

नेपाल सरकार  
गृह मन्त्रालय  
नेपाल प्रहरी प्रधान कार्यालय  
(मानवश्रोत विकास विभाग, भर्ना छनौट शाखा)  
नक्साल, काठमाण्डौ ।

**प्राविधिक प्रहरी नायव उपरीक्षक (MD Pathologist) पदको खुला प्रतियोगितात्मक परीक्षाको पाठ्यक्रम**

सेवा: नेपाल प्रहरी

समूह: प्राविधिक प्रहरी

उपसमूह: स्वास्थ्य, चिकित्सक

श्रेणी: राजपत्राङ्कित द्वितीय

**परीक्षा योजना (Examination Scheme)**

क्र.सं.	परीक्षा चरण	विवरण	पूर्णाङ्क
१.	प्रथम चरण	प्रारम्भिक तथा विस्तृत स्वास्थ्य परीक्षण	-
२.	द्वितीय चरण	लिखित परीक्षा	२००
३.	तृतीय चरण	विशेष स्वास्थ्य परीक्षण	-
४.	चतुर्थ चरण	अन्तरवार्ता	३०

**प्रथम चरण:-** प्रारम्भिक तथा विस्तृत स्वास्थ्य परीक्षण

- प्रहरी सेवाको पदमा नियुक्ति र बढुवा गर्दा अपनाउनु पर्ने सामान्य सिद्धान्त, २०६९ को अनुसूची-६ र ८ बमोजिम हुने ।

**द्वितीय चरण:-** लिखित परीक्षा योजना (Written Examination Scheme)

Paper	Subject	Part	Marks	Full Marks	Pass Marks	No. and Weight of Question	Time
I	Professional and Service Specific Test (PSST)-I	General Subject-I	25	100	40	5X5= 25 (Short Answer)	3 hrs
		Hospital Administration and Management-II	30			1X10=10 (Critical Analysis) 4X5=20 (Short Answer)	
		General Health Issues-III	35			2X10=20 (Critical Analysis) 3X5=15 (Short Answer)	
		नेपाल प्रहरी सेवा सम्बन्धी-IV	10			2X5= 10 (Short Answer)	
II	Professional and Service Specific Test (PSST)-II	Technical Subject	100	100	40	6X10=60 (Critical Analysis) 2X20=40 (Problem Solving)	3 hrs

**तृतीय चरण:-** विशेष स्वास्थ्य परीक्षण

- प्रहरी सेवाको पदमा नियुक्ति र बढुवा गर्दा अपनाउनु पर्ने सामान्य सिद्धान्त, २०६९ को अनुसूची-९ बमोजिम हुने ।

**चतुर्थ चरण:-** अन्तरवार्ता (Interview)

विषय	पूर्णाङ्क	परीक्षा प्रणाली
अन्तरवार्ता	३०	मौखिक

१. यो पाठ्यक्रमको योजना अनुसार दुई पत्रको लिखित परीक्षा हुनेछ ।
२. लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुन सक्नेछ ।
३. प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
४. प्रथम र द्वितीय पत्रको विषयगत प्रश्नका लागि तोकिएका १० अङ्क र २० अङ्कका प्रश्नहरूको हकमा १० अङ्क र २० अङ्कका एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
५. प्रथम पत्रको पाठ्यक्रमलाई ४ वटा खण्ड/एकाईमा विभाजन गरिएको छ । ४ वटा खण्ड/एकाईको लागि ४ वटै उत्तरपुस्तिका दिइनेछ र परीक्षार्थीले प्रत्येक खण्ड/एकाईका प्रश्नहरूको उत्तर सोही खण्ड/एकाईको उत्तर पुस्तिकामा लेख्नु पर्नेछ ।
६. यस पाठ्यक्रममा जेसुकै लेखिएको भएता पनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मिति भन्दा ३ (तीन) महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा रहेको सम्झनु पर्दछ ।
७. यस भन्दा अगाडि लागू भएका माथि उल्लेखित समूहको पाठ्यक्रम खारेज गरिएको छ ।

