



PRAVARA INSTITUTE OF MEDICAL SCIENCES

(DEEMED TO BE UNIVERSITY)

Loni, Tal. Rahata, Dist. Ahmednagar 413736

NAAC Re-accredited with 'A' Grade

SYLLABUS

UG Programme- General Surgery

(Competency Based Undergraduate Curriculum will be implemented from MBBS batch 2024 from 2024-25)

Surgery syllabus applicable to 2024 [Onwards] admission MBBS batch

Index

No.	Item	Page number
1	Aims and Objectives	3
2	AEtCom	7
3	Didactic lectures	8
4	Self-Directed Learning [SDL]	27
5	Small Group Teaching [SGT]	29
6	Clinical Postings	40
7	Internal Assessment	41
8	University Examinations	47
9	Recommended Books	50

1. Aims and Objectives

a. Competencies:

The student must demonstrate:

- Understanding of the structural and functional basis, principles of diagnosis and Management of common surgical problems in adults and children
- Ability to choose, calculate and administer appropriately intravenous fluids, Electrolytes, blood and blood products based on the clinical condition
- Ability to apply the principles of asepsis, sterilization, disinfection, rational use of Prophylaxis, therapeutic utilities of antibiotics and universal precautions in Surgical practice
- Knowledge of common malignancies in India and their prevention, early detection And therapy
- Ability to perform common diagnostic and surgical procedures at the primary care Level
- Ability to recognize, resuscitate, stabilize and provide Basic & Advanced Life Support to patients following trauma
- General knowledge about organ retrieval from deceased donor and living donor
- Ability to administer informed consent and counsel patient prior to surgical

Procedures

- Commitment to advancement of quality and patient safety in surgical practice

b. Broad subject specific objectives.

Knowledge: At the end of course, the student should be able to:

Describe etiology, pathophysiology, principles of diagnosis and management of

Common surgical problems including emergencies in adult and children

- Define indications and methods for fluid and electrolytes replacement therapy
Including blood transfusion
- Define asepsis, disinfection and sterilization and recommend judicious use of antibiotics
- Describe common malignancies in the country and their management including prevention
- Enumerate different types of anaesthetic agents, their indications, contraindications, Mode of administration and side effects

c. Skills

- At the end of the course, the student should be able to:
- Diagnose common surgical conditions both acute and chronic, in adults and children.
- Plan various laboratory tests for surgical conditions and interpret the results.
- Identify and manage patients of hemorrhagic, septicemia and other types of shock
- Be able to maintain patent air-way and resuscitate.

- Monitor patient of head, chest, spinal and abdominal injuries, both in adults and children
- Provide primary care for a patient of burns.
- Acquire principles of operative surgery including preoperative, operative and post Operative care and monitoring
- Treat open wound including preventive measures against tetanus and gas gangrene.
- Diagnose neonatal and pediatric surgical emergencies and provide sound primary care
- Before referring the patient to secondary/tertiary centers
- Identify congenital anomalies and refer them for appropriate management.

d. Integration:

- The teaching should be aligned and integrated horizontally and vertically in order to provide a sound biologic basis and a holistic approach to the care of the surgical patient.
- Apply knowledge of basic medical sciences and other relevant subjects to support understanding of various pathologies, facilitate examination of and intervention for the patients.
- To apply the principles of quality of health care, legal and ethical principles and regulations as recommended by Medical Council of India and WHO.

Learner -Doctor Programme (clinical clerkship)

Phase II

- History taking
- General Examination
- Local Examination with demonstration of signs.
- Psychomotor Skills
- AETCOM of Phase II

Phase III/ I

- All of Phase II plus
- Psychomotor Skills
- Differential diagnosis
- Investigations
- AETCOM of Phase III Part I

Phase III/ II

- All of Phase III Part I plus
- Psychomotor Skills
- Management
- Counseling
- AETCOM Phase III/Part II

-There shall be Ward Leaving Examination [WLE] at the end of 1st and 2nd clinical posting which will be added to internal assessment for practical

-At the end of 3rd and 4th clinical posting, there will be only formative assessment.

2. AETCOM Competencies for Third Year (Part II): Surgery and Allied Subjects

4.4A Student should be able to: Demonstrate empathy in patient encounters

4.4B The student should be able to: Communicate care options to patient and family with a terminal illness in a simulated environment

4.5 The student should be able to: Identify and discuss and defend medico-legal, socio-cultural, professional and ethical issues in physician – industry relationships

4.6 The student should be able to: Identify conflicts of interest in patient care and professional relationships and describe the correct response to these conflicts

3. Didactic Lectures

MBBS Phase II [Total teaching hours: 20]

S. NO	TOPICS	COMPETENCIES	SUBTOPICS	AIT	HOURS
			Lecture: 1		
1.	History of surgery		History of surgery: Introduction to surgery and allied subjects Teaching		1
2.	Metabolic response to injury		Lecture: 2		
		SU 1.1			1
			Describe basic concepts of homeostasis. Enumerate the metabolic changes in injury and their mediators.	Physiology and Biochemistry	
		SU 1.2	Lecture: 3		1
			Describe the factors that affect the metabolic responses to injury.	Biochemistry	
3.	Shock				
		SU 2.1	Lecture: 4		1
		PA6.3	Describe Patho physiology of shock, types of shock and principles of resuscitation including fluid replacement and monitoring. Define and describe shock, its pathogenesis and its stages	Pathology and Physiology	
		SU 2.2	Lecture: 5		1
			Describe the clinical features of shock and its appropriate treatment		
4.	Blood and blood Components				
		SU 3.1	Lecture: 6		1
		PA22.4	Describe the indications and complications of blood transfusion. Enumerate blood components and describe their clinical uses.	Pathology	
5.	Burns				

		SU 4.1	Lecture: 7		1
			Describe patho physiology of burns. Describe clinical features and diagnosis of burns	Physiology	
		SU 4.2, 4.3	Lecture: 8		1
			Plan appropriate treatment of burns. Discuss medico legal aspect in burns Injuries		
6.	Wound healing and wound care				
		SU 5.1	Lecture: 9		1
			Describe normal wound healing and factors affecting healing. Define and describe the process of repair and regeneration including wound healing and its types. Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events Enumerate and describe the mediators of acute inflammation	Pathology	
		SU 5.3	Lecture: 10		1
			Differentiate the various types of wounds, plan and observe management of wounds.		
7.	Surgical Infections				
		SU 6.1	Lecture: 11		1
			Define and describe the etiology and pathogenesis of surgical infections	Microbiology	

