

लोक सेवा आयोग
नेपाल स्वास्थ्य सेवा, मेडिसिन समूह, ग्याष्ट्रोइन्टेरोलोजी उपसमूह, नवौं (९) तहको खुला र आन्तरिक
प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

Paper II

Part I: General Subject

25 Marks

1. Research and Paper publication

- 1.1. Planning and carrying out health research
- 1.2. Methodology, design, variables, sampling, data collection, data entry, descriptive statistics, research reports, random number
- 1.3. Interpretation of the results of health research
- 1.4. Bio-statistics, Probability, probability distributions, hypothesis tests, estimation, parametric and non-parametric statistics, regression and correlation, longitudinal studies
- 1.5. Dissemination of the results
- 1.6. Principles of paper publications and search and critical review of literature, types of papers, common headings, tables and graphs, reference writing
- 1.7. Medical ethics, including introduction to ethical theories, medical ethics, professional ethics, ethics in research, ethics in health policy

2. Medical education and training

- 2.1. General principal, curricular components, the fundamentals of educational process.
- 2.2. Curriculum Development and Education Strategies
- 2.3. Identification of learning resources to meet the learning objectives,
- 2.4. Teaching/Learning Methods
- 2.5. Teaching-Learning Aids: Use of overhead projectors, slides, models etc in the teaching learning objectives
- 2.6. Classroom Presentation skills
- 2.7. Evaluation and Assessment of Learning: methods of evaluation, questions type
- 2.8. Organization, Management and Leadership
- 2.9. Continuing Professional Development (CPD)
- 2.10. Basics of Educational medicine.
- 2.11. Evidence based medical practice
- 2.12. Problem oriented medical record

3. Acts/Regulations related to Health

- 3.1. Human organ transplant act, Consumer protection act
- 3.2. Primary health care
- 3.3. Rational use of drugs, drug policies
- 3.4. NMC and National Health Agencies

Part II: Technical Subject

100 Marks

1. Basic Sciences

- 1.1 Embryology of the gut, liver, pancreas & congenital anomalies
- 1.2 Immune system of the GIT and its importance in various G.I. disorder
- 1.3 Molecular biology in relation to GIT
- 1.4 Genetic diseases of GIT & liver
- 1.5 Gene Therapy
- 1.6 GI Tumors & Tumor biology
- 1.7 Gastrointestinal hormones in health & diseases
- 1.8 GI related microbiology, clinical chemistry & haematology

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- 2. Problems related to GIT, Hepatobiliary and Pancreatic system**
 - 2.1 Upper & lower G.I. bleeding
 - 2.2 Gastrointestinal tuberculosis
 - 2.3 HIV and the GIT, hepatobiliary and pancreatic system
 - 2.4 GIT & liver in systemic diseases
 - 2.5 Cutaneous manifestation of G.I. disease
 - 2.6 Gastrointestinal side effects of drugs especially NSAIDS
 - 2.7 Gastro-intestinal symptoms physiology and interpretation:
 - 2.7.1 Nausea, vomiting
 - 2.7.2 Pain abdomen
 - 2.7.3 Diarrhoea, constipation
 - 2.7.4 Dysphagia
 - 2.7.5 Jaundice
- 3. Nutrition**
 - 3.1 Normal nutritional requirement
 - 3.2 Nutritional assessment and management
 - 3.3 Protein energy malnutrition
 - 3.4 Manifestations and management of nutritional deficiency & excess
 - 3.5 Nutritional support in various G.I.disorders (malabsorption, acute & chronic pancreatitis, IBD)
- 4. Esophagus**
 - 4.1 Basic anatomy, histology & physiology
 - 4.2 Congenital anomalies
 - 4.3 Motor physiology and motor disorder of the esophagus.
 - 4.4 GERD & its complication
 - 4.5 Esophageal disorders caused by infection, systemic illness, medication Radiation & Trauma
 - 4.6 Esophageal tumors
- 5. Stomach**
 - 5.1 Anatomy, histology and functions
 - 5.2 Physiology of acid & bicarbonate secretion in health & diseases
 - 5.3 Defense mechanism against acid & pepsin
 - 5.4 Gastroduodenal motor function in health & diseases
 - 5.5 Gastritis (specific & nonspecific)
 - 5.6 H pylori
 - 5.7 Peptic ulcer & its complications, their management
 - 5.8 Stress & stomach
 - 5.9 Gastric hypersecretory states including Zollinger Ellison Syndrome (ZES)
 - 5.10 Surgery for peptic ulcer
 - 5.11 Post gastrectomy complication
 - 5.12 Tumors of stomach
 - 5.13 Bezoars
 - 5.14 Diverticuli & hernia of the stomach
- 6. Small intestine**
 - 6.1 Anatomy, blood supply, histology
 - 6.2 Motility of small intestine
 - 6.3 Congenital anomalies
 - 6.4 Normal absorption of the nutrients
 - 6.5 Intestinal electrolyte absorption and secretion

