

Syllabus for the Preliminary test for the Recruitment on the post of Associate
Professor, Class-I in Surgical Gastroenterology (Medical Education)

Marks - 200

Questions - 200

Medium - English

1. **Basic Sciences**

Anatomy: Gross and histological anatomy of the abdomen and its contents including entire GI tract, Liver (including segmental anatomy), Biliary tract, Pancreas, spleen, portal and Hepatic venous system.

Physiology: Normal function of GI tract and related organs including endocrine functions of gut and pancreas. Physiological basis of various tests to study these functions.

Pharmacology of drugs used in GI surgical disorders e.g. to control acid secretion in the management of ulcerative colitis and immunosuppressive drugs.

Fluid: electrolyte and acid base disturbance- general aspects, imbalance in GI surgical patient's physiological responses to volume and osmolality abnormalities, interpretation of blood gas analysis, maintenance and replacement therapy.

Nutritional considerations in GI surgical patients: nutrient stores and body compositions, nutrient requirements, malnutrition, evaluation of nutritional status, nutritional therapy, enteral and parenteral therapy and complications of these.

Wound healing: Principles, Phases, types of healing, influencing factors on wound healing, wound dehiscence and management. Principles and disorders of hemostasis. Immunology in GI surgery. Especially in relation to organ transplantation.

2. **Oesophagus**

Anatomical detail, physiology of swallowing, esophageal manometry, pilmonitroning, endoscopic ultrasound and other diagnostic techniques, brush cytology, vital staining, contrast imaging and CT scan. Congenital lesions (TOF), Zenker's diverticulum, epiphrenic diverticulum, esophageal trauma, rupture-spontaneous or iatrogenic, corrosive burns detection, evaluation and management, esophageal motility disorders. Gastroesophageal reflux disease, achalasia. Barrett's esophagus, esophageal cancer- adeno & squamous, various esophageal operations-diverticulectomy, excision of leiomyoma, oesophagostomy, myotomy, fundoplication, oesophageal resection (Ivor Lewis, Mc Keown, Transhiastal). Cervical exploration, oesophagogastrostomy, gastric

pull-up, gastric and colonic bypass, complications of oesophagectomy, management of chylothorax.

3. Stomach and Duodenum

Anatomical details, physiology of gastric secretions, gastroduodenal motility, diaphragmatic hernia (congenital and acquired), volvulus, pyloric stenosis in children and adults, foreign bodies (bezoars), stomach trauma. H.pylori in gastric diseases, peptic ulcer, Zollinger-Ellison syndrome, NUD. Gastric tumours, gastric surgery-vagotomy pyloric drainage gastrojejunostomy. Bariatric gastric tube creation, R-en-Y oesophagojejunal anastomosis, postgastrectomy syndromes and complications

4. Biliary System

Detailed anatomy, bile physiology, enterohepatic circulation, acute cholecystitis, chronic cholecystitis, acalculus cholecystitis, gallstones pathogenesis and presentation. CBD stones CBD stricture, cholangitis, sphincter of Oddi (SOD) dysfunction and biliary dyskinesia, cholecystopathies, postcholecystectomy syndromes, choledochal cyst, polyps of GB, carcinoma of gall bladder, cholangiocarcinoma, parasitic infestations of biliary tree, cholecystectomy-open and laparoscopic. CBD exploration and drainage, biliary bypass radical cholecystectomy, choledochal cyst excision, primary sclerosing cholangitis endoscopic biliary interventions and stenting hemobilia.

5. Liver Segmental

Anatomy in detail, liver function and tests, liver regeneration, liver failure diagnosis and management, liver abscess cysts, benign and malignant tumours (HOC, intrahepatic cholangiocarcinoma, hemangioma, FNH adenoma), cirrhosis, PBC, viral hepatitis, radiological imaging modalities (US, CECT, Lipiodol CT, Dynamic CT, MR imaging and radionuclide scanning), percutaneous transhepatic biliary drainage and cholangiography. Liver biopsy, portal hypertension (cirrhotic and non-cirrhotic causes), hepatic venous outflow obstruction, Shunt surgery (Proximal lienorenal shunt, cavoatrial, mesocaval, portocaval-side to side), splenectomy and devascularisation, liver resecting-anatomic and non-anatomic, liver trauma, hepaticojejunostomy, seg III bypass, Orthotopic liver transplantation, liver related transplantation, Caroli's disease, hemobilia.