**पाठ्यक्रम लागू मिति:-** २०७९/१०/१९ गते ।

**प्रथम पत्र (Paper I)**  
**General Subject, Hospital Administration and Management, General Health**  
**Issues र प्रहरी सेवा सम्बन्धी**

**Part-I**  
**General Subject**

5X5= 25 Marks (Short Answer)

1. **National drug policy-1995 and importance of essential drug list**
2. **Health legislation:** ilaj garneko mahal, rape (karani), police act, prison act, evidence act, narcotic drug control act, drug act and regulation, disabled protection and welfare act, disaster relief act, children's act, government prosecution act, vehicle and transport act, compensation for torture act, consumer protection act, iodized salt act, human organ transplant act, breast milk substitute control act.
3. **Evidence based medical practice.**
4. **Research Methodology**
  - 4.1. Bio-statistics
  - 4.2. Basics in research methodology including search and critical review of medical literature, selection of appropriate study design, analysis of findings
5. **Medical education and training**
  - 5.1. General principle, curricular components, the fundamentals of educational process.
  - 5.2. Curriculum Development and Education Strategies
  - 5.3. Identification of learning resources to meet the learning objectives,
  - 5.4. Teaching/Learning Methods
  - 5.5. Teaching-Learning Aids: Use of overhead projectors, slides, models etc in the teaching learning objectives
  - 5.6. Classroom Presentation skills
  - 5.7. Evaluation and Assessment of Learning: methods of evaluation, questions type
  - 5.8. Organization, Management and Leadership
  - 5.9. Continuing Professional Development (CPD)
  - 5.10. Basics of Educational medicine.
  - 5.11. Problem oriented medical record

**Part-II**  
**Hospital Administration and Management: 30 Marks**

1X10=10 (Critical Analysis)

4X5=20 (Short Answer)

1. **Introduction to Management**
  - 1.1. Management Process
  - 1.2. Managerial Roles & Skills
  - 1.3. Nature of Managerial work
2. **Environmental Context**
  - 2.1. The external environment
  - 2.2. The internal environment

- 2.3. Organizational Culture
- 2.4. Organization environmental Relationship
- 2.5. Environmental – organizations effectiveness
- 3. Managing Interpersonal & Communication**
  - 3.1. Interpersonal nature of Organization
  - 3.2. Forms of Communication
  - 3.3. Managing Organizational Communication
- 4. Concept of Hospital Planning**
  - 4.1. Information and concept of Hospital planning
  - 4.2. Guiding Principles in Planning Hospital facilities & services
  - 4.3. Concept of Hospital unitization and its influencing factor
  - 4.4. Master plan
- 5. Background of Hospital**
  - 5.1. Distinguishing Characteristics of Hospital
  - 5.2. Complexities of Hospital
  - 5.3. Organogram of the Hospital
  - 5.4. Governing Board and its functions
- 6. Quality / Customer Service and Measuring Quality**
  - 6.1. Define Customer and Identify Customers
  - 6.2. Domains of Quality
  - 6.3. Customer Experience: Core Service & Delivery of Service
  - 6.4. Excellent Customer Service; Caring Service
  - 6.5. Individual Behavior: Stress, Communication, and Interpersonal Relationship
- 7. Patient Satisfaction and Quality Audit**
  - 7.1. Setting Objectives and Agreeing upon Standards
  - 7.2. Assessment of Patient Satisfaction
  - 7.3. Feedback: Customers, Staff, Suppliers etc.
  - 7.4. Quality Audit and Review Techniques
- 8. Hospital Store, Planning & Distribution**
  - 8.1. Definitions, Objectives, Importance
  - 8.2. Material cycle
  - 8.3. Integrative Material Management
  - 8.4. Factors Affecting & types for distribution

