

Syllabus for the post of

Associate Professor, Medical Gastroenterology, Class-I

(Advt. No. 39/2023-24)

Marks – 200

Questions – 200

Medium - English

1. Basic Sciences

Anatomy and Physiology :

Immune system of the gastrointestinal tract (GIT) and its importance in various GI Disorders, Molecular biology in relation to GIT, Genetic diseases of the GIT and the liver , Gene therapy, GI tumors and tumor biology, gastrointestinal hormones in health and diseases, Embryology of the gut, liver, pancreas and congenital anomalies

2. Symptoms, Syndromes, and Scenarios Discomfort above the diaphragm

Heartburn and noncardiac chest pain: Dysphagia and odynophagia, Discomfort below the diaphragm, Chronic or recurrent abdominal pain, Dyspepsia: ulcer and non-ulcer/bloating and early satiety/belching and rumination, Nausea and vomiting: Disorders of defecation, Diarrhea, Fecal incontinence, Rectal bleeding, Anorectal pain and pruritus ani, Generalized ill health, Functional gastrointestinal disease, Anorexia nervosa and bulimia nervosa, Weight loss, Gastrointestinal causes of anemia and occult bleeding, Upper and lower gastro-intestinal bleeding, Gastrointestinal tuberculosis

3. Esophagus:

Basic anatomy, histology and physiology, Congenital anomalies, Motility of the esophagus and motor disorders, Mechanism of deglutition and dysphasia, Approach to a patient with dysphasia, Gastro-esophageal reflux disease, Tumors of the esophagus, Esophageal webs, membranes and diverticulum, Management of benign and malignant esophageal strictures, Esophagus and systemic diseases, Infectious diseases of the esophagus, Foreign bodies in the esophagus and stomach, Esophageal perforation, Drug induced esophagitis

4. Stomach

Anatomy, histology, functions, Physiology of acid and bicarbonate secretion in health and diseases, Defence mechanisms against acid and pepsin, Gastroduodenal motor function in health and diseases, Gastritis (nonspecific and specific), Helicobacter pylori infection, Peptic ulcer, Dyspepsia, Stress and stomach, Gastric hypersecretory states including Zollinger Ellison syndrome, Ulcer complications and their management, Surgery for peptic ulcer, Post gastrectomy complication, Bezoars, Tumors of the stomach, Diverticuli and hernia of the stomach

5. Small Intestine

Anatomy, blood supply, histology, Motility of the small intestine, Congenital anomalies, Normal absorption of the nutrients, Intestinal electrolyte absorption and secretion, Malabsorption syndromes Pathophysiology, manifestations and approach, Celiac sprue, Infection related diseases a. Intestinal microflora in health and diseases b. Tropical sprue c. Whipple's disease d. Infectious diarrhoea and food poisoning e. Parasitic diseases, Small intestinal ulcers, Short bowel syndrome and intestinal transplantation, Eosinophilic gastroenteritis, Food allergies 13. Intestinal obstruction and pseudo-obstruction, Short bowel syndrome, Acute appendicitis Malrotation of the gut, Bezoars, Management of diarrhea, GI lymphomas, Small intestinal tumors, Small intestinal transplantation

6. Colon

Basic anatomy blood supply, histology and functions, Motility of the colon and disorders of motility, Congenital anomalies, Megacolon, Constipation, Colonic pseudo-obstruction, Fecal incontinence, Antibiotic associated diarrhea, Inflammatory bowel disease a. Ulcerative colitis b. Crohn's disease c. Indeterminate colitis d. Ileostomies and its management, Diverticular disease of the colon, Radiation entero-colitis, Colonic polyps and polyposis syndromes, Malignant diseases of the colon Other inflammatory diseases of colon including a. Solitary rectal ulcer syndrome b. Diversion colitis c. Collagenous and microscopic colitis d. Non specific ulcerations of the colon e. Malakoplakia f. Pneumatoses cystoids intestinalis, Hemorrhoids, Diseases of the anorectum

7. Pancreas

Anatomy, physiology, blood supply, developmental anomalies, Physiology of the pancreatic secretion, Pancreatic function tests, Acute pancreatitis, Recurrent acute pancreatitis, Chronic pancreatitis, Malignancies of the pancreas (Exocrine and endocrine), Cystic fibrosis and other childhood disorders of the pancreas, Hereditary pancreatitis, Pancreatic transplantation

8. Biliary Tree

Anatomy, Physiology, Physiology of bile formation and excretion, Enterohepatic circulation, Bilirubin metabolism, Approach to a patient with jaundice, Gallstones, its complications, and management, Acute acalculous cholecystitis, Miscellaneous disorders of the gallbladder, Acute cholangitis, Benign biliary structure, Benign and malignant neoplasms of the biliary system, Endoscopic management of biliary obstruction, Motility and dysmotility of the biliary system and sphincter of Oddi dysfunction, Congenital diseases of the biliary systems

