August 2009

[KV 029] **Sub. Code: 1551**

M.Ch. DEGREE EXAMINATIONS

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II – Neuro Surgery

Part I

Paper I – APPLIED BASIC SCIENCES IN RELATION

TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three hours **Maximum: 100 Marks**

ANSWER ALL QUESTIONS

Draw suitable diagrams wherever necessary.

I. Essays: **(2 x 20 =40)**

1. What are the risks of blood transfusion and describe the metabolic changes following blood transfusion and blood substitutes and mention alternates to transfusion.
2. Describe wound healing and factors responsible for wound healing.

II. Write short notes on: **(10 X 6 = 60)**

1. Gas Gangrene.
2. MEN II(a) II(b) (Multiple Endocrinal Neoplasia)
3. Apoptosis.
4. Plasma Expanders.
5. Premalignant condition.
6. Myocutaneous flap.
7. Prostaglandins.
8. Levels of neck node dissection.
9. Air embolism.
10. Sentinel lymph node.

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August 2011

[KZ 029] **Sub. Code: 1551**

MASTER OF CHIRUGIAE (M.Ch.) DEGREE EXAMINATION

(SUPER SPECIALITIES)

BRANCH II – NEURO SURGERY

APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

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. Discuss the anatomy of the thyroid gland.	11	35	15
2. Discuss the physiology of gastric acid secretion.	11	35	15
II. Write notes on :			
1. Erector spinae.	4	10	7
2. Odontoid process.	4	10	7
3. Inguinal canal.	4	10	7
4. Recurrent laryngeal nerve.	4	10	7
5. Houston’s valves.	4	10	7
6. Anorectal ring.	4	10	7
7. HLA antigens.	4	10	7
8. Common bile duct.	4	10	7
9. Blood supply of the stomach.	4	10	7
10. Mechanisms of lymph transport.	4	10	7

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[LB 029] **AUGUST 2012** **Sub. Code: 1551**

M.Ch – NEURO SURGERY

SIX YEARS COURSE- PART I

Paper – I APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time : 3 hours **Maximum : 100 marks**

(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Discuss the anatomy of the anterior triangle of the neck.	16	35	15
2. Discuss the physiology of the pituitary-adrenal axis.	16	35	15
II. Write notes on:			
1. Causes and management of respiratory acidosis.	4	10	7
2. Causes and management of Hyponatremia.	4	10	7
3. What are the clinical features of Multiple Endocrine Neoplasia syndrome Type I.	4	10	7
4. Physiology of Gastric acid secretion.	4	10	7
5. Clinical features and diagnosis of Carpal tunnel syndrome.	4	10	7
6. Pathophysiology of Gram negative septicemia.	4	10	7
7. Describe the anatomy of the Axillary nerve.	4	10	7
8. Describe the anatomy of the anterior abdominal wall.	4	10	7
9. Describe the anatomy of the Facial nerve.	4	10	7
10. What are the various branches of the external carotid artery.	4	10	7

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(LD 029) **AUGUST 2013** **Sub. Code: 1551**

M.Ch. – NEURO SURGERY
FIVE YEARS/SIX YEARS COURSE – PART – I
Paper – I APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY
Q.P.Code: 181551

Time: Three Hours **Maximum: 100 marks**

I. Elaborate on: **(2X15=30)**

1. Discuss on layer of scalp, its blood supply and nerve supply, its surgical importance.

2. Discuss on general arrangements of autonomic nervous systems and its neurotransmitter.

II. Write notes on: **(10X7=70)**

1. Anatomy and chemical composition of intervertebral disc.
2. Gross anatomy of pituitary gland and its hormones.
3. Branchial cyst.
4. Anatomy and formation of Rectus sheath.
5. Thyroid function test.
6. Course of Facial nerve.
7. Causes and management of metabolic acidosis.
8. Spinabifida.
9. Pathophysiology of gram negative septicaemia.
10. Formation of brachial plexus.