### Part-III

### General Health Issues: 35 marks

2X10=20 (Critical Analysis)  
3X5=15(Short Answer)

1. National Health Policy, 2016
2. Guideline for Health Institutions Established Upgrade version
3. Health and Human Right including Professional's Right, Client Right and Informed Consent
4. Gender Issues and Health
5. International Health Agencies: Role and Responsibilities of WHO, UNICEF, UNFPA and Interagency Relationships

6. Nepal Medical Council and Related Regulations
7. Medical Ethics
8. Health Management Information System (HMIS)
9. Health Insurance and Financing in Health Care
10. Continue medical Education (CME)

### **Part-IV**

#### **सामान्य ज्ञान तथा नेपाल प्रहरी सेवा सम्बन्धी:10 Marks**

2X5= 10 (Short Answer)

- क. नेपालको भूगोल सम्बन्धी सामान्य जानकारी (भौगोलिक अवस्था, स्वरूप, किसिम र विशेषताहरू, हावापानी किसिम र विशेषता, जल सम्पदा: स्थिति र महत्व, वन सम्पदा: अवस्था र महत्व, संरक्षण क्षेत्रहरू तथा वन विनाशका कारण र संरक्षणका उपायहरू, नेपालका प्रमुख हिमशिखरहरू, तालतलैया, झरना, भञ्ज्याङ ।
- ख. इतिहास र संस्कृति सम्बन्धी सामान्य जानकारी (आधुनिक नेपालको इतिहास (पृथ्वीनारायण शाह देखी हालसम्म), नेपालको सांस्कृतिक, धार्मिक एवं मौलिक परम्परा, जातजाति, भाषाभाषी, कला र साहित्य सम्बन्धी सामान्य जानकारी ।
- ग. नेपालको वर्तमान संविधान २०७२ (भाग १, ३, ४, ५, २८ र अनुसूचीहरू)
- घ. जनसंख्या र वातावरण सम्बन्धी सामान्य जानकारी (जनसंख्या, शहरीकरण, बसोवास (बँसाईसराई), जैविक विविधता, जलवायु परिवर्तन, वातावरण तथा प्रदूषण)
- ङ. समसामायिक घटना तथा नविनतम् विषयवस्तुहरू: (राष्ट्रिय तथा अन्तर्राष्ट्रिय महत्वका राजनैतिक, सामाजिक, आर्थिक, वैज्ञानिक, सांस्कृतिक, खेलकूद, पुरस्कार, कला साहित्य, संगीत सम्बन्धी)
- च. नेपाल प्रहरीको पृष्ठभूमि (वि.स. २००७ साल देखि हालसम्म) र वर्तमान अवस्था ।
- छ. प्रहरी ऐन, २०१२ र प्रहरी नियमावली, २०७१ (संशोधन सहित) का मुख्य-मुख्य व्यवस्थाहरू (संगठनात्मक स्वरूप, सेवाको प्रकार, दर्ज्यानी चिन्ह, पद तथा श्रेणी सेवा, शर्त र सुविधा, प्रहरी आचरण, नियुक्ति र अवकाश, प्रहरी कर्मचारीको काम-कर्तव्य अधिकार, नेपाल प्रहरीमा प्राविधिक प्रहरी कर्मचारीको महत्व र आवश्यकता, नेपाल प्रहरी कार्यालयको स्थापना र कार्यालय प्रमुख सम्बन्धी व्यवस्था)
- ज. विविध:- सुरक्षा समिति (केन्द्र, प्रदेश र जिल्ला), नेपाल प्रहरी र अन्य सुरक्षा निकायहरू (नेपाली सेना, सशस्त्र प्रहरी बलनेपाल र राष्ट्रिय अनुसन्धान विभाग) संगको सम्बन्ध, अपराध परिचय, महत्व र प्रविधिको प्रयोग, विपद व्यवस्थापनमा नेपाल प्रहरी, सार्क, संयुक्त राष्ट्रसंघ, इन्टरपोल सम्बन्धी जानकारी ।

