

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान, सेवा आयोग
प्राज्ञिक सेवा, सामुदायिक स्वास्थ्य समूह, सह-प्राध्यापक दर्शो(१०) तहको
खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम
Paper II: Technical Subject
Section (A) - 45 Marks

1. Epidemiology

1.1 Basic Epidemiology:

- 1.1.1 Epidemiological measurements
- 1.1.2 Measurements of Burden of disease (DALY, QALY)
- 1.1.3 Standardization - rationale, direct and indirect standardization
- 1.1.4 Epidemiological study design
- 1.1.5 Concept of cause and effect association
- 1.1.6 Natural history and progress of the disease
- 1.1.7 Control and prevention of diseases
- 1.1.8 Disease surveillance
- 1.1.9 Screening
- 1.1.10 Diseases and other health problems
- 1.1.11 Epidemiological principle of outbreak investigation
- 1.1.12 Community health care for population

1.2 Applied Epidemiology:

- 1.2.1 Infectious Diseases of public health concern in Nepal
- 1.2.2 Non-communicable diseases common of Nepal
- 1.2.3 Emerging and re-emerging infectious diseases
- 1.2.4 Outbreak investigation
- 1.2.5 Social epidemiology
- 1.2.6 Critical review of scientific papers
- 1.2.7 Critical review current policies/strategies/programs on prevention/control of selected CDs & NCDS in Nepal
- 1.2.8 Community level epidemics of common health problems
- 1.2.9 Health promotion, prevention program based on epidemiological principles

2. Biostatistics and Computer Application

- 2.1 Descriptive statistics
- 2.2 Probability distribution
- 2.3 Correlation and regression analysis
- 2.4 Sampling theory, sampling distribution and estimation, and limitations
- 2.5 Inferential statistical methods and tools
- 2.6 Hypothesis testing and interpretation
- 2.7 Parametric and non-parametric tests
- 2.8 Simple and multiple linear regression
- 2.9 Bivariate and multivariate logistic regression
- 2.10 Data analysis software (Epi-info, Excel, SPSS, STATA, R)
- 2.11 Data management (coding, processing, importing, exporting)
- 2.12 Questionnaire design, reliability and validity of the tools

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2.13 Application of various statistical methods and tools in observational, cross-sectional, comparative, longitudinal, quasi-experimental and experimental research designs

3. Health Promotion Education

- 3.1 Health education, health promotion, behavioral change in health promotion education
- 3.2 Approaches and theories of health promotion education
- 3.3 National and international discourse in health promotion and education
- 3.4 Frameworks/models/theories of health promotion and education
- 3.5 Settings in health promotion and education
- 3.6 Strategies of health education and promotion and their application in individual, groups and mass situations.
- 3.7 Planning, implementation and evaluation of health education and promotion programs and feedback mechanism.
- 3.8 Health communication
- 3.9 Health Promotion Policy, Principles and Practices
- 3.10 Roles of health promotion and education in public health programs
- 3.11 Community participation in public health promotion education
- 3.12 Group dynamics and leadership
- 3.13 Critical appraisal of health promotion education in international and national contexts

4. Society, Culture and Health

- 4.1 Behavioral science and medicine
- 4.2 Social and cultural understanding of health, illness, disease, disability and suffering
- 4.3 Social determinants of health
- 4.4 Social problems, causes and consequences
- 4.5 Social and cultural factors in health and wellbeing
- 4.6 Formal and informal medical systems and practices with special reference to Nepal
- 4.7 Health care pluralism
- 4.8 Provider-consumer relationship
- 4.9 Inter-professional relationship
- 4.10 Health politics
- 4.11 Research methods of society and culture applied to population health

5. Family Health

- 5.1 Family health and well-being
- 5.2 Women and Child health (safe motherhood, family planning, STIs, HIV/AIDS, ASRH; child health, adolescent health)
- 5.2 Gender and health (gender issues in health, gender-based violence, girls migration and trafficking)
- 5.3 Ageing and well-being

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- 5.4 Disability and wellbeing
- 5.5 Community mental health

6. Food and Nutrition

- 6.1 Food and nutrition science
- 6.2 Nutritional requirements in different stages of life
- 6.3 Metabolism of protein, fat, carbohydrate, fat soluble vitamins, water soluble vitamins, iron, B12, folic acid, iodine and water
- 6.4 Food and Nutrition education and behavioral change communication
- 6.5 Clinical features and prevention strategies and management of important nutrition deficiency diseases
- 6.6 Nutrition policy, strategies, and nutritional deficiency disease
- 6.7 Critical appraisal of nutritional policies, strategies and activities of the government and non-governmental organizations in Nepal

