

April-2001

[KD 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION.

(Higher Specialities)

Branch IV — Gastroenterology

(Revised Regulations)

**Paper I — BASIC SCIENCES APPLIED TO THE
SPECIALITY**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the pathogenesis of Hepatic fibrosis. (25)
2. Discuss the normal motility of Gut. Describe the changes in irritable bowel syndrome. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Barrets oesophagus.
 - (b) Kupfer cell.
 - (c) Eradication of helicobacter pylori.
 - (d) Breath test.
 - (e) Sphincter of Odi dysfunction.

November-2001

[KE 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

**Paper I — BASIC SCIENCES APPLIED TO THE
SPECIALITY**

Time : Three hours

Maximum : 100 marks

Answer ALL questions

- 1 Discuss the role of IRON in liver diseases (25)
 2. Discuss the embryonic development and congenital anomalies of the pancreas. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Gut-preferred fuels.
 - (b) B₁₂ – absorption.
 - (c) Histopathology of hepatocellular carcinoma.
 - (d) Innervation of oesophagus.
 - (e) Inhibitors (naturally occurring) of gastric acid secretion.
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March-2002

[KG 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

**Paper I — BASIC SCIENCES APPLIED TO THE
SPECIALITY**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the pharmacology of vasoactive drugs used in the management of portal hypertension. (25)
 2. Critically evaluate the role of different pancreatic function tests. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Erythrocyte changes in liver disease
 - (b) Histology activity Index
 - (c) Microbiology and prevention of infections transmitted by endoscopes
 - (d) 5-HT receptors in the gut
 - (e) Urea breath test.
-

September-2002

[KH 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE
SPECIALITY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe the mechanism of Hepatic Regeneration. (25)
 2. Describe the anatomy of lower oesophageal sphincter and discuss the mechanism of gastrooesophageal reflux. (25)
 3. Write short notes on : (50)
 - (a) Pancreas Divisum
 - (b) Absorption of Sodium
 - (c) Tumour necrosis factor alpha
 - (d) Somatostatin
 - (e) Alkaline phosphatase.
-

[KK 013]

Sub. Code : 1251

B. Write short notes on :

(10 × 5 = 50)

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE SPECIALITY

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

A. Essay :

(2 × 15 = 30)

(1) Discuss "Oesophageal Motility in health and disease".

(2) Describe the ultrastructure of the hepatocyte and the mechanism of necrosis in viral hepatitis.

(1) Barretts Oesophagus.

(2) Somatostatin.

(3) **Breath test in malabsorption.**

(4) Choledochal cyst.

(5) Solitary rectal ulcer.

(6) Carcinoid syndrome.

(7) Bacterial flora of G.I. Tract.

(8) Neonatal hepatitis.

(9) *Haemobilia*.

(10) Virtual colonoscopy.

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Sub. Code : 1251

II. Write short notes on :

(10 × 5 = 50)

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE SPECIALITY

Time : Three hours **Maximum : 100 marks**

Theory : Two hours and forty minutes	Theory : 80 marks
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M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

1. Essay : (2 × 15 = 30)

(1) Briefly discuss the microscopic anatomy of Oxyntic (gastric) gland and the various cellular mechanisms involved in the regulation of acid secretion.

(2) Give an account of embryonic development of pancreas, its normal anatomy and histology in adult and various congenital anomalies of pancreas.

(a) Peyer's patches.

(b) Cytokines in regulation of intestinal inflammatory response.

(c) **Biology of tumor metastasis.**

(d) Stellate cells.

(e) Manometric criteria for primary esophageal motility disorders.

(f) **Tumor Suppressor Genes.**

(g) Malrotation of Gut.

(h) Brush border digestion of carbohydrates.

(i) Control of normal enteric flora.

(j) **Hepatic Venous Pressure Gradients.**

[KM 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE SPECIALITY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes	Theory : 80 marks
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M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. Essay: (2 × 15 = 30)

(1) Describe the surface anatomy, segmental anatomy and acinar micro anatomy of the human liver and their clinical utility.

(2) Discuss the embryonal development of Biliary tract and the related developmental anomalies with a detailed commentary on choledochal cyst.

II. Write short notes on : (10 × 5 = 50)

(a) Esophageal webs and rings

(b) Interstitial cells of cajal

(c) **Immuno histochemistry in liver diseases**

(d) Barrett's metaplasia

(e) Pegylation

(f) Modalities for assessment of Gastric motor functions

(g) Types of Pathogenic E.Coli

(h) Metavir and Ishak scoring systems

(i) Small bowel histology in malabsorption syndrome

(j) Pancreatic blood supply, venous and lymphatic drainage.

