechanisms that could be set up in a hospital to help resolve such dilemmas.

A previously healthy 25-year-old man is admitted to the Intensive Care Unit with 80% burns. He is semiconscious and in severe pain. The doctors carry out full resuscitation and life saving measures after obtaining consent from the patient's mother. Later, when the patient is conscious, rational and deemed to be mentally capable, he refuses all treatment and wants to die, but the doctors continue to treat and rehabilitate him despite his objections.   (15 marks)

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MD (MEDICAL ADMINISTRATION) PART I EXAMINATION
OCTOBER 2010

Date : 12ᵗʰ October 2010   Time : 9.00 a.m – 12.00 noon

PAPER II

Answer all questions.
Answer each question in a separate answer book.

1.

    1.1   List out the different types of policies.   (10 marks)

    1.2   You have been appointed as a member of a health team. Outline the policy process that team will follow to effectively manage the reforms.   (30 marks)

2.

    2.1   What is meant by "inclusive growth" in the context of equity in the provision of state health service ?   (15 marks)

    2.2   Make a brief assessment of the achievement of "inclusive growth" in the provision of state health services in Sri Lanka during on past decade with examples.   (25 marks)

3.   Assume you have just become the Provincial Director of Health Services of a province. The Secretary of the Provincial Ministry of Health Services is a aware that you have recently completed the Health Management System course of MD (Medical Administration) He wants to know how you are going to manage the health service activities of the province.

    Prepare a brief report to your Secretary explaining the following :

    How would you apply the strategic management approach manage your office and to improve the productivity and quality of health service activities in the province ?   (40 marks)

4. "The implementation of Policies and Strategies are concerned with the design and management of system to achieve the best of integration of people, structures, processes and resources, in reaching organizational purposes".

   Critically evaluate the above statement explaining the relationship among strategy formulation, implementation and evaluation.　　(40 marks)

5.

   5.1 Outline the duties and responsibilities of the Medical Administrator of a hospital to ensure effective medico-legal services for administration of justice.　　(16 marks)

   5.2 How would you, as a Medical Administrator of a tertiary care hospital in the state sector, assist the newly appointed Consultant Judicial Medical officer to establish a new medico-legal unit in the hospital.　　(24 marks)