## द्वितीय पत्र (Paper-II): Technical Subject

**Full Marks: 100**

(Critical Analysis) 6X10=60

(Problem Solving) 2X20=40

### 1. **Histopathology**

- 1.1 Gross anatomy and histology of specimens and tissues of gastrointestinal (GIT), cardiovascular (CVS), respiratory (RS) systems.
- 1.2 Normal physiology and histology of above systems.
- 1.3 Gross anatomical alterations in the surgically removed specimens.
- 1.4 Gross pathological diagnosis of the lesions of gastrointestinal (GIT), cardiovascular (CVS), and respiratory (RS) system with the given clinical information.
- 1.5 Different types and functions of fixatives in histopathology laboratory.
- 1.6 Different types of chemicals, and equipment used in tissue processing and perform the procedure.
- 1.7 Steps and principles of H and E staining and mounting and perform them.
- 1.8 Interpret the microscopic findings of various types of lesions of gastrointestinal (GIT), cardiovascular (CVS), and respiratory (RS) system.
- 1.9 Biochemical changes in a tissue or organ in above mentioned conditions.
- 1.10 Diagnose the above mentioned lesions and differentiate them from other similar lesions in view of the clinical findings provided.
- 1.11 Gross anatomy and histology of specimens and tissues of renal electrolytes and reproductive systems.
- 1.12 Normal physiology of renal electrolytes and reproductive systems.
- 1.13 Metabolism of carbohydrate, fat protein, nucleic acids, vitamins, copper and minerals.
- 1.14 Gross anatomical alterations in the surgically removed specimen of renal electrolytes respiratory systems and metabolic disorders.
- 1.15 Gross pathological diagnosis of the lesions of renal electrolytes and reproductive systems with clinical data.
- 1.16 Interpret the microscopic findings of various lesions of renal electrolyte reproductive system and metabolic disorders.
- 1.17 Diagnose and differentiate with various other lesions of above mentioned system.
- 1.18 Gross anatomy and histology of specimen and tissues from musculoskeletal system, neuro sensory systems, eye, ENT and skin.
- 1.19 Normal physiology of the above mentioned systems.
- 1.20 Gross anatomical alterations in the surgically removed specimen of above mentioned systems.
- 1.21 Correlate the gross findings with the microscopic features and clinical presentations.
- 1.22 Use of museum and importance of preservation of specimens.
- 1.23 Frozen Section: principle and function of cryostat, intraoperative specimens and diagnose.

### 2. **Cytopathology**

- 2.1 Normal cell morphology in vaginal, cervical and endometrial specimens and sputum specimen.
- 2.2 Preparation of the above mentioned smears, fix and stain with Pap staining and mount them.
- 2.3 Different types of fixatives used in cytopathological laboratory and explain their functions.
- 2.4 Perform fine needle aspiration biopsy procedure, prepare wet and dry smears fix and stain the slides with Pap stain and Giemsa stain.
- 2.5 Principle of Pap stain and Giemsa stain.

- 2.6 Interpret the cellular morphological changes in sputum, vaginal, cervical, and endometrial specimen, and neoplastic conditions.
- 2.7 Correlate with the clinical findings and diagnose.
- 2.8 Different methods of preparing smears from body fluids including urine and CSF.
- 2.9 Principles of cytocentrifuge and Millipore filtration.
- 2.10 Normal cell morphology in brushing, washing and body fluids smears.
- 2.11 Interpret the cellular morphological changes in brushing, washing and body fluid smears in different inflammatory, non-inflammatory, non-neoplastic and neoplastic conditions.
- 2.12 Correlate the findings with the clinical findings and diagnose them.
- 2.13 Sex chromatin, methods of obtaining and preparation of smears for the examination of sex chromatin, Interpret the findings.
- 2.14 Congenital anomalies in relation to sex chromosome.
- 2.15 Interpret FNAC smears and diagnose the lesions.