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- 6.6 Malabsorption syndrome
 - 6.6.1 Pathophysiology, manifestations & approach
 - 6.7 Celiac sprue
 - 6.8 Infection related diseases
 - 6.8.1 Intestinal microflora in health & diseases
 - 6.8.2 Tropical sprue
 - 6.8.3 Infectious diarrhoea & food poisoning
 - 6.8.4 Parasitic diseases
 - 6.9 Small intestinal ulcers
 - 6.10 Short bowel syndrome
 - 6.11 Eosinophilic gastroenteritis
 - 6.12 Food allergies
 - 6.13 Intestinal obstruction & pseudo-obstruction
 - 6.14 Management of diarrhoea.
 - 6.15 G.I. lymphomas
 - 6.16 Small intestinal tumors
 - 6.17 Small intestinal transplantation
- 7. Colon**
- 7.1 Basic anatomy, blood supply, histology & functions
 - 7.2 Motility the colon & disorders of motility
 - 7.3 Congenital anomalies
 - 7.4 Megacolon
 - 7.5 Constipation
 - 7.6 Colonic pseudo-obstruction.
 - 7.7 Fecal incontinence
 - 7.8 Antibiotic associated diarrhoea
 - 7.9 Inflammatory bowel disease
 - 7.9.1 Ulcerative colitis
 - 7.9.2 Crohn's disease
 - 7.9.3 Indeterminate colitis
 - 7.9.4 Ileostomies & its management
 - 7.10 Diverticular disease of colon.
 - 7.11 Radiation enterocolitis.
 - 7.12 Colonic polyps & polyposis syndrome
 - 7.13 Malignant disease of colon.
 - 7.14 Hemorrhoids
 - 7.15 Disease of the anorectum
 - 7.16 Other inflammatory diseases of the colon including
 - 7.16.1 Solitary rectal ulcer syndrome
 - 7.16.2 Diversion colitis
 - 7.16.3 Collagenous & microscopic colitis
 - 7.16.4 Non specific ulceration of the colon
 - 7.16.5 Pneumatosis cystoides intestinalis
- 8. Pancreas**
- 8.1 Anatomy, Physiology, blood supply developmental anomalies
 - 8.2 Physiology of the pancreatic secretion
 - 8.3 Pancreatic function test
 - 8.4 Acute, recurrent & chronic pancreatitis
 - 8.5 Pancreatic tumor (Exocrine & endocrine)

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- 8.6 Cystic fibrosis & other childhood disorder of the pancreas
- 8.7 Hereditary pancreatitis
- 8.8 Pancreatic transplantation

9. Biliary Tree

- 9.1 Anatomy, Physiology
- 9.2 Physiology of bile formation & excretion
- 9.3 Enterohepatic circulation
- 9.4 Bilirubin metabolism
- 9.5 Approach to the patient with jaundice
- 9.6 Gall stone, its complications & management
- 9.7 Acute calculous cholecystitis
- 9.8 Miscellaneous disorders of the gall bladder
- 9.9 Acute cholangitis
- 9.10 Benign biliary structures
- 9.11 Benign & malignant neoplasm of the biliary system
- 9.12 Endoscopic management of biliary obstruction
- 9.13 Motility & dysmotility of the biliary system & sphincter of oddi dysfunction
- 9.14 Congenital diseases of the biliary system
- 9.15 Sclerosing cholangitis & recurrent pyogenic cholangitis

10. Liver

- 10.1 Anatomy, Physiology, blood supply
- 10.2 Function of liver
- 10.3 Microcirculation of liver
- 10.4 Liver function test
- 10.5 Portal hypertension
 - 10.5.1 Extrahepatic portosplenic vein obstruction
 - 10.5.2 Non cirrhotic portal fibrosis
 - 10.5.3 Cirrhosis
- 10.6 Acute viral hepatitis
- 10.7 Chronic hepatitis
- 10.8 Fulminant hepatic failure
- 10.9 Cirrhosis of liver with the emphasis on the spectrum of alcohol related disorder
- 10.10 Ascites
- 10.11 Hepatorenal syndrome
- 10.12 Autoimmune liver disease
- 10.13 Metabolic liver disease
- 10.14 Primary biliary cirrhosis
- 10.15 Hepatic venous outflow tract obstruction
- 10.16 Fibrocystic disease of the liver
- 10.17 Wilson's disease
- 10.18 Hemochromatosis
- 10.19 Liver abscess & Bacterial, parasitic, Fungal and granulomatous liver disease.
- 10.20 Liver in porphyria, pregnancy & Congestive heart failure
- 10.21 Hepatic tumors
- 10.22 Liver biopsy
- 10.23 Liver transplantation & artificial liver support

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11. Peritoneum and Retroperitoneum:

- 11.1 Chronic peritonitis
- 11.2 Malignant ascites
- 11.3 Diseases of retroperitoneum

12. Vascular diseases of the G.I. tract

13. G.I. Radiology

- 13.1 Reading and interpreting the common x-ray film's including
 - 13.1.1 X-ray films of the abdomen
 - 13.1.2 Barium studies, ultrasound of abdomen, EUS
 - 13.1.3 CT scan including CT angiography / Portography, MRCP, Portography, Percutaneous Cholangiography (PTC) & PTCD, TIPS, BRTO (Ballon Occluded Transvenous Obliteration), Angiographic Management of difficult GI bleeding, MR scan, angiography and ERCP films

14. G.I. Pathology

- 14.1 Reading and interpreting histological slides of common gastrointestinal and liver diseases

15. Adequate understanding and training of procedures including upper G.I. endoscopy and lower G.I. procedures

16. Orientation of EUS, ERCP Capsule Endoscopy, Chromoendoscopy, Esophageal Manometry, Enteroscopy and pH study

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