		SU 6.1	Lecture: 12		1
			Define and describe the etiology and pathogenesis of surgical infections.	Microbiology	
		SU 6.2	Lecture: 13		1
			Enumerate prophylactic and therapeutic antibiotics. Plan appropriate Management.		
8.	Investigations of a surgical patient				
		SU 9.1	Lecture: 14		1
		PA8.1	Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient.	Biochemistry, Microbiology and Pathology	
		PA8.2	Describe the diagnostic role of cytology and its application in clinical care.		
		MI7.1	Describe the basis of exfoliative cytology including the technique, stains used Describe the etiopathogenesis and discuss the laboratory diagnosis of infections of genitourinary system		
9.	Nutrition and fluid Therapy				
		SU 12.1	Lecture:15		1
			Enumerate the causes and consequences of malnutritionin the surgical Patient	Physiology	
		SU 12.2	Lecture:16		1
			Describe and discuss the methods of estimation and replacement of the fluid and electrolyte requirements in the surgical patients.	Physiology	
		SU 12.3	Lecture:17		1

			Discuss then utritional requirements of surgical patients, the methods of providing nutritional support and their complications.	Biochemistry	
10.	Transplantation				
		SU 13.1	Lecture: 18		1
			Describe the immunological basis of organ transplantation.	Microbiology	
		SU 13.2	Lecture: 19		1
			Discuss the principles of immune suppressive therapy. Enumerate Indications, describe surgical principles, management of organ Transplantation	Microbiology, Pharmacology	
11.	Basic surgical skills				
		SU 14.1	Lecture: 20		1
		MI1.4	Describe Aseptic techniques, sterilization and disinfection. Classify and describe the different methods of sterilization and disinfection. Discuss the application of the different methods in the laboratory, in clinical and surgical practice	Microbiology	
		MI1.5	Choose the most appropriate method of sterilization and disinfection to be used in specific situations in the laboratory, in clinical and surgical practice		

MBBS Phase III- Part I [Total Teaching hours: 20]

S. NO	TOPICS	COMPETENCIES	SUBTOPICS	AIT	HOURS
1.	Metabolic response to injury				
		SU1.3	Lecture: 1		1
			Describe basic concepts of postoperative care.		
2.	Surgical Audit and Research				
		SU7.1.7.2	Lecture: 2		1
			Describe the planning and conduct of surgical audit. Describe the principles and steps of clinical research in General Surgery	Community Medicine	
3.	Ethics				
		SU8.1, 8.2	Lecture: 3		1
		AS10.3	Describe the principles of Ethics as it pertains to General Surgery and demonstrate professional is man empathy to the patient undergoing general surgery. Describe the role of communication in patient safety	Forensic Medicine, AETCOM	
		SU9.2	Lecture: 4		1
			Biological basis for early detection of cancer and multi disciplinary approach in management of cancer		
4.	Perioperative Management				
		SU10.1	Lecture: 5		1
			Describe the principles of perioperative management of common surgical procedures and describe the steps and obtain informed consent in a simulated environment	AETCOM	

5.	Anaesthesia and pain management				
		SU11.1, 11.5	Lecture: 6		1
		AS3.1, AS5.6	Describe principles of Preoperative assessment. Describe principles of providing post-operative pain relief and management of chronic pain. Describe the principles of preoperative evaluation. Observe and describe the principles and steps/techniques involved in common blocks used in Surgery (including brachial plexus blocks)	Anesthesiology	
		SU11.6	Lecture: 7		1
		AS3.2	Describe Principles of safe General Surgery. Elicit, present and document an appropriate history including Medication history in a patient undergoing Surgery as it pertains to a preoperative anaesthetic evaluation.	Anesthesiology	
6.	Transplantation				
		SU13.3	Lecture: 8		1
			Describe legal and ethical issues in organ transplantation		
7.	Basic Surgical Skills				
		SU14.2	Lecture: 9		1
			Describe surgical approaches, incisions and the use of appropriate Instruments in surgery in general.		
		SU14.3	Lecture: 10		1
			Describe the materials and methods used for surgical wound closure and anastomosis (sutures, knots and needles)		

8.	Trauma				
		SU17.2	Lecture: 11		1
			Demonstrate the steps in Basic Life Support. Transport of injured patient in a simulated environment	Anaesthesiology	
9.	Developmental anomalies of face, mouth and jaws				
		SU19.1, 19.2	Lecture: 12		1
			Describe the etiology and classification of cleft lip and palate. Describe principles of reconstruction of cleft lip and palate.	Human Anatomy	
10.	Oropharyngeal Cancer				
		SU20.1, SU20.2	Lecture: 13		1
			Describe etio pathogenesis of oral cancer symptoms and signs of oropharyngeal cancer. Enumerate the appropriate investigations and discuss the Principles of treatment and reconstructive flap	ENT	
			Lecture: 14		1
			Discuss the prevalence of oral cancer and enumerate the common types of cancer that can affect issues of the oral cavity. Discuss the role of etiological factors in the formation of precancerous/cancerous lesions. Identify potential pre-cancerous/cancerous lesions. Counsel patients to risks of oral cancer with respect to tobacco, smoking, alcohol and other causative factors.		
11.	Disorders of salivary Glands				
		SU21.1	Lecture: 15		1

		AN28.9 , AN34.1 ,	Describe surgical anatomy of the salivary glands, pathology clinical presentation of disorders of salivary glands. Describe & demonstrate the parts, borders, surfaces, contents, relations and nerve supply of parotid gland with course of its duct		
			And surgical importance. Describe & demonstrate the morphology, relations and nerve supply.		
		SU21.2	Lecture: 16		1
			Enumerate the appropriate investigations and describe the Principles of treatment of disorders of salivary glands		
12.	Thyroid and Parathyroid Glands				
		SU22.1, 22.2	Lecture: 17		1
			Describe clinical features and management of multinodular goiter		
			Lecture: 18		
			Describe pathology, clinical features and management of solitary thyroid nodule		
		SU22.4	Lecture: 19		1
			Describe the clinical features, classification and principles of management of thyroid cancer		
		SU22.5	Lecture: 20		1
			Describe the applied anatomy of parathyroid. Describe and discuss the clinical features of hypo - and hyperparathyroidism and the principles of their management		

MBBS Phase III- Part II [Total Teaching hours: 90]

S. NO	TOPICS	COMPETENCIES	SUBTOPICS	AIT	HOURS
1.	Adrenal Glands				
		SU23.1, 23.2, 23.3	Lecture: 1		1
			Describe the applied anatomy of adrenal glands. Describe the etiology, clinical features and principles of management of disorders of adrenal gland.	Human Anatomy	
2.	Breast				
		SU25.1	Lecture: 2		1
		PA31.1	Describe applied anatomy and appropriate investigations for breast disease. Classify and describe the types, etiology, pathogenesis and hormonal dependency of benign breast disease.	Human Anatomy	
		SU25.2	Lecture: 3		1
			Describe clinical features and management of benign breast diseases including infections.		
		SU 25.3	Lecture:		1
		PA31.2	Describe the etio pathogenesis, clinical features, investigations and treatment of malignant tumours of breast. Classify and describe the epidemiology, pathogenesis morphology, prognostic factors, hormonal dependency, staging and spread of carcinoma of the breast.	Pathology	
3.	Vascular diseases				
		SU 27.1	Lecture: 5		