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II. Write short notes on :

(10 x 5 = 50)

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE SPECIALTY

Time : Three hours

Maximum : 100 marks

Theory : Two hours and forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

$(2 \times 15 = 30)$

(1) Describe the microanatomy and relevant physiology of bile secretion at the canalicular membrane of the hepatocyte.

(2) Describe the embryonal development of the intestines, and the problems associated with malrotation of the gut.

(a) Antimicrobial resistance in *H. pylori*.

(b) **Infliximab.**

(c) Life cycle of *strongyloides stercoralis*.

(d) Lymphatic drainage of the stomach.

(e) **Physiology of defaecation.**

(f) Epidemiology of Hepatitis A.

(g) 5HT receptors.

(b) Hepatic changes in normal pregnancy.

(i) Bulaemia nervosa.

(i) **Immunohistochemistry of liver disease.**

[KP 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE SPECIALITY

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

- (1) Describe the factors influencing calcium absorption in the gut. Discuss the skeletal abnormalities secondary to hepato-biliary diseases. (20)
- (2) Discuss the role of dietary factors in the pathogenesis and prevention of gastrointestinal cancers. (15)
- (3) Describe the hepatic blood flow in health and in portal hypertension. (15)

II. Write Short notes on :

(6 × 5 = 30)

- (a) Zinc deficiency and supplementation.
- (b) Transient lower oesophageal sphincter relaxation.
- (c) Congenital anomalies of pancreas.
- (d) Common variable immunodeficiency.
- (e) Genetics of Wilson's disease.
- (f) Cyclo-oxygenase 2 inhibitors.

[KQ 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

**Paper I — BASIC SCIENCES APPLIED TO THE
SPECIALITY**

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

(1) Discuss the role of neural, hormonal, paracrine and autocrine agents in the regulation of gastric acid secretion in health and disease. (20)

(2) Discuss the pathophysiology of constipation and its relevance in systemic illnesses. (15)

(3) Describe the mechanism of liver injury due to alcohol ingestion. (15)

II. Write short notes on :

(6 × 5 = 30)

1. Pathogenesis of hereditary pancreatitis.
 2. Intestinal cells of cajal.
 3. Bacterial over growth in irritable bowel syndrome.
 4. Role of intestinal flora in IBD.
 5. Pathogenesis in early and late stage of NAFLD.
 6. Mechanism of GERD.
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[KR 013]

Sub. Code : 1251

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch IV — Gastroenterology

Paper I — BASIC SCIENCES APPLIED TO THE
SPECIALITY

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

1. Describe bile salt metabolism. (20)
2. Discuss intestinal micro circulation. (15)
3. Describe normal cell cycle, regulation of normal cell proliferation and pathways mediating cell growth. Also describe various mechanisms involved in oncogenesis. (15)

II. Write short notes on :

(6 × 5 = 30)

- (a) Prebiotics.
 - (b) HFE gene mutation.
 - (c) Development of portal vein.
 - (d) Intestinal rotation.
 - (e) Fecal chymotrypsin.
 - (f) Zymodemes.
-

August 2008

[KT 013]

Sub. Code: 1251

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch IV – GASTROENTEROLOGY

(Revised Regulations)

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40

1. Discuss briefly the embryonic development of esophagus and various developmental anomalies of esophagus.
2. Describe the anatomy of sphincter of oddi. Give a detail account of sphincter of oddi dysfunction.

II. Write short notes on:

10 x 6 = 60

1. Gastric volvulus.
2. Ghrelin.
3. Gut neuropeptides.
4. Anorectal manometry.
5. Night eating syndrome.
6. Choledochal cysts.
7. Hepatic venous pressure Gradient.
8. Segments of liver.
9. Annular pancreas.
10. Secretory IgA.

August 2009

[KV 013]

Sub. Code: 1251

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch IV – GASTROENTEROLOGY

(Revised Regulations)

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40

1. Discuss physiology of gastric secretion and role of receptor blockers.
2. Discuss the digestion and absorption of fat and tests of fat mal absorption.

II. Write short notes on:

10 x 6 = 60

1. Paneth cell.
2. Matrix metalloproteinase.
3. Rappaports acinus.
4. Gluten.
5. Serology in inflammatory bowel diseases.
6. Bilirubin Metabolism.
7. Hepatitis 'B' virus envelope antigen.
8. Alkaline phosphatase.
9. Ig A and gut.
10. Hiatus hernia.

