

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.
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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.
-

[KL 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 Theory : 80 marks
forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. 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.

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

- (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.

February-2005

[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 Theory : 80 marks
forty minutes

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.

[KO 013]

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 Theory : 80 marks
forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. Essay : (2 × 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.

(h) Hepatic changes in normal pregnancy.

(i) Bulaemia nervosa.

(j) 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 Theory : 80 marks
forty minutes

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 Theory : 80 marks
forty minutes

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. Secretary 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.)
1. Describe the composition and function of pancreatic juice and discuss the role of pancreatic function tests.	11	35	15
2. Describe the normal bacterial flora of gut and discuss the role of probiotics.	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.

(LE 013)

FEBRUARY 2014

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. 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?