		AN19.3, AN20.5, AN20.9	Describe the etio pathogenesis, clinical features, investigations and principles of treatment of acute occlusive arterial disease. Identify & demonstrate palpation of vessels (femoral, popliteal, dorsalispedis, posttibial)		
4.	Biohazard disposal				
		SU 15.1	Lecture: 6		1
		MI8.7	Describe classification of hospital waste and appropriate methods of disposal. Demonstrate Infection control practices and use of Personal Protective Equipment (PPE).	Microbiology	
5.	Trauma				
		SU 17.1, 17.3	Lecture: 7		1
			Describe principles of first aid and management of mass casualty		
		SU 17.2	Lecture: 8		1
			Describe the steps in basic life support and principles advanced trauma life support	Anesthesiology	
6.	Skin and Subcutaneous tissue				
		SU18.1,18.2	Lecture: 9		1
			Describe the patho genesis, clinical features and management of various cutaneous and subcutaneous infections. Describe clinical examination of surgical patient including welling and discuss investigations for diagnosis and treatment plan.		
		SU18.3	Lecture: 10		1
			Classify skin tumours. Differentiate different skin tumours and discuss their management.		

7..	Anaesthesia and Pain Management				
		SU 11.2	Lecture: 11		1
		AS5.6	Enumerate the principles of general, regional and local anaesthesia. Observe and describe the principles and steps/ techniques involved in common blocks used in Surgery (including brachial plexus blocks)	Anesthesiology	
		SU 11.4	Lecture: 12		1
			Enumerate the indications and principles of day care general surgery	Anesthesiology	
		SU 16.1	Lecture: 13		1
			Describe indications, advantages and disadvantages of minimally invasive general Surgery.		
8.	Trauma				
		SU 17.4, 17.5, 17.6	Lecture: 14		1
			Describe patho physiology, mechanism of head injuries. Describe clinical features for neurological assessment and GCS in head injuries. Choose appropriate investigations and discuss the principles of management of head injuries.		
		SU 17.7	Lecture: 55		1
			Choose appropriate investigations and discuss the principles of management of head injury.		
		SU 17.8, 17.9	Lecture: 16		1
			Describe patho physiology of chest injuries. Describe the clinical features and principles of management of chest Injuries.		
		SU17.3	Lecture: 17		1

			Describe patho physiology of abdominal injuries. Describe the clinical features and principles of management of abdominal injuries.		
9.	Pancreas				
		SU 24.1	Lecture: 18		1
		AN55.2	Describe the clinical features, principles of investigation, prognosis and management of pancreatitis. Demonstrate the surface projections of: stomach, liver, fundus of gall bladder, spleen, duodenum, pancreas, ileocecal junction, kidneys & root of mesentery.	Human Anatomy	
		SU 24.2	Lecture: 19		1
			Describe the clinical features, principles of investigation, prognosis and management of pancreatic endocrine tumours		
		SU 24.3	Lecture: 20		1
			Describe the principles of investigation and management of carcinoma head of pancreas.		
10.	Cardio-thoracic Surgery, Chest-Heart and lungs				
		SU 26.1, 26.2	Lecture: 21		1
			Outline the role of surgery in the management of coronary heart disease, valvular heart diseases and congenital heart diseases, disease of thorax and diaphragm.		
		SU 26.3	Lecture: 22		1
			Describe the clinical features of mediastinal diseases and the principles of management.		
		SU 26.4	Lecture: 23		1
			Describe the etiology, pathogenesis, clinical features of tumors of the lung and the principles of management.		
11.	Vascular Diseases				
		SU 27.1	Lecture: 24		1

			Describe the etiopathogenesis, clinical features, investigations and principles of treatment of vasospastic disorders.		
		SU 27.2, 27.3, 27.4	Lecture: 25		1
			Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease..		
			Lecture: 26		1
			Describe types of gangrene and principles of amputation		
		SU 27.5, 27.6	Lecture: 27		1
		AN20.5	Describe the applied anatomy of the venous system of lower limb. Explain anatomical basis of varicose veins and deep vein thrombosis.	Human Anatomy	
			Lecture: 28		1
			Describe clinical features and management of deep vein thrombosis		
			Lecture: 29		1
			Describe clinical features and management of varicose veins		
		SU 27.7	Lecture: 30		1
			Describe pathophysiology, clinical features, investigations and principles of management of lymph edema		
12.	Abdomen				
		SU 28.1	Lecture: 31		1
			Describe pathophysiology, clinical features, investigations and principles of management of inguinal hernia. Describe & demonstrate extent, boundaries, contents of Inguinal canal including Hesselbach's triangle.Explain the anatomical basis of inguinal hernia.	Human Anatomy	
		SU 28.1	Lecture: 32		1
			Describe pathophysiology, clinical features, investigations and principles of management of femoral hernia	Human Anatomy	

		SU 28.1	Lecture: 33		1
		AN44.6	Describe pathophysiology, clinical features, investigations and principles of management of incisional hernias. Describe & demonstrate attachments of muscles of anterior abdominal wall.	Human Anatomy	
		SU 28.1	Lecture:34		1
		AN44.7	Describe pathophysiology, clinical features, investigations and principles of management of ventral hernia of abdomen. Enumerate common Abdominal incisions.	Human Anatomy	
		SU 28.3	Lecture: 35		1
			Describe causes, clinical features, complications and principles of management of peritonitis. Name & identify various peritoneal folds & pouches with its explanation.Explain anatomical basis of peritonitis	Human Anatomy	
		SU 28.4	Lecture: 36		1
		AN47.4	Describe pathophysiology, clinical features, investigations and K principles of management of Intra-abdominal abscess, mesenteric cyst, and retroperitoneal tumors. Explain anatomical basis of subphrenic abscess.		
		SU 28.5	Lecture: 37		1
		AN23.1	Describe the applied anatomy and physiology of esophagus. Describe & demonstrate the external appearance, relations, blood supply, nerve supply, lymphatic drainage and applied anatomy of esophagus.	Human Anatomy, Physiology	
		SU 28.6	Lecture: 38		1
			Describe the clinical features, investigations and principles of management of benign and malignant disorders of esophagus		
		SU 28.7	Lecture: 39		1
		AN47.1	Describe the applied anatomy and physiology of stomach. Describe & identify boundaries and recesses of lesser & greater sac	Human anatomy	
		SU 28.8	Lecture: 40		1

			Describe and discuss the etiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis.		
		SU28.8	Lecture: 41		1
			Describe and discuss the etiology, the clinical features, investigations and principles of management of peptic ulcer		
		SU28.8	Lecture: 42		1
			Describe and discuss the etiology, the clinical features, investigations and principles of management of carcinoma stomach		
		SU 28.10	Lecture: 43		1
		AN47.4 AN47.6	Describe the applied anatomy of liver. Describe the clinical features, Investigations and principles of management of liver abscess Explain anatomical basis of liver biopsy (site of needle puncture), referred pain in cholecystitis, Obstructive jaundice	Human anatomy	
		SU 28.10	Lecture: 44		1
			Describe the clinical features, investigations and principles of management of hydatid disease.		
		SU 28.10	Lecture: 45		1
			Describe the clinical features, investigations and principles of management of liver injury		
		SU 28.10	Lecture: 46		1
		AN47.3	Describe the clinical features, Investigations and principles of management of tumours of the liver. Explain anatomical basis of Ascites.	Human Anatomy	
		SU 28.11	Lecture: 47		1