February 2011

[KY 013]

Sub. Code: 1251

DOCTOR OF MEDICINE (D.M.) DEGREE EXAMINATION

(Super Specialities)

Branch IV – GASTROENTEROLOGY

Revised Regulations

Common to all candidates

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40

1. Functional Anatomy of Gut-Associated Lymphoid Tissue and discuss current pathogenesis of IBD.
2. Describe the hepatocyte with suitable diagrams and how to approach a patient with elevated Alkaline phosphatase level.

II. Write short notes on:

10 x 6 = 60

1. Hepatic Fibrosis.
2. Prothrombin Time.
3. Terlipressin.
4. Gastric Pacemaker.
5. Short chain fatty acids.
6. DNA Repair genes.
7. Proton pump inhibitors.
8. Assessment of gastric neuromuscular function.
9. Ghrelin.
10. Pharmacotherapy for obesity.

August 2011

[KZ 013]

Sub. Code: 1251

**DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION
(SUPER SPECIALITIES)**

**BRANCH IV – GASTROENTEROLOGY
BASIC SCIENCES APPLIED TO THE SPECIALITY
Q.P. Code: 161251**

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

Pages (Max.)	Time (Max.)	Marks (Max.)
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1. Describe the composition and function of pancreatic juice and discuss the role of pancreatic function tests.
2. Describe the normal bacterial flora of gut and discuss the role of probiotics.

11	35	15
11	35	15

II. Write notes on :

- | | | | |
|---|---|----|---|
| 1. Peyer's patches. | 4 | 10 | 7 |
| 2. Oncofetal proteins. | 4 | 10 | 7 |
| 3. Kwashiorkor. | 4 | 10 | 7 |
| 4. Celiac disease. | 4 | 10 | 7 |
| 5. Percutaneous endoscopic gastrojejunostomy. | 4 | 10 | 7 |
| 6. Sibutramine. | 4 | 10 | 7 |
| 7. Vertical banded gastroplasty. | 4 | 10 | 7 |
| 8. Binge eating disorder. | 4 | 10 | 7 |
| 9. Eosinophilic proctocolitis. | 4 | 10 | 7 |
| 10. Dermatitis Herpetiformis. | 4 | 10 | 7 |

February 2012

[LA 013]

Sub. Code: 1251

**DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION
(SUPER SPECIALITIES)**

**BRANCH IV – GASTROENTEROLOGY
BASIC SCIENCES APPLIED TO THE SPECIALITY**

Q.P. Code: 161251

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Pathogenesis, investigations and treatment of gastric cancer.	16	35	15
2. Causes, clinical evaluation and investigations of obstructive jaundice.	16	35	15

II. Write notes on :

1. Secondary prophylaxis for portal hypertensive bleeding.	4	10	7
2. Viral oesophagitis	4	10	7
3. Bariatric surgery	4	10	7
4. Managing drug resistance in hepatitis B virus treatment	4	10	7
5. Indications for anti- Helicobacter pylori treatment and discuss different treatment regimens	4	10	7
6. Developmental anomalies of pancreas causing pancreatitis	4	10	7
7. Nutritional assessment in patient with malabsorption syndrome	4	10	7
8. Side-effects of Tacrolimus, interactions of other drugs with Tacrolimus	4	10	7
9. Parasites causing malabsorption	4	10	7
10. Radiation induced colitis	4	10	7

[LB 013]

AUGUST 2012

Sub. Code: 1251

D.M – GASTROENTEROLOGY

Paper – I BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: 3 hours
(180 Min)

Maximum: 100 marks

Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks
(Max.)(Max.)(Max.)

- | | | | |
|--|----|----|----|
| 1. Discuss the pathogenesis of sporadic as well as familial colorectal cancer. Briefly discuss the strategies to screen for colorectal cancer in relatives of the index patient. | 16 | 35 | 15 |
| 2. How do you classify the causes of jaundice? Discuss the causes and management of isolated hyperbilirubinemia in detail. | 16 | 35 | 15 |

