POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MSc (MEDICAL ADMINISTRATION) EXAMINATION – JULY 2016

Date :- 4th July 2016   **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. Expanded programme of Immunization (EPI) review at the district level revealed that in some Public Health Midwife (PHM) areas vaccination coverage is either more than 100% or less than 100%.

   1.1. How would you explain this?   (15 marks)

   1.2. As the Regional Director of Health Services (RDHS), what action would you take to rectify this?   (15 marks)

2. A descriptive cross-sectional study was conducted in selected 4 hospitals in a province to describe the job satisfaction among OPD Medical Officers.

   The following table shows the results in numbers.

Work experience	Job satisfaction	
	High	Low
< 10 years	100	100
≥ 10 years	120	80
Total	220	180

   2.1. Describe two (02) alternative sampling methods for the above study.
             (10 marks)

   2.2. Name two (02) alternative statistical methods to compare job satisfaction between the two groups.   (05 marks)

   2.3. Calculate and interpret overall high job satisfaction and its 95% confidence interval.   (15 marks)

3.

    3.1. What is health work-force planning? (05 marks)

    3.2. Describe the importance of health work-force planning. (10 marks)

    3.3. Describe the factors to be considered when forecasting health work-force, to the Sri Lankan context. (15 marks)

4.

    4.1. List the tools which can be used in planning. (10 marks)

    4.2. Describe two (02) of the above list. (20 marks)

5. Evaluate the below described project.

Use the formula $NPV = C_i / (1+r)^i$

    C_i is the cash flow at period i
    i   is the period in years
    r   is the cost of capital

    $IRR = X + Y (p/q)$

    X   discount rate which gives a positive NPV
    Y   Difference between the discount rates
         (in this sum it is 15%-12%=3%)
    p   value of the positive NPV
    q   range of the NPV values

Use the table attached to obtain the present values

Project cash flows:

Period	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cash outflows (in Rs000s)	5800					
Cash inflows (in Rs000s)		500	800	1200	2900	3800

  5.1. Calculate the project Net Present Value (NPV) and state whether the project is acceptable assuming that the cost of capital is either 12% and 15% . (17marks)

  5.2. Calculate the Internal Rate of Return of the project (IRR). (08 marks)

  5.3. In addition to above calculations what other factors should you consider when deciding whether to accept or reject the project. (05 marks)

PRESENT VALUE TABLE

Present value of $1, that is $(1+r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods	Interest rates (r)									
(n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods	Interest rates (r)									
(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

POSTGRADUATE INSTITUTE OF MEDICINE
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MSc (MEDICAL ADMINISTRATION) EXAMINATION – JULY 2016

Date :- 5th July 2016   **Time :- 9.30 a.m. – 11.30 a.m.**

SECTION A

PAPER II

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

1. Distinguish between biomedical and non-biomedical models of health and illness.   (10 marks)

2.
   2.1. Define Public Relations.   (04 marks)

   2.2. How important is Public Relations in a health setting.   (06 marks)

3. Outline the difference between formal and informal organizations.
                                                          (10 marks)

4. List the important areas to be considered in setting up an effective Medical Record Management System in a District General Hospital.   (10 marks)

5. Briefly describe five (05) gaps in the service quality Model (SERVQUAL Model)   (10 marks)

6. Outline the leadership grid in relation to, Relationship Behavior and Task Behavior.   (10 marks)

7. Write short notes on :

   7.1. Sustainable Development Goals (SDG)   (05 marks)

   7.2. Human Development Index (HDI)   (05 marks)

8. Briefly outline the role of a medical administrator in community mobilization.   (10 marks)

9. Briefly describe the Principles of Medical Ethics   (10 marks)

10. Write short notes on :

   10.1. Committee on Public Enterprises (COPE)   (05 marks)

   10.2. Public Accounts Committee (PAC)   (05 marks)

11.

   11.1. What are the characteristics of a good health indicator?   (05 marks)

   11.2. List five (05) indicators that could be used to assess the quality of Accident and Emergency (A&E) unit of a teaching hospital.
      (05 marks)

12. What do you mean by quasi market?   (10 marks)

13. What are the roles and functions of a Technical Evaluation Committee (TEC)?   (10 marks)

14. Write short notes on development of a Policy frame-work.   (10 marks)

15. List the advantages and disadvantages of using incinerators in hospital waste management.   (10 marks)

MSc (MEDICAL ADMINISTRATION) EXAMINATION – JULY 2016

Date :- 5th July 2016   **Time :-** 1.00 p.m. – 4.00 p.m.