		AN47.6	Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenic injuries. Describe the post-splenectomy sepsis – prophylaxis. Explain the anatomical basis of Splenic notch, accessory spleens, Kehr's sign	Human Anatomy	
		SU 28.12	Lecture: 48		1
		AN47.7	Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system. Mention the clinical importance of Calot's triangle	Human Anatomy	
		SU 28.12	Lecture: 49		1
			Describe clinical features, investigations and principles of management of obstructive jaundice		
		SU 28.13, 28.14	Lecture: 50		1
			Describe the applied anatomy and physiology of small intestine	Anatomy and physiology	
		SU 28.13, 28.14	Lecture: 51		1
			Describe the clinical features, investigations and principles of management of small intestinal obstruction		
		SU 28.13, 28.14	Lecture: 52		1
			Describe clinical features, investigations and management of infective enteritis		
		SU 28.13, 28.14	Lecture: 53		1
			Describe clinical features, investigations and management of connective tissue disorders of small intestine		
		SU 28.13, 28.14	Lecture: 54		1
			Describe clinical features, investigations and management of mesenteric ischemia		
		SU 28.13, 28.14	Lecture: 55		1
			Describe the clinical features, investigations and principles of management of small intestinal tumours		

		SU 28.13, 28.14	Lecture: 56		1
			Describe the indications, types, complications and principles of management stoma	Human Anatomy	
		SU 28.15	Lecture: 57		1
			Describe the clinical features, investigations and principles of Management of acute appendicitis and its complications.		
			Lecture: 58		1
		SU28.14	Describe applied anatomy and physiology of colon		
			Lecture: 59		1
		SU28.14	Describe clinical features, investigations and principles of management of colonic diverticula		
			Lecture: 60		1
		SU28.14	Describe clinical features, investigations and principles of management of inflammatory bowel disease		
			Lecture: 61		1
		SU28.14	Describe clinical features, investigations and principles of management of large bowel obstruction		
		SU28.14	Lecture: 62		1
			Describe clinical features, investigations and principles of management of colon cancer		
		SU 28.16	Lecture: 63		1
			Describe applied anatomy including congenital anomalies of the rectum and anal canal.	Human Anatomy	
		SU 28.17	Lecture: 64		1
			Describe clinical features, investigations and principles of management of anal abscess		
		SU 28.17	Lecture: 65		1
			Describe the clinical features, investigations and principles of management of hemorrhoid		

		SU28.17	Lecture: 66		1
			Describe the clinical features, investigations and principles of management of anal fissure		
		SU28.17	Lecture: 67		1
			Describe the clinical features, investigations and principles of management of anal fistula		
		SU28.17	Lecture: 68		1
			Describe the clinical features, investigations and principles of management of rectal prolapse		
15.	Urinary System				
		SU29.2	Lecture: 69		1
			Describe surgical and applied anatomy of kidney		
		SU 29.1	Lecture: 70		1
			Describe the causes, investigations and principles of management of hematuria		
		SU 29.2	Lecture: 71		1
		AN52.7	Describe the clinical features, investigations and principles of management of congenital anomalies of genitourinary system. Describe the development of urinary system.	Human Anatomy	
		SU 29.3	Lecture: 72		1
		MI7.1	Describe the Clinical features, Investigations and principles of management of urinary tract infections. Describe the etiopathogenesis and discuss the laboratory diagnosis of infections of genitourinary system.	Microbiology	
		SU 29.4	Lecture: 73		1
			Describe the clinical features, investigations and principles of management of hydronephrosis		
		SU 29.5	Lecture: 74		1
			Describe the clinical features, investigations and principles of management of renal calculi		
		SU 29.5	Lecture: 75		1
			Describe the clinical features, investigations and principles of management of renal tuberculosis		

		SU 29.6	Lecture: 76		1
			Describe the clinical features, investigations and principles of management of renal tumours		
		SU 29.7	Lecture: 77		1
			Describe the principles of management of acute and chronic retention of urine		
		SU 29.8	Lecture: 78		1
			Describe the clinical features, investigations and principles of management of bladder cancer		
		SU 29.9	Lecture: 79		1
		AN48.7	Describe the clinical features, investigations and principles of management of benign enlargement of prostate. Mention the lobes involved in benign prostatic hypertrophy & prostatic cancer.	Human Anatomy	
		SU29.9	Lecture: 80		1
			Describe the clinical features, investigations and principles of management of prostate cancer		
		SU 29.10	Lecture: 81		1
			Describe clinical features, investigations and management of urethral stricture.		
16.	Penis, Testis and Scrotum				
		SU 30.1	Lecture: 82		1
		AN46.5	Describe the clinical features, investigations and principles of management of phimosis, paraphimosis. Explain the anatomical basis of Phimosis & Circumcision.	Human Anatomy	
		SU 30.1	Lecture: 83		1
			Describe the clinical features, investigations and principles of management of carcinoma penis.		
		SU 30.2, 30.3	Lecture: 84		1

		AN46.1	Describe coverings, internal structure, side determination, blood supply, nerve supply, lymphatic drainage & descent of testis with its applied anatomy.	Human Anatomy	
		SU30.6	Lecture: 85		1
			Describe the clinical features, investigations and principles of management of undescended testis.		
		SU30.3	Lecture: 86		1
			Describe the applied anatomy clinical features, investigations and principles of management of epididymo-orchitis		
		SU30.5	Lecture: 87		1
			Describe the applied anatomy clinical features, investigations and principles of management of hydrocoele		
		SU30.4	Lecture: 88		1
		AN46.4	Describe the applied anatomy clinical features, investigations and principles of management of varicocele Explain the anatomical basis of varicocele	Human Anatomy	
		SU 30.6	Lecture: 89		1
			Describe classification, clinical features, investigations and principles of management of benign tumours of testis.		
		SU 30.6	Lecture: 90		1
			Describe classification, clinical features, investigations and principles of management of malignant tumours of testis.		

4. Self-Directed Learning

MBBS phase III/I:Total Teaching hours: 10 hours [*These are suggested topics which can be modified at institutional level]

Sr. No.	TOPICS	COMPETENCIES	SUBTOPICS	AIT	HOURS
1.	Ethics				
		SU8.1	SDL:1		5
			Describe the principles of Ethics as it pertains to General Surgery. Demonstrate Professionalism and empathy to the patient.		
2.	Transplantation				
		SU13.3	SDL:2		5
			Discuss the legal and ethical issues concerning organ donation. Counsel patients and relatives on organ donation in a simulated environment.		