II. Write notes on:

- | | | | |
|---|---|----|---|
| 1. Pharmacotherapy of portal hypertensive bleeding. | 4 | 10 | 7 |
| 2. Immunoglobulin A : importance in hepatic and GI systems. | 4 | 10 | 7 |
| 3. Management of complications of obesity. | 4 | 10 | 7 |
| 4. Management of drug resistant hepatitis B virus. | 4 | 10 | 7 |
| 5. Tests to detect Helicobacter pylori infection. | 4 | 10 | 7 |
| 6. Pancreas divisum : investigations, associated disorders, treatment. | 4 | 10 | 7 |
| 7. Ursodeoxycholic acid : mechanisms of action and indications. | 4 | 10 | 7 |
| 8. Side-effects of cyclosporine, interactions of other drugs with cyclosporine. | 4 | 10 | 7 |
| 9. Strongyloidiasis : clinical manifestations and management. | 4 | 10 | 7 |
| 10. Antibiotic associated colitis : investigations and treatment. | 4 | 10 | 7 |

FEBRUARY 2013

LC 013

Sub: Code:1251

D.M –GASTROENTEROLOGY

Paper – I BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code : 161251

**Time : 3 hours
(180 Min.)**

Maximum : 100 marks

I. Elaborate on:

(2 x 15 marks=30 marks)

1. Discuss the " esophageal motility in health and disease".
2. Discuss the embryonic development of pancreas and congenital anomalies of pancreas

II Write notes on

(10 x7 marks=70 marks)

- 1) Discuss briefly the various steps evolved in the metabolism of vitamin B12
- 2) Mention the role played by Strongyloides stercoralis in various GI conditions
- 3) What is the blood supply of Pancreas?
- 4) Write short notes on "Gut preferred fuels"
- 5) Briefly mention criteria for diagnosing Night eating syndrome.
- 6) Elaborate on the role played by Kupffer cell in various liver disorders/ dysfunctions
- 7) How do you manage a patient suffering from Malt lymphoma?
- 8) Write briefly about the role played by Ghrelin
- 9) Discuss the importance of Immunohistochemistry in liver disease
- 10) Mention the diagnostic criteria and its implications in managing Barrett's Metaplasia

(LD 013)

AUGUST 2013

Sub. Code:1251

D.M. – GASTROENTEROLOGY

Paper – I BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P.Code: 161251

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Describe the vascular supply of colon; Discuss the pathophysiology and causes of ischaemia of colon.
2. Describe the macroscopic and microscopic structure of pancreas. Discuss the pathogenesis of acute pancreatitis.

II. Write notes on:

(10X7=70)

1. Motilin.
2. Dendritic cells.
3. Tumour Suppressor Genes.
4. Terlipressin.
5. Zenker's Diverticulum.
6. Gastric acid secretion.
7. Vitamin D.
8. Interferons.
9. Apoptosis.
10. Enteric microbiota.

D.M. – GASTROENTEROLOGY
Paper – I BASIC SCIENCES APPLIED TO THE SPECIALITY
Q.P.Code: 161251

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Discuss the role of vasoactive drugs used in the management of portal hypertension.
2. Discuss briefly the embryology of the biliary tract and describe in detail choledochal cyst.

II. Write notes on:

(10X7=70)

1. Briefly outline the metabolism of sodium.
2. What are the advantages of Histology activity index (HAI)?
3. Analyse the role of Intestinal flora in IBD.
4. Mention the role of various Breath tests in malabsorption.
5. What is the importance of Transient lower esophageal relaxations in GERD ?
6. Write short notes on “Pancreatic Polypeptide.”
7. Discuss in brief the role played by Leptin in various GI disorders.
8. Mention the role of Genetics in Wilson’s disease.
9. Discuss the various Segments of liver and its importance in managing various hepatobiliary problems.
10. What is the importance of Interstitial cells of Cajal?

[LH 013]

AUGUST 2015

Sub. Code: 1251

D.M. – GASTROENTEROLOGY

PAPER I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code : 161251

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the epidemiology, pathogenesis, diagnosis, management and complications of gastro esophageal reflux disease (GERD).
2. Describe the hepatocyte and discuss bile acids in health and disease.

II. Write notes on :

(10 x 7 = 70)

1. Oncogenes
2. Pathogenesis of pain in chronic pancreatitis.
3. Kupffer cells.
4. HFE gene mutation.
5. Biomarkers of hepatic fibrosis.
6. 5-aminosalicylic acid.
7. Meckel's diverticulum.
8. Solitary rectal ulcer.
9. Gut mucosal IgA.
10. Hydrogen breath test.

[LI 013]

FEBRUARY 2016

Sub. Code: 1251

D.M. – GASTROENTEROLOGY

PAPER I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code : 161251

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the epidemiology, pathogenesis and spectrum of Ethanol related liver disease.
2. Discuss the embryonal development and the congenital anomalies associated with the small and large intestines.