9. Liver

Anatomy, physiology, blood supply, Functions of the liver, Microcirculation of liver, Liver function tests, Portal hypertension i. Extrahepatic portosplenic vein obstruction ii. Non cirrhotic portal fibrosis iii. Cirrhosis, Acute viral hepatitis, Chronic hepatitis, Fulminant hepatic failure, Subacute hepatic failure, Cirrhosis of liver, Ascites, Hepatorenal syndrome, Autoimmune liver disease, Metabolic liver disease, Sclerosing cholangitis- primary and secondary, Primary biliary cirrhosis, Hepatic venous outflow tract obstruction, Fibrocystic diseases of the liver, Wilson's disease, Hemochromatosis, Liver in porphyria, Hepatic tumors, Infections of the liver, Liver in pregnancy, Liver in congestive heart failure, Liver diseases and pregnancy, Liver biopsy, Liver transplantation and artificial liver support Liver transplantation, Liver transplantation: indications and selection of candidates and immediate Complications

10. Peritrium and Retroperitoneum

Ascites, Chronic peritonitis, Budd-Chiari syndrome, Malignant ascites, Diseases of the retroperitoneum

11. Diseases of Multiple Organ Systems

Oral Disease and Oral-Cutaneous Manifestations of Gastrointestinal and Liver Disease, Disorders of Mouth and Tongue, Mucocutaneous Candidiasis, Mucocutaneous Features of HIV Infection, Mucocutaneous Ulcerative Disease Vesiculobullous Diseases, Lichen Planus, Cutaneous Manifestations of Intestinal Disease, Collagen vascular and vasculitic disorders^h, Systemic disease and the gastrointestinal tract¹¹² Pancreatic endocrine tumors, The carcinoid syndrome, Vascular disorders of the liver, AIDS and the gut, Graft-versus-host disease, Radiation and other physicochemical injury, Systemic amyloidosis, Foreign bodies Porphyria *Puy*, The hereditary recurrent fevers, Cutaneous manifestations of GI diseases

12. Psychosocial factors

A Biopsychosocial Understanding of Gastrointestinal Illness and Disease Case, Study, A Typical Patient in a Gastroenterology Practice, The Biomedical Model, The Biopsychosocial Model

13. Nutrition

Normal nutritional requirements, Assessment of nutritional status, Protein energy malnutrition, Manifestations and management of nutritional deficiency and excess, Nutritional support in various GI disorders (malabsorption, acute and chronic pancreatitis, inflammatory bowel disease) Vascular Diseases of the GI Tract

14. PAEDIATRIC GASTROENTEROLOGY

Congenital disorders of gastrointestinal system, liver, biliary tract and pancreas, Age related physiological and psychological variables of children, Unique aspects of disease in paediatric age group as compared to adult

15. GERIATRIC GASTROENTEROLOGY

General Issues: Impact of age on presentation, diagnosis and treatment of important, gastrointestinal conditions, Impact of depression and dementia on presentation and treatment, Pathophysiology of aging, Social and ethical issues Geriatric gastroenterology, Changes of G.I. function with aging, (e.g.) slowing of colonic motility and rectal dysfunction, Changes in drug

metabolism, Effect of aging on nutrition, GI problems in institutionalized and bedridden patients (e.g) fecal impaction as risk factor for urine incontinence.

16. WOMENS HEALTH ISSUES IN DIGESTIVE DISEASES

General women health issues : Doctor-patient relationships, Cultural and religious issues, Psycho-social issues, Lab values and diagnostic tests - Gender differences as well as changes during pregnancy in normal lab values

Specific women health issues : Health and disease states – gender difference in demographics, epidemiology, pathophysiology, clinical presentation, Effect of menstrual cycle and menopause on digestive disease, Pharmacokinetics of medications – differences in absorption, metabolism and therapeutic response

Pregnancy and child bearing : GI and liver changes / disorders in normal pregnancy, Effect of pre-existing GI and liver disorders on pregnancy and fertility, Impact of pregnancy on gastrointestinal & liver disease, GI and liver disorders unique to pregnancy, Maternal-fetal transmission of infections and appropriate management of mother and infant, Pharmacokinetics and interactions of medications during pregnancy and breast feeding - potential harm to fetus, Nutritional requirements Post-partum issues Rectal prolapse, hemorrhoids, urinary / fecal incontinence

17. RESEARCH METHODOLOGY.

18. MEDICO LEGAL ASPECTS RELEVANT TO THE DISCIPLINE.

19. INDIAN MEDICAL COUNCIL (PROFESSIONAL CONDUCT, ETIQUETTE AND ETHICS) REGULATIONS, 2002.

20. CURRENT TRENDS AND RECENT ADVANCEMENTS IN THE FIELD OF MEDICAL GASTROENTEROLOGY.