MBBS phase III/II: Total Teaching hours: 30 hours [*These are suggested topics which can be modified at institutional level]

Sr. No	TOPICS	COMPETENCIES	SUBTOPICS	HOURS
1.	Thyroid			
		SU 22.2, SU 22.3, SU22.4	SDL:1	10
			Describe the etiopathogenesis of thyroidal swellings. Demonstrate and document the correct clinical examination of thyroids wellings and discus the differential diagnosis and their management. Describe the clinical features, classification and principles of management of thyroid cancer	
2.	Breast			5
		SU 25.2, SU 25.3	SDL:2	
			Describe the etiopathogenesis, clinical features and principles of management of benign breast disease including infections of the breast. Describe the etiopathogenesis, clinical features, Investigations and principles of treatment of benign and malignant tumours of breast.	
3.	Oral malignancy			
		SU 20.1, SU 20.2	SDL:3	10
			Describe etiopathogenesis of oral cancer symptoms and signs of oropharyngeal cancer. Enumerate the appropriate investigations and discuss the Principles of treatment.	
4.	Communication skills			
		AETCOM	SDL:4	5
			Breaking bad news, treatment compliance, obtaining consent, counseling	

5. Small Group Teaching

MBBS phase III part I: [Small group teachings/ Tutorials/ Integrated teaching/ Practical's: 30 hours]

- 25 % of allotted time of the third professional shall be utilized for integrated learning with pre- and para clinical subjects and shall be assessed during the clinical subject's examination.
- This allotted time will be utilized as integrated teaching by para clinical subjects with clinical subjects (as Applied Anatomy, Clinical Pathology, Clinical Pharmacology, Clinical Microbiology, Radio diagnosis, Instruments, Operative Surgery, Communication skills etc.).

S. NO	TOPICS	COMPETENCIES	SUBTOPICS	AIT	HOURS
6.	Surgical infections	SU6.1	SGD: 1		1
			Define and describe the aetio-pathogenesis and principles of management of surgical infections	Microbiology	
7.	Surgical Audit and Research	SU7.1, SU7.2	SGD: 2		1
			Describe the Planning and conduct of Surgical audit. Describe the principles and steps of clinical research in surgery	Community Medicine	
8.	Ethics	SU8.1, SU8.2	SGD: 3		1
			Describe the principles of Ethics as it pertains to surgery. Demonstrate professional is man empathy to the patient under goings urgery	Forensic Medicine, AETCOM	
9.	Investigation of Surgical patient	SU9.1	SGD: 4		1
			Choose appropriate biochemical, microbiological, pathological, imaging investigations and interpret the investigative data in a surgical patient	Biochemistry, microbiology, pathology	
		SU9.2	SGD: 5		1
			Biological basis for early detection of cancer and multidisciplinary approach in management of cancer		

11.	Nutrition and fluid Therapy	SU12.1	SGD: 6	Physiology, Biochemistry	1
			Enumerate the causes and consequences of malnutrition in the surgical patient		
			SGD: 7		1
		SU12.2	Describe and discuss the assessment and management of nutrition in surgical patients		
			SGD: 8		1
		SU12.3	Discuss the nutritional requirements of surgical patients, the methods of providing nutritional support and their complications		
12.	Transplantation	SU13.3	SGD: 9	AETCOM	1
			Discuss the legal and ethical issues concerning organ Donation		
13.	Basic Surgical Skills	SU14.2	SGD: 10		1
			Describe surgical approaches, incisions and the use of appropriate instruments in surgery		
		SU14.3	SGD: 11		1
			Describe the materials and methods used for surgical wound closure and anastomosis (sutures, knots and needles)		
14	Biohazard Disposal	SU15.1	SGD: 12	Microbiology	1
		MI8.7	Describe classification of hospital waste and appropriate methods of disposal. Demonstrate infection control practices and use of personal protective equipments.		
15.	Trauma	SU17.3	SGD: 13		1
			Describe the principles in management of mass casualties		
16.	Skin and subcutaneous Tissue		SGD: 14		1
		SU18.1 SU18.2	Describe the pathogenesis, clinical features and management of various cutaneous and subcutaneous infections.		
			SGD: 15		1
		SU18.3	Differentiate different skin tumors and discuss their management		

			SGD: 16		1
			Describe and demonstrate the clinical examination of surgical patient including swelling and order relevant investigation		
17.	Developmental anomalies of face, mouth and jaws	SU19.1, 19.2	SGD: 17	Human Anatomy	1
			Describe the etiology and classification of cleftlip and palate. Describe the Principles of reconstruction of cleftlip and palate		
18	Oropharyngeal Carcinoma	SU20.1	SGD: 18	ENT	1
			Describe management of oral cancer		
19.	Disorders of salivary Glands	SU21.1	SGD: 19	Human Anatomy	1
		AN34.AN28.9	Describe surgical anatomy of the salivary glands, pathology, and clinical presentation of disorders of salivary glands.		
			SGD: 20		1
			Describe & demonstrate the parts, borders, surfaces, contents, relations and nerve supply of parotid gland with course of its duct and surgical importance	Human Anatomy	
		SU21.2	SGD: 21		1
			Enumerate the appropriate investigations and Describe the Principles of treatment of disorders of salivary glands		
20.	Thyroid and Parathyroid Glands	SU22.1, 22.2	SGD: 22	Human anatomy, Pathology	1
		AN35.2	Describe the applied anatomy and physiology of thyroid and etiopathogenesis of thyroïdal swellings. Describe location, parts, borders, surfaces, relations & blood supply of thyroid gland.		

			SGD: 23		1
			Describe etiopathogenesis of goiter.		
		SU22.3	SGD: 24		1
			Demonstrate and document the correct clinical examination of goiter.		
			SGD: 25		1
			Describe clinical features and workup of goiter.		
		SU22.4, SU22.5	SGD: 26		1
			Principles of management of goiter		
22.	Vascular diseases	SU 27.1, 2, 3, 4	SGD: 27	Human Anatomy	1
			Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease		
			SGD: 28		1
			Describe clinical features, investigations and principles of management of vasospastic disorders.		
			SGD: 29		1
			Describe the types of gangrene and principles of amputation		
			SGD: 30		1
		AN 20.9	Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease	Anatomy	

MBBS PhaseIII part II-**Small group teachings/ Tutorials/ Integrated teaching/ Practical's: 153 hours**

- 25 % of allotted time of the third professional shall be utilised for integrated learning with pre- and para clinical subjects and shall be assessed during the clinical subject's examination.
- This allotted time will be utilised as integrated teaching by para clinical subjects with clinical subjects (as Applied Anatomy, Clinical Pathology, Clinical Pharmacology, Clinical Microbiology, Radio diagnosis, Instruments, Operative Surgery, Communication skills etc.).

