

पाटन स्वास्थ्य विज्ञान प्रतिष्ठान, सेवाआयोग
प्राज्ञिक सेवा, शल्य चिकित्सा समूह, Plastic surgery उपसमूह, सहायक प्राध्यापक पद,
(९ख) तहको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम
Paper II: Technical Subject
Section (A) - 45 Marks
(1 critical analysis Q -15 mark + 3 long Q- 30 marks)
General Surgery

1. **Basic&Applied**

1.1 **AppliedSurgicalAnatomy**

- 1.1.1 Required to have acknowledge of the structure and function of all system of the body (where applicable to common clinical conditions in surgery)
- 1.1.2 Knowledge of histology to understand the function to tissue and organs as well as growth, degeneration and repair
- 1.1.3 Embryological basis of common congenital anomalies

1.2 **System**

- 1.2.1 Nervous system
- 1.2.2 Respiratory system
- 1.2.3 Cardiovascular system
- 1.2.4 Digestive system
- 1.2.5 Endocrine system
- 1.2.6 Musculoskeletal system
- 1.2.7 General – e.g. Acid-base balance, fluid and electrolyte balance, nutrition, metabolic response to trauma and sepsis, etc.

2. **AppliedPhysiology**

3. **SurgicalPathology**

- 3.1 Knowledge of the surgical pathology and microbiology in the context of surgery including inflammation, infection, neoplasm, response on the tissues to injury, disturbance of growth, degeneration processes, repair and regulation
- 3.2 Immunology and Genetics
- 3.3 Neoplastic diseases
- 3.4 Gross and histopathology of common surgical conditions
- 3.5 Nervous system
- 3.6 Respiratory system
- 3.7 Cardiovascular system
- 3.8 Genito-urinary system
- 3.9 Gastrointestinal system
- 3.10 Musculoskeletal system

4. **CriticalCare**

- 4.1 Basics of pathophysiology, approach and management of critical surgical situation e.g. Trauma, shock, sepsis, organ failure
 - 4.1.1 Clinical pictures
 - 4.1.2 Investigation
 - 4.1.3 Diagnosis confirmation
 - 4.1.4 Management – use of equipments
 - 4.1.5 Monitoring – complications
 - 4.1.6 Counseling – communication
 - 4.1.7 Follow-up

5. **Recent advance**

- 5.1 Research-inside country
- 5.2 Recent advance – international
- 5.3 Not published research work
- 5.4 Future national vision

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6. **Surgical Management**

- 6.1 Principle of management of common general surgical conditions
 - 6.1.1 Clinical practice (History and examinations)
 - 6.1.2 Investigation
 - 6.1.3 Provisional Diagnosis and differentials
 - 6.1.4 Treatment-Conservative, operative, palliative
 - 6.1.5 Monitoring
 - 6.1.6 Follow-up of the patients with general surgical condition of following systems
 - 6.1.6.1 Nervous system
 - 6.1.6.2 Respiratory system
 - 6.1.6.3 Cardiovascular system
 - 6.1.6.4 Gastrointestinal system
 - 6.1.6.5 Genitourinary system
 - 6.1.6.6 Endocrine and breast
 - 6.1.6.7 Musculo-skeletal system and soft tissue
 - 6.1.6.8 Trauma/Polytrauma

7. **Principles of Surgery**

- 7.1 Knowledge of the General principle and practice of Surgery
 - 7.1.1 Imaging techniques/interventional Radiology
 - 7.1.2 Endoscopy/Laparoscopy
 - 7.1.3 Surgery at extremes of life
 - 7.1.4 Theatre techniques
 - 7.1.4.1 Aseptic techniques-sterilization
 - 7.1.4.2 Anaesthesia in general, maintenance of homeostasis
 - 7.1.4.3 Basic techniques-suturing material dressing plaster
 - 7.1.4.4 Diathermy and electrosurgical devices
 - 7.1.4.5 Tourniquet
 - 7.1.5 Wound healing, dehiscence, scar, contractures
 - 7.1.6 Post operative complication and management
 - 7.1.7 Sepsis's surgery
 - 7.1.7.1 Acute and Chronic, inflammation
 - 7.1.7.2 Wound infection and septicemia
 - 7.1.7.3 TB, Leprosy, AIDS, Bacterial infection
 - 7.1.7.4 Antiseptic, Antibiotic policies

8. **Operation Surgery**

- 8.1 **Nervous System**
 - 8.1.1 Exposure to extradural haematoma
 - 8.1.2 Skull traction
 - 8.1.3 Nerve repair and transplant
 - 8.1.4 Trauma-skull, spine
- 8.2 **Respiratory System**
 - 8.2.1 F.B. in respiratory tract
 - 8.2.2 Tracheostomy, cricothyroidotomy
 - 8.2.3 Chest Drainage
 - 8.2.4 Thoractomy
 - 8.2.5 Chest trauma (variety of injuries)
- 8.3 **Cardiovascular**
 - 8.3.1 Cardiac Tamponade
 - 8.3.2 Exposure to artery and vein, embolectomy
 - 8.3.3 Amputations
- 8.4 **Gastrointestinal System**