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[LF 029] **AUGUST 2014** **Sub. Code: 1551**

M.Ch. – NEURO SURGERY

FIVE YEARS / SIX YEARS COURSE

PART – I

Paper I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q. P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

Answer ALL questions in the same order.

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

1. Discuss the anatomy and lobes of the liver.
2. Discuss the physiology of pituitary – adrenal axis.

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

1. Anatomy of femoral nerve.
2. Anatomy of common bile duct.
3. Ischiorectal fossa.
4. Causes and management of hypokalemia.
5. Multiple endocrine neoplasia – type 2.
6. Metabolic alkalosis.
7. Course and branch of radial nerve.
8. Cubital fossa.
9. Branches of external carotid artery.
10. Anatomy of galea aponeurotica.

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[LH 029] **AUGUST 2015** **Sub. Code: 1551**

M.Ch. – NEURO SURGERY

FIVE YEARS / SIX YEARS COURSE

PART – I

PAPER I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P.Code: 181551

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

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

1. Pathophysiology of thyroid malignancies.

2. Benign and malignant tumors of adrenal gland.

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

1. Mammogram.

2. Feeding gastrostomies.

3. Scalp Swellings.

4. Choledochal cyst.

5. Features of lower limb arterial stenosis.

6. Anatomy of inguinal canal.

7. Immunohistochemistry.

8. Types of renal calculi.

9. Potassium imbalance.

10. Phimosis.

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(LJ 029) AUGUST 2016 **Sub. Code: 1551**

M.Ch. – NEURO SURGERY

SIX YEARS COURSE

PART – I

Paper I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P.Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Metabolic stress response in a surgical patient.
2. Surgical anatomy of breast and investigations of breast symptoms.

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

1. Brachial plexus.
2. Insulin resistance.
3. Prophylaxis of surgical site infection.
4. Amoebiasis.
5. Oncogenes.
6. Frozen section biopsy.
7. Pain control in malignant disease.
8. Acute parotitis.
9. Composition and classification of inguinal hernia.
10. Gastric acid secretion.

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(LL 029) AUGUST 2017 **Sub. Code: 1551**

M.Ch. – NEURO SURGERY

SIX YEARS COURSE

PART – I

Paper I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P.Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Surgical Anatomy of pancreas and pathophysiology of Acute pancreatitis.

2. Pathophysiology of shock in a surgical patient.

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

1. Anatomy of intra peritoneal abscess.
2. Surgical Anatomy of Anal Sphincters.
3. Metabolic acidosis.
4. Immunological basis of graft rejection.
5. Pheochromocytoma.
6. Thyroid function tests.
7. Gas gangrene.
8. Cavernous Sinus.
9. Undescended testis.
10. Innervation of bladder.

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(LP 029) AUGUST 2019 **Sub. Code: 1551**

M.Ch. – NEURO SURGERY

SIX YEARS COURSE

PART – I

Paper I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Describe the surgical anatomy of liver.
2. Elaborate on the hormones of pituitary gland and its effects in controlling the physiological milieu.

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

1. Coeliac plexus.
2. Diabetic ketoacidosis.
3. Renovascular hypertension.
4. SIADH (Syndrome of inappropriate antidiuretic hormone secretion).
5. Tuberculous lympadenopathy.
6. Chorda tympani nerve.
7. Submandibular sialadenitis.
8. Dumping syndrome.
9. Treatment and prevention of pressure sore.
10. Hiatus hernia.

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(LR 029) NOVEMBER 2020 **Sub. Code: 1551**

(AUGUST 2020 SESSION)

M.Ch. – NEURO SURGERY

SIX YEARS COURSE

PART – I

Paper I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Surgical anatomy of gall bladder and bile duct.
2. Metabolic stress response to surgery and trauma.

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

1. Brachial plexus
2. Prostate specific antigen
3. Tetanus
4. Diabetes insipidus
5. Recurrent laryngeal nerve
6. Deep venous thrombosis
7. Frozen shoulder
8. Mammography
9. Multiple endocrine neoplasia
10. Functions of adrenal gland.