SR.	TOPIC	COMPETENCIES	SUBTOPICS	AIT	HRS
1.	Shock	SU 2.3	SGD: 1		2
			Management of shock		
2	Blood and blood components	SU 3.3	SGD: 2		2
			Indications and complications blood transfusion		
3.	Burns	SU 4.4	SGD: 3		2
			Management of burns		
4.	Wound care	SU5.3	SGD 4		2
			Basic bandaging care		
			SGD 5		2
		SU10.4	Basic suturing skills		
			SGD 6		2
		SU5.3	Management of wounds		
8.	Anaesthesia	SU 11.3	SGD 7		2
			Demonstrate maintenance of an airway in a mannequin or equivalent.		
		SU 11.1, 11.2	SGD: 8		2
			Enumerate the principles of general, regional and local anaesthesia.		
		SU 11.3, 11.4, 11.5	SGD: 9		2

			Enumerate the indications and principles of day care general surgery.		
			SGD 10		2
			Describe principles of providing post-operative pain relief and management of chronic pain		
		SU12.2	SGD 11		2
			Correction of acid base and electrolyte imbalance		
12.	Minimally invasive General surgery	SU 16.1	SGD: 12		2
			Describe indications, advantages and disadvantages of minimally invasive surgery		
13.	Trauma	SU 17.4	SGD: 13		2
			Describe pathophysiology, mechanism of head injuries		
		SU 17.5	SGD: 14		2
			Describe clinical features and neurological assessment in head injuries.		
		SU 17.6	SGD:15		2
			Choose appropriate investigations and discuss the principles of management of head injuries.		
		SU 17.7	SGD: 16		2
			Describe the clinical features of soft tissue injuries, appropriate investigations and discuss the principles of management.		
		SU 17.8	SGD: 17		2
			Imaging of thorax: X-rays pneumothorax, hemothorax		
		SU 17.9	SGD: 18		2
			Describe the principles of management of chest injuries.		
		SU 17.10	SGD: 19		2
			Describe principles of management of blunt trauma abdomen		
		SU17.9	SGD 20		2
			Inter costal drain insertion [ICD]		
14.	Plastic surgery	SU 18.3	SGD: 21		2

			Skin grafting		
		SU18.3	SGD 22		2
			Excision of skin and subcutaneous swellings like sebaceous cyst, lipoma: Equipments and procedure		
16.	Abdominal wall	SU28.2	SGD: 23		2
			Management of hernia		
		SU28.2	SGD 24		2
			Management of incisional hernia		
18.	Breast	SU 25.3	SGD: 25		2
			Management of benign breast tumors		
			SGD 26		2
		SU25.3	Management of malignant tumors of breast		
			SGD 27		2
		SU25.4	Counsel the patient and obtain informed consent for treatment of malignant conditions of the breast.		
19.	Cardio-thoracic vascular Surgery	SU 26.1	SGD 28		2
			Outline the role of surgery in the management of coronary heart disease		
			SGD 29		2
			Fluid used in surgery		
		SU 26.2	SGD 30		2
			Outline the role of surgery in the management of diseases of thorax		
20.	Vascular Diseases	SU 27.1	SGD: 31		2
			Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease.		
		SU27.1	SGD 32		2
			Describe the investigation of vascular diseases	Radiology	
		SU 27.3	SGD: 33		2
			Principles of management of vasospastic disorders.		

		SU 27.4	SGD: 34		2
			Principles and management of limb amputation.		
		SU 27.5	SGD: 35		2
			Management of venous thrombosis		
		SU 27.6	SGD 36		2
			Management of varicose veins		
		SU 27.7	SGD: 37		2
			Management of lymphedema		
21.	Peritoneum, Stomach, small intestines, large intestines	SU28.3	SGD 38		2
			Describe etiology and pathophysiology of peritonitis		
		SU 28.3	SGD: 39		2
			Principles of management of peritonitis		
		SU 28.3	SGD: 40		2
			Principles of management of small intestinal obstruction		
			SGD 41		2
		SU28.15	Management of acute appendicitis		
			SGD: 42		2
		SU28.14	Management of ileostomy		
			SGD 43		2
		SU28.14	Management of intestinal fistula		
			SGD 44		2
		SU28.14	Management of large intestinal obstruction		
			SGD 45		2
		SU28.14	Management of colostomy		
			SGD 46		2
		SU28.14	Management of colon cancer		
			SGD 47		2

		SU28.16	Management of hemorrhoid		
			SGD 48		2
		SU28.16	Management of anal fissure		
			SGD 49		2
		SU28.16	Management of anal abscess		
			SGD 50		2
			Intestinal imaging workup: X-rays abdomen Obstruction, perforation, volvulus		
23.	Liver and biliary tract		SGD: 51		2
		SU28.10, 12	Imaging workup in cholelithiasis		
			SGD 52		2
		SU28.12	Laboratory workup of cholelithiasis		
			SGD: 53		2
		SU28.12	Management of obstructive jaundice		
24.	Spleen		SGD 54		2
		SU28.11	Splenectomy: Pathology and surgery of splenic trauma		
25.	Upper and Lower GUT		SGD 55		2
		SU29.5	Imaging workup of GUT: X-ray KUB, IVU, RGU, MCU		
			SGD 56		2
		SU29.5	Management of renal and ureteric calculi		
			SGD 57		2
		SU29.5	Management of vesical calculi		
			SGD 58		2
		SU30.1	Management of phimosis		
			SGD 59		2
		SU29.5	Management of renal cell carcinoma		
			SGD 60		2
		SU30.1	Management of penile cancer		
			SGD 61		2

		SU30.6	Management of testicular cancer		
			SGD 62		2
26.	Instruments, tubes, catheters	SU29.11	Tubes, drains, catheters used in surgery: I		
			SGD: 63		2
		SU14.1	Tubes, drains, catheters used in surgery: II		
			SGD: 64		2
		SU14.1	Electro surgery and energy devices in surgery		
			Instruments used in open surgery: I		
			SGD: 65		2
		SU14.1	Instruments used in open surgery: II		
			SGD: 66		2
27.	Integrated topics	AN35.5	Describe & demonstrate extent, drainage & applied anatomy of cervical lymph nodes	Human anatomy	
		AN44.1	SGD 67		2
			Describe & demonstrate the Planes (Transpyloric, transtubercular, subcostal, lateral vertical, linea alba, linea semilunaris), regions & Quadrants of abdomen	Human anatomy	
			SGD 68		2
		AN47.14	Describe the abnormal openings of thoracoabdominal diaphragm and diaphragmatic hernia	Human anatomy	
			SGD 69		2
		AN49.4	Describe & demonstrate boundaries, content & applied anatomy of Ischiorectal fossa	Human anatomy	
			SGD 70		2
		AN55.1	Demonstrate the surface marking of regions and planes of abdomen, superficial inguinal ring, deep inguinal ring, McBurney's point, Renal Angle & Murphy's point	Human anatomy	