### 3. **Haematopathology**

- 3.1 Normal hemopoiesis.
- 3.2 Erythropoiesis.
- 3.3 Structure, function, synthesis, and metabolism of haemoglobin.
- 3.4 Classify the different types of Anaemias.
- 3.5 Aetiopathogenesis and morphological findings in the peripheral and bone marrow smears in different types of anaemia and correlate with clinical data and diagnose correctly.
- 3.6 Haematological tests and explain their principle:
  - 3.6.1 Reticulocyte count
  - 3.6.2 Osmotic fragility test
  - 3.6.3 Foetal haemoglobin
  - 3.6.4 LE cell phenomenon
  - 3.6.5 Hb electrophoresis
  - 3.6.6 Serum Iron, Folic acid, Vit B
  - 3.6.7 Total Iron binding capacity
  - 3.6.8 Serum ferritin
- 3.7 Fine needle bone marrow aspiration and stain with Wright's stain.
- 3.8 Interpret and diagnose the morphological changes in the blood and bone marrow specimen.
- 3.9 Common haematological procedures and interpret the results.
- 3.10 Cytochemical test and interpret.
- 3.11 Classification of Leukaemia
- 3.12 Different types and their morphological features
- 3.13 Principles and interpretation of:
  - 3.13.1 Bleeding time
  - 3.13.2 Clotting time
  - 3.13.3 Prothrombin time
  - 3.13.4 Activated partial thromboplastine time
  - 3.13.5 Platelet function test
  - 3.13.6 Factor VII and IX Assay
  - 3.13.7 Bence Jones protein
- 3.14 Plan a strategy of investigations for common haematological diseases.

### 4. **Clinical Microbiology**

- 4.1 Routine examination of urine and faeces and interpret the findings correctly.
- 4.2 Examination of CSF
- 4.3 Examination of peripheral blood for blood parasites.
- 4.4 Semen analysis
- 4.5 Common aerobic and anaerobic bacteria in a culture plate.

- 4.6 Gram's stain and identify the common bacteria.
- 4.7 Sensitivity reactions of common bacteria.
- 4.8 Principle of Gram's stain and ZN stain.
- 4.9 Importance of collection of specimens of culture.
- 4.10 Principle of HbSAg, HIV tests.

**5. Clinical Chemistry**

- 5.1 Perform and interpret correctly the routine clinical chemistry tests.
- 5.2 Working principles of spectrophotometer, colorimeter, flame photometer, blood gas analyzer, electrophoresis, and automation in laboratory medicine.

**6. Autopsy pathology**

- 6.1 Complete/partial autopsy.
- 6.2 Gross and microscopic features found in autopsy body and tissue sections respectively and correlate it with clinical history and diagnosis.
- 6.3 Write the provisional and final anatomical diagnosis reports correctly.

**7. Blood Bank**

- 7.1 Blood grouping and Rh typing tests and cross matching.
- 7.2 Coombs test
- 7.3 Principles and interpretations of above tests

**8. Immunology**

- 8.1 Agar Gel precipitation
- 8.2 Haemagglutination
- 8.3 Immunoelectrophoresis
- 8.4 Identification of T and B cells in peripheral blood
- 8.5 Immuno Fluorescence technique
- 8.6 Counter current electrophoresis for demonstration of antigen
- 8.7 ELISA techniques.
- 8.8 Principle lying behind these tests.
- 8.9 Principle of fluorescent microscopy.

**9. Medical statistics and information technology**

- 9.1 Importance of statistical methods in assessing data from patient material and experimental studies, correlation coefficient, expected versus observed and their interpretations.
- 9.2 Mean, standard deviation and standard error from given experimental data.
- 9.3 Familiarity with the use of the computer and other telecommunication devices like the fax for the storage, retrieval and sending of information.

-समाप्त-