6. **Liver Transplantation**

History of Liver Transplantation, Liver Transplantation in India, Indications and Contraindications for Liver Transplantation, Organ Preservation in Liver Transplant, Anesthetic Management in Liver Transplantation, Immunology of Liver Transplantation, Pediatric Liver Transplant, Liver Transplantation in Acute Liver Failure, Deceased Donor Liver Transplantation, Living Related Liver Transplantation, Complications in Living Donor Liver Transplantation.

7. **Pancreas**

Anatomy, physiology, pancreatic ductal anomalies, acute pancreatitis, chronic pancreatitis, calcific, tropical and alcoholic; endocrine tumours, exocrine tumours of pancreas, cystic neoplasms; pseudocysts of pancreas, haemosuccus pancreaticus; **Pancreatic operations:** pancreatic neurosectomy, pseudocystogastrostomy/jejunostomy, pylorus preserving pancreatoduodenectomy, duodenum preserving pancreatic head resections (Frey's, Beger's), distal pancreatectomy, regional pancreatectomy, total pancreatectomy, lateral pancreaticojejunostomy, Whipple's, pancreatic transplantation.

8. **Peritoneum**

Omentum, Retroperitoneum Recesses, reflections, subdiaphragmatic spaces, peritonitis, Primary secondary and tertiary, tuberculosis, mesenteric cyst, pseudomyxoma peritonei, ascites (diagnosis, investigation and management), retroperitoneal tumors, inguinal hernia, ventral hernias, peritoneoscopy.

9. **Spleen**

Anatomy, splenic function, haemolytic anaemias, splenomegaly hypersplenism, splenic trauma, cysts and granulomas, physiological effects of splenectomy, OPSI, splenic vein thrombosis, splenic artery aneurysms, splenectomy, splenic preservation.

10. **Small Intestine**

Mesenteric vascular anatomy, intestinal physiology, Ladd's band, malrotation, volvulus, hernia, intestinal obstruction, ileocaecal TB, lymphoma, tumors of small intestine, Meckel's diverticulum, intussusception, small bowel gangrene, intestinal resections, lengthening and transplantation, mesenteric ischaemia, short gut syndrome, small bowel fistulae, Crohn's and other inflammatory bowel diseases enteral feeding, home/parenteral nutrition.

11. Colon, Rectum and Anal Canal

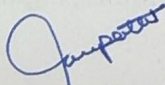
Anatomy, physiology, colonic motility, physiology of defaecation and anal continence; Hirschsprung's disease, anorectal malformations, rectal prolapse, SRUS, pseudoobstruction (Ogilvia syndrome), descending perineum syndrome, anismus and constipation, anal incontinence; Haemorrhoids, fissure, fistulae and anal stricture; polyps and other benign tumors hereditary and familial polyposis syndrome, ulcerative colitis and Crohn's ameobic colitis, ischaemic colitis, diverticulitis, lower GI haemorrhage, carcinoma of the colon, rectum, anal canal. Operations- APR, anterior resections, segmental coletomies, pelvic exenterations, colostomy, ureterosimoidostomy, hemicolectomies, urinary diversions, surgery for anal incontinence, rectal prolapse and complex fistulae, restorative proctocolectomy and ileoanal pouch anastomosis.

12. RESEARCH METHODOLOGY.

13. MEDICO LEGAL ASPECTS RELEVANT TO THE DISCIPLINE.

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

15. CURRENT TRENDS AND RECENT ADVANCEMENTS IN THE FILED OF SURGICAL GASTROENTEROLOGY.


(Prasun Patel)
DEPUTY SECRETARY
GUJARAT PUBLIC SERVICE COMMISSION