			SGD 71		2
		BI10.2	Describe various biochemical tumor markers and the biochemical basis of cancer therapy.	Biochemistry	
			SGD 72		2
		MI1.4	Classify and describe the different methods of sterilization and disinfection. Discuss the application of the different methods in the laboratory, in clinical and surgical practice	Microbiology	
			SGD 73		2
		IM15.7	Demonstrate the correct technique to perform an anal and rectal examination in a mannequin or equivalent	General medicine	
			SGD 74		2
		IM15.10	Enumerate the indications for endoscopy, colonoscopy and other imaging procedures in the investigation of Upper GI bleeding	General medicine	
			SGD 75		2
		RT1.1	Describe and discuss definition of radiation, mechanism of action of radiation, types of radiation	Radiotherapy	
			SGD 76		2
		IM12.9, 10, 11	Interpret thyroid function tests in hypo-and hyperthyroidism. Identify atrial fibrillation, pericardial effusion and bradycardia on ECG. Order and interpret diagnostic testing based on the clinical diagnosis including CBC, thyroid function tests and ECG and radioiodine uptake and scan	General medicine	

6. Clinical postings

No	Phase/term	Duration [Weeks]
1	Phase II	6
2	Phase III part I	5
3	Phase III part II	13 [15 hours/Week, 3 hours to be utilized for skill training]
4	Total	24 [414 Hours]

[Elective posting of 2 weeks]

7. Internal Assessment

- A designated faculty member in each unit will coordinate and facilitate the activities of the learner, monitor progress, provide feedback and review the log book/ case record.
- The log book/ case record must include the written case record prepared by the learner including relevant investigations, treatment and its rationale, hospital course, family and patient discussions, discharge summary etc.
- The log book shall also include records of outpatients assigned. Submission of the log book/ case record to the department is required for eligibility to appear for the final examination of the subject. An e-logbook is desirable.

Assessment

I. Eligibility to appear for Professional examinations The performance in essential components of training are to be assessed, based on following three components:

a) Attendance:

There shall be a minimum of 75% attendance in theory and 80% attendance in practical /clinical for eligibility to appear for the examinations in that subject. In subjects that are taught in more than one phase - the learner must have 75% attendance in theory and 80% attendance in practical in each phase of instruction in that subject. There shall be a minimum of 75% attendance in AETCOM and minimum of 80% attendance in family visits under Family adoption programme. Each student shall adopt minimum 3 families/households and preferably five families. The details shall be as per Family Adoption Program guidelines. If an examination comprises more than one subject (for e.g., General Surgery and allied branches), the candidate must have a minimum of 75% attendance in each subject including its allied branches, and 80% attendance in each clinical posting. Learners who do not have at least 75% attendance in the electives will not be eligible for the Third Professional - Part II examination/ Next.

b) Internal Assessment (IA):

Internal assessment shall be based on day-to-day assessment. For subjects taught in more than one phase, there shall be IA in every phase in which the subject is taught. It shall relate to different ways in which learners participate in the learning process including assignments, preparation for seminar, clinical case presentation, preparation of clinical case for discussion, clinical case study/ problem solving exercise, participation in project for health care in the community, Quiz, Certification of competencies, museum study, log books, SDL skills etc. Internal assessment should have both subjective and objective assessment. Internal assessment shall not be added to summative assessment. However, internal assessment marks in absolute marks should be displayed under a separate column in a detailed marks card. The internal assessment marks for each subject will be out of 100 for theory and out of 100 for practical/clinical (except in General Medicine, General Surgery and Obstetrics & Gynaecology, in which theory and practical assessment will be of 200 marks each).

c) Certifiable Competencies Achieved:

1. Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.

2. Regular periodic examinations shall be conducted throughout the course. There shall be no less than three theory and practical internal assessment examinations in each subject of phase 1 & II, and this mandatorily includes pre-university examination. There shall be no less than two theory and clinical examinations in each subject of Phase III part 1 & 2 and this mandatorily includes an end of posting assessment. Log book (including required skill certifications) to be assessed and marks given from 10-20% in internal assessment.
3. Learners must secure at least 50% of the total marks (combined in theory and practical / clinical; and minimum 40% in theory and practical

Separately) for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject.

4. The results of internal assessment should be intimated to students at least once in 3 months and as and when a student wants to see the results.

Remedial measures:

A student whose has deficiency(s) in any of the 3 criteria that are required to be eligible to appear in university examination, should be put into remedial process as below:

During the course: If Internal assessment (IA) or attendance is less or/and certifiable competencies not achieved and marked in log book in quarterly/ six monthly monitoring, the students/parents must be intimated about the possibility of being detained much before the final university examination, so that there is sufficient time for remedial measures. These students should be provided remedial measures as and when needed to improve IA. Any certifiable competency/ IA marks deficiency should be attended with planned teaching/tests for them. Student should complete the remedial measures and it should be documented. In spite of all above measures, if student is still not meeting the criteria to be eligible for regular exam he shall be offered remedial for the same batch supplementary exam. For attendance, he will be allowed remedial measures ONLY IF attendance is more than 60% for each component. being detained much before the final university examination, so that there is sufficient time for remedial measures. These students should be provided remedial measures as and when needed to improve IA. Any certifiable competency/ IA marks deficiency should be attended with planned teaching/tests for them. Student should complete the remedial measures and it should be documented. In spite of all above measures, if student is still not meeting the criteria to be eligible for regular exam he shall be offered remedial for the same batch supplementary exam. For attendance, he will be allowed remedial measures ONLY IF attendance is more than 60% for each component.

At the end of phase: If Internal assessment (IA) or attendance is less or/and certifiable competencies not achieved and marked in log book at the end of regular classes in a phase, the student is detained to appear in regular university examination of that batch.

- Remedial classes can be planned for students missing regular classes on genuine grounds, thus ensuring that all certifiable competencies are achieved.
- Students who have less than 75% attendance in theory and 80% attendance in practical cannot appear for University examination, however; they may appear for Supplementary examination provided they attend the remedial classes organised between University Sit and Supplementary exam. Students who have attendance 60% or above shall be eligible for such remedial classes.

Internal assessment [Theory]

Phase II	Phase III part I	Phase III part II [					Total
		Surgery	Orthopedics	Anesthesia	Radiodiagnosis	Total	
25	25	75	50	13	12	150	200

Internal assessment [Practical]

Phase II	Phase III part I	Phase III part II					Total
		Surgery	Orthopedics	Anesthesia	Radiodiagnosis	Total	
25	25	75	50	13	12	150	200

**Format/Skeleton of question paper [Theory internal Assessment]
For Phase II and Phase III part I**

Q. No.	Question Type	Marks	No. of questions	Marks
1 [Section A]	Scenario based MCQs	1 per item	5	5
2 [Section B]	Long essay question	10 per question	1	10
3	Reasoning questions	2 per question	5	10
	* Options at the discretion			

For Phase III part II[75 marks]

Q. No.	Question Type	Marks	No. of questions	Marks
1 [Section A]	Scenario based MCQs	1 per item	15	15
2 [Section B]	Long essay question	10 per question	2	20
3	Short notes [Reasoning questions]	3 per question	5	15
4	Short answer questions [Applied aspects and AEtCom]	5 per question	5	25
	* Options at the discretion			

Format for InternalAssessment

Phase II and Phase III part I [Practical end post examination]

Long case [30]		OSCE	Total
Clinical examination and diagnosis	Communication		
10	5	10	25

For Phase III part II

Long case		Short case	OSCE	Table viva	Total
Clinical examination and diagnosis	Communication	Clinical examination and diagnosis			
25	5	15	20	10	75

Assessment in CBME is **ONGOING PRCESS**, No Preparatory leave is permitted.