II. Write notes on :

(10 x 7 = 70)

1. Helicobacter pylori infection and Gastric cancer.
2. Hepatitis B virus mutants.
3. Vitamin B 12 absorption.
4. Cholecystokinin.
5. Anorectal manometry.
6. Choledochal cyst.
7. Unconjugated Hyperbilirubinaemia.
8. Extra hepatic portal vein obstruction.
9. Premalignant lesions for Colonic malignancy.
10. Small bowel biopsy.

D.M. – GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P.Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the embryonic development of Esophagus and the congenital anomalies of esophagus.
2. Discuss the microscopic anatomy of Gastric mucosa and various mechanisms involved in the regulation of Gastric acid secretion.

II. Write notes on:

(10 x 7 = 70)

1. Assessment of Hepatic fibrosis.
2. Pancreatic Divisum.
3. Premalignant conditions of Stomach.
4. Hepatic Osteodystrophy.
5. Vasoactive Intestinal Polypeptide.
6. Cyclical Vomiting Syndrome.
7. Histopathological findings in Ulcerative Colitis.
8. Carcino embryonic antigen.
9. Gastric Volvulus.
10. Cameron ulcer.

D.M. – GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P.Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Describe in brief the embryology of pancreas. Mention the congenital anomalies and write brief note on each of the anomalies.
2. What is the pathogenesis of Nonalcoholic fatty liver disease? Describe in detail the various mechanisms involved.

II. Write notes on: **(10 x 7 = 70)**

1. Gastrointestinal abnormalities in scleroderma.
2. Refeeding syndrome.
3. Alpha Foeto Protein (α FP).
4. Precancerous lesions of esophagus.
5. Enterocyte.
6. Anorectal manometry.
7. HELLP syndrome.
8. Minimal hepatic encephalopathy.
9. HVPG measurement, applications and limitations.
10. Ursodeoxycholic acid (UDCA) uses and indications.

D.M. – GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P.Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: (2 x 15 = 30)

1. Discuss the digestion and absorption of fat and tests of fat malabsorption.
2. Describe the surface anatomy, segmental anatomy and acinar microanatomy of liver and their clinical importance in various situations.

II. Write notes on: (10 x 7 = 70)

1. The role of Interdigestive migrating motor complex in digestion.
2. What is the Value of Prothrombin time in liver disorders?
3. Briefly write on the role of cyclic vomiting syndrome.
4. Mention briefly the role of iron in hepatic disorders.
5. PINES- what is its importance in gastroenterology?
6. Mention the utility of mucosal protective agents in peptic ulcer disease.
7. Mention the criteria of ROME II in pelvic floor dyssynergia.
8. Levosulphride.
9. Role of radionuclide scanning in gastroenterology.
10. Pancreatic function Tests.

D.M. – MEDICAL GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P.Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Describe the pathophysiology of liver injury in alcoholic liver disease.
2. What is the epidemiology, pathogenesis, staging systems, Diagnosis and management of IPSID (immuno proliferative small intestinal disease)?

II. Write notes on: **(10 x 7 = 70)**

1. What are the new insights in the management of diabetic gastro paresis?
2. What is the dosage, uses and side effects of Imatinib Mesylate?
3. Write briefly on Annular Pancreas.
4. Mention the tests employed in the diagnosis of Protein losing enteropathy.
5. Write briefly on the anatomy of Peyer's patches.
6. Mention the important characteristics of Histopathology of Hepatocellular carcinoma.
7. Mention the importance of necrotic migratory erythema.
8. Giardiasis.
9. Mismatch instability.
10. Parietal cell.

D.M. – MEDICAL GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Describe in detail the assessment of gastric neuromuscular function.
2. Describe development of the esophagus and write about congenital tracheoesophageal fistulas.

II. Write notes on: **(10 x 7 = 70)**

1. Gastroschisis.
2. Nutmeg liver.
3. Orocecal transit time.
4. Brunner glands.
5. Whipworm infestation.
6. Somatostatin receptor scanning scintigraphy.
7. Molecular mechanisms of radiation induced GI damage.
8. Tests for H.pylori infection.
9. Botox in Gastroenterology.
10. Interstitial cells of Cajal.

(LR 013)

NOVEMBER 2020

Sub. Code: 1251

(AUGUST 2020 SESSION)

D.M. – MEDICAL GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss hepatic microcirculation. Its physiology and pathophysiology in liver diseases.
2. Discuss the brain-gut microbiome axis and its role in pathogenesis in Irritable Bowel syndrome.