SECTION B
PAPER I

Answer **all five** questions.
Answer **each** question in a separate book.

1.
     1.1.   List out ten (10) criteria for evaluation of the quality management system.   **(10 marks)**

     1.2.   You are a Regional Director of Health Services (RDHS). Develop standards for five (05) of the above criteria you have listed to evaluate quality management system.   **(20 marks)**

2. Discuss important factors you will take into consideration, as Regional Director of Health Services in setting up a monitoring and evaluation programme for Dengue Control in a district.   **(30 marks)**

3.
     3.1.   Define Responsiveness in relation to Health System.   **(03 marks)**

     3.2.   List elements of responsiveness.   **(07 marks)**

     3.3.   A survey of patient satisfaction revealed that patients are not satisfied in relation to "Respect for Patients". As the Director of a District General Hospital discuss the steps you will take to improve this aspect of responsiveness.   **(20 marks)**

4. In a District General Hospital there were a large number of unutilized medical and surgical equipment accumulated. If you are the newly appointed Director to this hospital discuss how will you address this situation?   **(30 marks)**

5.
     5.1.   Distinguish between education and training.   **(05 marks)**

     5.2.   You have been informed that there is a high incidence of cross infections in the post-surgical ward of your hospital. Describe the process you adopt as the Director of the hospital to identify the training needs and development of plan of action to conduct an in service training programme to improve this situation. **(25 marks)**

MSc (MEDICAL ADMINISTRATION) EXAMINATION – JULY 2016

Date :- 7th July 2016   **Time :-** 9.30 a.m. – 11.30 a.m.

SECTION B

PAPER II

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

1. Write short notes on prevention of carcinoma of the cervix.   (10 marks)

2. Outline the procedure for registration of a new medicinal drug in Sri Lanka.
(10 marks)

3. List out the issues related to successful implementation of International Health Regulation (2005) through the existing legislation under the authority of Ministry of Health.   (10 marks)

4.

   4.1.   List the uses of the Annual Health Bulletin.   (04 marks)

   4.2.   Outline your suggestions to improve the present Annual Health Bulletin.   (06 marks)

5. What measures will you take at Ports of Entry to prevent ZIKA virus being introduced to Sri Lanka?   (10 marks)

6. As a Medical Superintendent of a Base Hospital, outline five (05) ways of improving the productivity with suitable examples.   (10 marks)

7. As a RDHS you are informed that one of your ambulances has met with a road traffic accident involving another vehicle. No casualties have been reported. What advice will you give:

   7.1.   to the Driver?   (05 marks)

   7.2.   to the Management Assistant handling transport   (05 marks)

8. As a Director you have been informed by an OPD Pharmacist that there are many prescriptions with illegible handwriting.

    8.1.   What steps will you take to overcome this situation?   (05 marks)

    8.2.   What are the barriers and challenges you may anticipate in taking your actions?   (05 marks)

9. A large number of chronic renal disease patients are awaiting renal transplant.
Outline the factors you will consider in establishing a renal transplant unit in a Teaching Hospital.   (10 marks)

10. You have been invited to do a presentation on "health promoting hospital concept". Outline how you will plan your presentation.   (10 marks)

11. Write short notes on improving patient safety culture in a hospital?
    (10 marks)

12. In your district there has been sudden displacement of people due to a land slide. As the Regional Director of Health Services, how will you direct your public health staff in preventing outbreaks of diseases among this community?   (10 marks)

13. In your hospital increase number of under 5 children with severe acute malnutrition is getting admitted. Paediatrician has highlighted this situation at the management committee meeting. As the Director of the hospital, outline the steps you will take to address this situation.   (10 marks)

14. It has been observed that the local purchase of drugs is escalating in your hospital. What measures will you take to minimize this situation?
    (10 marks)

15. There is a transformation from manual to electronic systems for the management of health information. As a Medical Administrator how will you prepare your organization for this transformation?   (10 marks)