- There shall be 3 internal assessment examinations in General Surgery
- The suggested pattern of question paper for internal assessment internal examinations, except prelim examination is attached at the end. Pattern of the prelims examinations should be similar to the University examinations.
- Internal assessment marks for theory and practical will be converted to out of 100 (theory)+ 100 (practical). Internal assessment marks, after conversion, should be submitted to university within the stipulated time as per directives from the University.

Conversion Formula for calculation of marks in internal assessment examinations

	Theory	Practical
Phase II	25	25
Phase III/I	25	25
Phase III/II	150	150
Total	200	200
Conversion out of	100	100
Conversion formula	Total marks in IA theory examinations/2	Total marks in IA Practical examinations/2
Eligibility criteria after conversion	50	50
	Combined theory + Practical= 50	

No	Question	Number of	Marks
1 Section A	MCQs	20	20
2 Section B	LAQ	1	10
3	Short notes [Reasoning]	5	15
4	SAQ [Applied]	4 out of 5	20
5 Section C	Short notes	3 out of 4	15
6	SAQ [One on AETCOM]	4 out of 5	20
	Total	40	100

University examination

Template of Theory Question paper I for Preliminary and University examination

Template of Theory Question paper II for Preliminary and University examination

No	Question	Number of	Marks
1 Section A	MCQs [10 Surgery, 10 Orthopedics]	20	20
2 Section B	LAQ [Surgery]	1	10
3	Short notes [2 Reasoning, 1 Applied, 1 AEtCom]	4 out of 5	20
4	Short notes [2 Anesthesia, 2 Radiology]	4 out of 5	20
5 Section C	LAQ [Orthopedics]	1	10
6	SAQ [Orthopedics]	4 out of 5	20
	Total	37	100

SeatNo.	Case I General Surgery including communication skill (40)		Case II Orthopedics (20)		General Surgery OSCE # & Table viva (30)			Ortho (10)	GrandTotal
	Long case	Communication	Short case	Clinical signs demo	Instruments and Procedure + Logbook	X-rays and Surgical Pathology	OSCE	Table (10)	
	30	10	15	5	10	10	10	10	100

Template for Practical examination [Surgery and allied] for Preliminary and University examination

OSCE Stations may include General examinations, Local examinations, psychomotor skills, Communication skills, AETCOM etc.

*Communication skills to be assessed by Kalama zoo Consensus, clinical signs to be assessed by either GLOBAL Rating Scale or OSCE, Psychomotor Skills to be assessed by OSCE with check list. If the skills are small, 2 or 3 skills may be combined.

Appointment of Examiners

- Person appointed as an examiner in the particular subject must have at least three years of total teaching experience as Assistant Professor after obtaining postgraduate degree following MBBS, in the concerned subject in a college affiliated to a recognized medical college (by UGMEB of NMC).
- For Practical /Clinical examinations, there shall be at least four examiners for every learner, out of whom not less than 50% must be external examiners. Of the four examiners, the senior-most internal examiner shall act as the Chairman and coordinator of the whole examination programme so that uniformity in the matter of assessment of candidates is maintained.
- A University having more than one college shall have separate sets of examiners for each college, with internal examiners from the concerned college. External examiners may be from outside the college/ university/ state/ union territory.
- There shall be a Chairman of the Board of paper-setters who shall be an internal examiner and shall mandatorily moderate the theory question paper(s).
- All eligible examiners with requisite qualifications and experience can be appointed internal examiners by rotation in their subjects.
- All theory paper assessment should be done as a central assessment program (CAP) of the concerned university.
- Internal examiners shall be appointed from the same institution for unitary examination in the same institution. For pooled examinations at one center, the approved internal examiners from the same university may be appointed.
- The Examiners for General Surgery and allied subjects shall be from General Surgery and 25% from orthopedics. There shall be one orthopedics examiner out of four examiners (either internal or external).
- Ophthalmology and ENT examinations to be held as separate examinations and not combined with other subjects.
- There shall be NO grace marks to be considered for passing in an examination.

9. Recommended books

Year: II/ III-I/ III-II MBBS

Subject: General Surgery

Sr. no.	Author	Title of book/ Material	Publisher
		<u>TEXTBOOK</u>	
1.	Norman S Williams P. Ronan O' Connell Andrew Mc Caskie	Bailey & Love's Short practice of Surgery 27 th Edition 2018	CRC Press
2	Sriram Bhat	SRB's Manual of Surgery 6 th Edition 2017	Jaypee Publishers
3	K Rajgopal Shenoy Anitha Shenoy	Manipal Manual of Surgery 5 th Edition 2020	CBS Publishers
4	S Das	A Concise Textbook of Surgery 6 th Edition 2018	DAS Publications
		<u>CLINICAL SURGERY</u>	
1.	S Das	A Manual on Clinical Surgery 9 th Edition 2019	DAS Publications
2.	Sriram Bhat	SRB's Bedside Clinics in Surgery 1 st Edition 2009	Jaypee Publishers
3.	Makhan Lal Saha	Bedside Clinics in Surgery 2 nd Edition 2013	Jaypee Publishers
4.	J Kyle, JAK Smith, D Johnson	Pye's Surgical Handicraft 22 nd Edition 1999	K. M. Vargheese Company (Indian edition)
5.	Margaret Farquharson, James Hollingshead, Brendan Moran	Farquharson's Textbook of Operative General Surgery 10 th Edition 2015	CRC Press
6.	John S P Lumley, Anil K D' Cruz, Carol E Scott-Conner	Hamilton Bailey's Demonstration of Physical signs in Clinical Surgery 19 th Edition 2014	CRC Press

		<u>REFERENCES</u>	
1.	Courteny Townsend, Daniel Beauchamp, B Mark Evers, KennethL Mattox	Sabiston Textbook of Surgery 1 st South Asia Edition 2017	Elseiver
2.	F Charles Brunicardi, Mary L Brandt, Dana Anderson, Timothy Billar, David Dunn, John Hunter, Jeffery Matthews, Raphael Polllock	Schwartz's Principles of Surgery 10 th Edition 2019	McGraw Hill
		<u>APPLIED ANATOMY</u>	
1.	Lee McGregor GAG Decker, DJ du Plessis	Lee Mc Gregor's Synopsis of Surgical Anatomy 12 th Edition 2018	KM Varghese Company
2.	John E Skandalkis, Gene Colborn, Thomas Weidman	Skandalkis Surgical Anatomy 2004	Broken hill Publishers
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