**Questions for State Exam**

**for the Master of Public Health Programme**

**2013-2014**

**I. Introduction and theoretical basis of Public Health**

1. Determinants of health and disease - main groups. Socio-economic and lifestyle determinants of health.
2. Prevention – definition, scope and levels. Strategies for primary prevention.
3. Screening. Criteria for instituting population-based screening programmes.
4. Public health problems of specific population groups - women’s and maternal health; Family planning. Contraceptive use. Impacts and trends.
5. Public health problems of specific population groups - child and adolescent health; Health care services organization.
6. Public health problems of specific population groups - health of the elderly; Population aging – measurement, impacts and global trends.

**II. Measurement and evaluation of Public Health**

1. Population size and growth. Measuring population change. Impacts, global trends and projections. Population composition. Population pyramids. Types, health aspects and application.
2. Fertility and reproduction – terminology, measurement and medico-social aspects. Birth registration. Global trends and international comparisons of fertility and reproduction.
3. Mortality - measurement, characteristic and medico-social aspects. Maternal mortality - measurement, characteristics and medico-social aspects. Global trends and international comparisons.
4. Infant and child mortality - measurement, characteristics and medico-social aspects. Global trends and international comparisons.
5. Life expectancy. Global trends and international comparisons.
6. Measures of disease frequency – incidence and prevalence. Application of main indicators.

**III. Business communication in Public Health**

1. Effective communication strategies and skills in public healthcare.
2. Factors and principles for effective communication in public healthcare.
3. Verbal communication skills in medicine. Professional medical terminology and slang. Medical therapeutic communication. Dialog with a patient.
4. Body language in medicine. Personality, appearance and behavior of modern medical professional in public healthcare.

**IV. Ethics and fundamentals of law**

1. The principle of respect for autonomy. Concept of autonomy. Informed consent and informed refusal of treatment.
2. The principle of non-maleficence. Concepts of harm. Malpractice. Standards of "due care" - legal and ethical.
3. The principle of justice and its implications for medicine and health care.
4. Allocation of scarce resources and health policy. The macro- and the micro- levels.
5. Rule of veracity. The truth and the patient. Rule of confidentiality - ethical and legal exceptions

**V. Modern epidemiological methods**

1. Descriptive epidemiological studies – types, design, advantages and limitations;
2. Analytic epidemiological studies – types, design, advantages and limitations;
3. Experimental epidemiological studies – types, design, advantages and limitations;
4. Measures of effect – absolute and relative risk. Measures of potential impact – attributable risk of the exposed and of the population.
5. Epidemiological surveillance of intestinal and drop infections dysentery, salmonellosis, hepatitis A, measles, mumps, rubella;
6. Epidemiology of transmissive infections and infections with multiple mechanism – Yellow fever, hepatitis B, HIV/AIDS;
7. Desinfection and pest control - types, organization, implementation and monitoring;
8. Epidemiological basis of immunization. Types of immunization. Organization of the immunizations. Immunization calendar. Economic aspects of immunizations;

**VI. Modern statistical methods in health sciences**

1. Types of data. Presenting data. Summarizing data.
2. Descriptive statistics - measures of central tendency; measures of variability.
3. Introduction to probabilities. Probability distributions. The normal distribution.
4. Inferential statistics - samples and populations, standard error. Confidence intervals.
5. Statistical significance; Hypotheses testing; Types of errors.
6. z-test of the difference of two means; one and two tailed tests.
7. Relationships between variables – correlation & regression
8. Basic statistical methods to test hypotheses – an overview

**VII. Environment and health**

1. The scope of environment and health.
2. Drinking water. Environmental problems. Industrial and epidemiological importance. Groups of indicators of drinking water.
3. Food. Healthy nutrition. Food borne illnesses and their causes.
4. The Workplace. Industrial Hygiene. Identification of Occupational Health Problems. Injury control.

**VIII. Research methodology**

**IX. Health economics**

1. Economics and health care. Basic concepts of economics. Health economics: definition and main questions.
2. Specific features of health markets and health economics; uncertainty; asymmetric information and agency problem; externalities; the role of government.
3. The demand for health care and medical care: factors shifting the individual demand curve. Elasticity of demand for medical care. The role of the physician for the individual demand: the model of induced demand.
4. Funding of Health Care. Sources and methods of funding.
5. Models of funding and provision of health services.
6. Health costs; direct costs, indirect costs; factors and dynamics; tendencies in health costs.

**X. Management and marketing in health**

1. Basic definitions for Management and Marketing. Main differences between trade marketing and social marketing. Change management.
2. Marketing strategies and opportunities for the Public health network
3. Marketing-mix – main components. Specific aspects of the marketing mix components in the field of public health and health care.
4. Marketing plan as a main tool. Questions to answer and steps for action.
5. Integrated marketing communications. Messages, strategies and tools.

**XI. International Aspects of Health, Health Policy and Analyses**

1. Health policy definition, object, subject and participants in health policy process. Principles, goals, and priorities of health policy.
2. Health policy development. Nature of the health policy development process. Subject and stakeholders. Approaches to the Health Policy Formulation. Sources of information.
3. Health policy methods and instruments. Analyses of health status and health system performance.
4. Definitions and components of a healthcare reform.
5. Financing of health care. Definition. Sources of financing. Health financing methods;
6. Health inequalities and inequities. Definitions. Health inequalities factors. Health system design and its influence on health inequities.

**XII. Health Information Systems**

1. The rationale of electronic medical records. Electronic vs. paper medical records. Types of medical records. Modern trends: EMR vs HER.
2. Information systems – definitions, types. Methods for development of IS: problem solving and system development, lifecycle (waterfall), prototyping, end user development, purchasing software solutions, and outsourcing.
3. Hospital information systems – development, main functions, types of architecture, examples.
4. Medical knowledge bases – definitions, contents. Clinical decision support systems – main principles of design, types, overview, examples.
5. Standards in health informatics. Standards for electronic data exchange and format of medical messages; Standards for unified medical data presentation.
6. Health information systems as a source of health and medical information – main characteristics, purpose, components. Trans-national HIS – WHO, EU, other.

**XIII. Health Promotion**

1. Basic strategies, actions and principles of Health promotion.
2. Approaches of health promotion: Health prevention; Health education.
3. Approaches of health promotion: Advocacy; Empowerment; Environmental changes.
4. Methods of HP: Partnership for health; Working with communities and community development.
5. Methods of HP: Helping people to change – models of behaviour change; Using mass media in HP.
6. Settings for Health promotion: Healthy cities, Workplace, Schools, Hospitals and Primary health care.

**XIV. Sociology of Health and Diseases**

1. Social patterning of health and disease. Social health inequities - gender, ethnic and cultural inequities in health.
2. Sociology of health care practice. The medical model. Medicalisation.
3. General characteristics and specificity of qualitative research. Methodology and stages of conducting qualitative research (QR).
4. Methods for collecting information– questionnaire.
5. Methods for collecting information – interview, observation.