7. Demography

- 7.1 Demography & health
- 7.2 Sources of demographic data, population structure, characteristics and population growth.
- 7.3 Population movement, internal and international migration, foreign labor migration, urbanization, urban-rural linkages, demographic cycles, demographic transition
- 7.4 Population growth rates, population projection, and methods of population standardization
- 7.5 Measures of fertility/mortality/migration, urbanization, nuptiality & their relationships
- 7.6 Human development index, gender development index
- 7.7 Relationship between population, ecology, development and health
- 7.8 Migration causes and consequences: push and pull factors, internal and external migration, seasonal migration, cross border migration, international migration.
- 7.9 Health workforce migration and consequences with special reference to Nepal
- 9.10 Relation between migration and socio-economic conditions in the place of origin and place of destination.
- 7.11 Critical appraisal of population health policy and program in Nepal

8. Environmental Health

- 8.1 Environment and health
- 8.2 Water and health
- 8.3 Sanitation and health
- 8.4 Waste management
- 8.5 Food security/quality/hygiene and sanitation/ food act
- 8.6 Air pollution and its impact
- 8.7 Noise pollution and its impact

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- 8.8 Housing and health
- 8.9 Other environmental issues- Global environmental problem (radiation, global warming, acid raid, ozone depletion, deforestation), Natural and man-made disasters, urbanization
- 8.10 Environmental policy and planning, Environmental Act & Role of Role of Private Sector
- 8.11 Infectious and tropical diseases control: bacteria and parasites of public health importance, public health entomology/control of vector borne diseases,
- 8.12 Climate change and human health risks and response
- 8.13 Environmental protection and human health
- 8.14 Environmental health Sustainable Development Goals
- 8.15 Environmental risk assessment

Section (B) - 55 Marks

9. Occupational Health

- 9.1 Occupation health & its components
- 9.2 Occupational environment and Hazards (physical, chemical, biological, mechanical, psychosocial)
- 9.3 Occupational safety, occupational health situation (occupational disease) in Nepal
- 9.4 Risk assessment
- 9.5 Ergonomics and workers compensation
- 9.6 Occupational health, safety and management system

10. Health System, Health Planning and Management and Health Care Services

- 10.1 Models of health system around the world
- 10.2 Health care delivery system
- 10.3 Health information system
- 10.4 Infrastructure and logistics management
- 10.5 Organizational diagnosis and managing change in an organization
- 10.6 Hospital management
- 10.7 Concept of health systems management (management theories)
- 10.8 Management process / managerial functions: Planning, organizing, directing, coordinating and controlling (PODCC) perspectives.
- 10.9 Concept of planning, Strategic planning (need and process)
- 10.10 Health care policy and strategies with special reference to Nepal
- 10.11 Structure and function of health system
- 10.12 Human resource and financial management
- 10.13 Information management system and their use

11. Health Economics

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- 11.1 Health economics and health care finance
- 11.2 Demand and supply theory
- 11.3 Health care financing and welfare state
- 11.4 National health budget
- 11.5 Private and public spending in health
- 11.6 Equity and the evaluation of health care interventions and program
- 11.7 Health insurance, types, opportunities and challenges
- 11.8 Factors affecting the quantity demanded for health insurance,
- 11.9 Government and private sector as health insurer, moral hazards of health insurance
- 11.10 Critical appraisal of health insurance and other social security policies and other social support systems of Nepal

12. Public Policy & Health Policy

- 12.1 Theory and practice of health policy
- 12.2 Human resource management policy
- 12.3 Education in health and curriculum development policy
- 12.4 Training policy
- 12.5 Review of health policies in Nepal
- 12.6 Health system and policy research
- 12.7 Recent advances in public policies
- 12.8 Recent advances in health policies
- 12.9 Federalization and health policy of Nepal

13. International Health and Primary Health Care

- 13.1 International health, public health and global health: issues and agendas
- 13.2 Primary health care and other initiatives
- 13.3 Issues and agendas and health equity and social justice
- 13.4 Health service, health care service and universal health coverage
- 13.5 Globalization and health and global institutional players
- 13.6 Recent advancement in international health
- 13.7 Health and Sustainable Development Goals

14. Project Design, Project work and Leadership

- 14.1 Project management knowledge and skills
- 14.2 Project life cycle
- 14.3 Project planning tools and application
- 14.4 Project implementation, monitoring and evaluation
- 14.5 Project quality management
- 14.6 Social entrepreneurship
- 14.7 The role of project manager
- 14.8 Project management health workforce
- 14.9 Leadership quality

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15. Recent advances in evidence-based public health practices

- 15.1 Evidence-based public health
- 15.2 Advances in public health system research
- 15.3 Appraisal of roles of public health discipline in health and national development
- 15.4 One health and planetary health

16. Community-Based Learning and Education (CBLE) in Medicine

- 16.1 Need and importance of CBLE in medicine
- 16.2 Attributes of community-oriented health professionals
- 16.3 Strategies of CBLE

17. Humanities in Medicine

- 17.1 Humanizing medicine
- 17.2 Human centered approach, empathy and compassion
- 17.3 Observation, listening and reflection
- 17.4 Professionalism and resilience building

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