II. Write notes on:

(10 x 7 = 70)

1. Anatomy of cricopharyngeus muscle and its dysfunction
2. Gastric glands and its function
3. Describe common channel anomaly in sphincter of Oddi and its clinical Importance
4. Parasites causing malabsorption
5. Hydrogen breath test
6. Mismatch repair pathway in colorectal cancer
7. Hepatic erythropoietin
8. Genetics in hereditary pancreatitis
9. Viruses causing acute liver failure
10. Trientine – uses, dosage and side effects

(DM 0821)

AUGUST 2021

Sub. Code: 1251

D.M. – MEDICAL GASTROENTEROLOGY

Paper I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss pancreatic micro – circulation, its role in pathogenesis of acute pancreatitis.
2. Discuss physiology of DEFECATION reflex and its relevance in chronic constipation with evaluation and management of chronic constipation.

II. Write notes on:

(10 x 7 = 70)

1. PITT cells functions and clinical importance.
2. Various types of schilling test.
3. Migratory motility complex.
4. Gastro – colic reflex in IBS.
5. Stronglyoidosis-clinical manifestation and management.
6. Gall bladder abnormalities.
7. Small intestinal transit studies.
8. Steatohepatic HCC.
9. Genetics in colon cancer.
10. Prostaglandins in liver failure and transplantation.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0223]

FEBRUARY 2023

Sub. Code :1251

D.M. – MEDICAL GASTROENTEROLOGY

PAPER I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe in detail the embryology and congenital anomalies associated with Esophagus.
2. Discuss the digestion and absorption of fat and tests of fat Malabsorption.

II. Write notes on:

(10 x 7 = 70)

1. Interstitial cells of Cajal.
2. Bile Acids and Long Chain Fatty Acids.
3. Assessment of Hepatic Fibrosis.
4. Diagnosis of Small Intestinal Bacterial Overgrowth.
5. Complications of Short Bowel Syndrome.
6. Refractory Celiac Disease.
7. Pancreatic Polypeptide.
8. Pancreaticobiliary Maljunction.
9. Role of Radionuclide Scanning in Gastroenterology.
10. Approach to Screening of Colorectal carcinoma.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0124]

JANUARY 2024

Sub. Code :1251

D.M. – MEDICAL GASTROENTEROLOGY

PAPER I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss the structure of *Helicobacter pylori* and its pathogenicity and management.
2. Discuss the Structure of Hepatocytes, portal Triads and Describe Vascular Supply of Liver.

II. Write notes on: **(10 x 7 = 70)**

1. Pubo Rectal Sling.
2. Zenkers diverticulum.
3. Hepatitis D Virus.
4. Acotiamide.
5. Esophageal Rings.
6. Bezoars in stomach.
7. Rectal Ulcers.
8. Tumor markers for HCC.
9. Serum Alkaline Phosphatase.
10. Benign Recurrent Intrahepatic Cholestasis.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0225]

FEBRUARY 2025

Sub. Code :1251

D.M. – MEDICAL GASTROENTEROLOGY

PAPER I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the anatomy, histology, development of the pancreas and developmental anomalies of the pancreas.
2. Discuss the definition, clinical features, classification, diagnosis and treatment of Sphincter of Oddi dysfunction.

II. Write notes on:

(10 x 7 = 70)

1. Lymphatic drainage of the stomach.
2. Hepatic stem cells.
3. HVPG measurement, applications and its limitations.
4. Short-chain fatty acids.
5. Pancreatic fistulas.
6. Ursodeoxycholic acid.
7. Pancreatic function tests.
8. Gamma Glutamyl Transpeptidase (GGTP).
9. Thiamine –Metabolic role and effect of deficiency.
10. Refeeding syndrome.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[DM 0825]

AUGUST 2025

Sub. Code: 1251

D.M. – MEDICAL GASTROENTEROLOGY

PAPER I – BASIC SCIENCES APPLIED TO THE SPECIALITY

Q.P. Code: 161251

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the physiology and pathophysiology of esophageal motility and management of motility disorder of esophagus.
2. Elaborate on various gut hormones and their clinical implications.

II. Write notes on:

(10 x 7 = 70)

1. Gastroparesis.
2. Hepatitis E virus.
3. Enterohepatic circulation.
4. Lactobacillus rhamnosus.
5. FODMAP disease.
6. Sphincter of Oddi dysfunction.
7. Kupffer cells.
8. Tumor suppressor genes.
9. Flow cytometry.
- 10.5 HT receptors antagonists.