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

[MCH 0222] FEBRUARY 2022 **Sub.Code :1551**

M.Ch. – NEURO SURGERY

SIX YEARS COURSE

PART – I

Paper I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Various types of shock and discuss about the causes and Management.
2. Anterior and Posterior Anatomical Triangles of neck and their applied anatomy.

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

1. Neurogenic bladder
2. Total parenteral nutrition
3. Hemostasis in Surgery
4. Anatomical & Physiological dead space
5. Ulnar paradox
6. Hormones of Thyroid
7. Second part of duodenum anatomy and surgical importance
8. Scalp
9. Draw a detailed labelled diagram of C2 Axis vertebra
10. Hessel bach triangle

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

(MCH 0823) AUGUST 2023 Sub. Code: 1551

M.Ch. - BRANCH II - NEURO SURGERY

SIX YEARS COURSE

PART – I

PAPER I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. What is normal and abnormal wound healing? Discuss in detail about types of Wounds and Tissue repair.

2. Elaborate on Surgical Ethics and Law. Discuss in detail about informed consent, withdrawal of life supporting treatment and confidentiality in Surgical practice.

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

1. Tissue engineering and Regeneration.
2. Surgical infection.
3. Anterior and Posterior neck triangles.
4. Venous thromboembolism prophylaxis.
5. Needle stick injury.
6. Cirsoid aneurysm.
7. Horner syndrome.
8. Carotid body Tumor.
9. Frozen section.
10. Tumor Markers.

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

(MCH 0124) JANUARY 2024 Sub. Code: 1551

M.Ch. - BRANCH II - NEURO SURGERY

SIX YEARS COURSE

PART – I

PAPER I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Describe the anatomy of the thyroid gland with a note on its endocrine function.

2. Describe the anatomy of the venous drainage of the head and neck with its surgical implications.

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

1. Diaphragm.
2. Differential diagnosis of a subcutaneous nodule.
3. Squamous cell carcinoma of skin.
4. Suprarenal gland.
5. Thoracic duct and its importance in surgery.
6. Tuberculous lymphadenitis.
7. Frey's syndrome.
8. Metronidazole.
9. Coagulation pathway.
10. Non-absorable sutures.

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

(MCH 0824) **AUGUST 2024** **Sub. Code: 1551**

M.Ch. - BRANCH II - NEURO SURGERY
SIX YEARS COURSE
PART – I

PAPER I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Write about the integrated metabolic response in acute phase (< 48 hours) of surgical injury and the role of neuroendocrine stress response mechanism.

2. Write on the potential opportunities afforded by tissue engineering and regeneration medicine with relevance to surgery and its current limitations for clinical applications.

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

1. T3, T4 and TSH values and its relevance in fitness to undergo surgery.
2. List the indications for blood transfusions and the current clinical evidence-based guidelines for blood transfusions.
3. Management of degloving injuries.
4. Antibiotic prophylaxis in surgery.
5. Investigations, imaging and management of Amoeboma.
6. Basic principles of a surgical skin incision.
7. Classify types of needles and the specific purpose of each type of needle in wound closure.
8. End of life care in malignancy.
9. Instrument decontamination of gastrointestinal endoscope.
10. Various modalities and their relevance in imaging for an infected bone joint.

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

(MCH 0225) FEBRUARY 2025 Sub. Code: 1551

M.Ch. BRACH II - NEURO SURGERY

SIX YEARS COURSE

PART – I

PAPER I – APPLIED BASIC SCIENCES IN RELATION TO GENERAL SURGERY

Q.P. Code: 181551

Time: Three Hours **Maximum: 100 Marks**

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

1. Describe the anatomy and applied anatomy of duodenum with appropriate diagram.
2. Pathophysiology and pharmacotherapy of Acid Peptic Disease (APD).

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

1. Direct Inguinal hernia.
2. MRSA and VRSA.
3. Lumbar plexus.
4. Posterior pituitary – Anatomy and Physiology.
5. Succinyl choline.
6. Islets of Langerhans.
7. Anterior superior iliac spine.
8. Taenia solium.
9. Portal circulation.
10. Notochord.

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