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- 8.4.1 All type of GI Surgery of all magnitude and types
- 8.4.2 Different combination of operation
- 8.4.3 Except-transplantation
- 8.5 **Genitourinary system**
 - 8.5.1 Suprapubic bladder drainage
 - 8.5.2 Cystoscopy
 - 8.5.3 Exposure of kidney, calculus, obstructive uropathy
 - 8.5.4 Perinephric abscess
 - 8.5.5 Scrotal/testicular operation
 - 8.5.6 Ectopic pregnancy/other pelvic surgery
- 8.6 **Endocrine and breast**
 - 8.6.1 Thyroid/parathyroid
 - 8.6.2 Breast surgery (no reconstruction)
- 8.7 **Musculoskeletal and soft tissue**
 - 8.7.1 Simple skeletal traction
 - 8.7.2 Compartmental syndrome
 - 8.7.3 Bone infection
- 8.8 **Plastic**
 - 8.8.1 Simple cleft lip repair
 - 8.8.2 Skin grafting/flaps
 - 8.8.3 Skin lesion
 - 8.8.4 Lymph node and biopsy
- 8.9 **Other**
 - 8.9.1 Venesection central line
 - 8.9.2 Laryngoscope, ET intubation
 - 8.9.3 FNAC/tru-cut needle biopsy
 - 8.9.4 Defibrillation

Section (B) - 55 Marks
(1 critical analysis Q -15 marks + 4 long Q -40 marks)
Burns and Plastic surgery

1. General principles
 1. History of plastic surgery and its broad scope at the present time
 2. Anatomy and functions of skin
 3. Split skin grafts and full thickness skin grafts, their take and Subsequent behaviour.
 4. Local skin flaps
 5. Pedicled skin flaps and tubes
 6. Unstable scar and scar contracture
 7. Care of wounds, dressing, techniques and splints
 8. Wound healing
 9. Grafts – fat, fascia, tendon, nerve, cartilage, bone.
 10. Infective skin gangrene
 11. Hospital infections
 12. Sutures and instruments
 13. Implant materials used in Plastic Surgery
 14. Principles of genetics and general approach to the management of congenital malformations.
 15. Flaps-Fasciocutaneous muscle, musculocutaneous, congenital malformations.
 16. Local anaesthesia, nerve blocks, regional anaesthesia.
 17. Principles of anaesthesia for infants, adults, hypothermia, hypotensive anaesthesia.
 18. Tissue expansion
 19. Keloid, hypertrophic scars
 20. Endoscopy in Plastic Surgery

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2. Head and Neck
 1. Growth and development changes in face, anatomy of facial skeleton.
 2. Structure and development of teeth
 3. Temporomandibular joint dysfunctions
 4. Fractures- nose, maxilla, mandible, zygoma, orbit-early management and treatment of sequelae.
 5. Corrective Rhinoplasty
 6. Reconstructive Rhinoplasty
 7. Facial paralysis
 8. Reconstruction of external ear
 9. Reconstruction of eyelids, ptosis
 10. Congenital deformities of face and jaw bone
3. Tumours of Head and Neck and Skin
 1. Vasoformative lesions of the skin and adnexa
 2. Jaw tumours
 3. Cancer of upper Aerodigestive system
 4. Reconstruction of mandible
 5. Reconstruction of maxilla
 6. Malignant and benign tumours of head and neck
 7. Tumour of skin
 8. Principles of prosthetic replacement of Jaw defects
4. Cleft Lip and Palate and Craniofacial Anomalies
 1. Embryology of head and neck (excluding central nervous system)
 2. Regional anatomy of head and neck
 3. Embryogenesis of cleft lip and palate
 4. Cleft lip and palate, alveolar clefts
 5. Velopharyngeal incompetence
 6. Orthodontics, speech therapy in cleft lip and palate
 7. Principles of craniofacial surgery
 8. Rare craniofacial clefts, Tessier's clefts
 9. Craniosynostosis, hypertelorism, craniofacial microsomia
5. Trunk
 1. Reconstruction of full thickness defects of the abdomen and thorax
 2. Decubitus ulcer
 3. Breast reconstruction
6. Aesthetic Surgery
 1. Chemical peeling and dermabrasion
 2. Blepharoplasty
 3. Face lift
 4. Abdominoplasty
 5. Body contouring, liposuction
 6. Reduction mammoplasty
 7. Augmentation mammoplasty
 8. Laser therapy
 9. Aesthetic rhinoplasty
7. Lower Extremity
 1. Functional anatomy of foot
 2. Lymphedema
 3. Reconstructive surgery of lower extremity
8. Genitourinary
 1. Embryology of the male and female external genitalia

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2. Anatomy of the male and female external genitalia
3. Hypospadias
4. Epispadias and ectopic vesicae
5. Reconstruction of external genitalia
6. Vaginoplasty
7. Trans-sexualism (intersex)
9. Hand
 1. Embryology of upper extremity
 2. Functional anatomy of hand
 3. Examination of hand
 4. General principles of hand surgery
 5. Treatment of acute hand injuries
 6. Fingertip injuries
 7. Flexor tendon injuries
 8. Extensor tendon injuries
 9. Principles of reconstruction in mutilating hand injuries
 10. Fractures of hand and dislocation of hand –metacarpal, phalanges
 11. Nail injuries, grafting
 12. Pollicisation
 13. Thumb reconstruction
 14. Peripheral nerve injuries, electro diagnostic tests
 15. Brachial plexus injury
 16. Innervated flaps
 17. Vascular malformations of upper extremity
 18. Lymphedema in upper extremity
 19. Ischaemic conditions of upper extremity
 20. Vasospastic conditions of upper extremity
 21. Nerve compression syndromes
 22. Surgery for spastic and tetraplegic hand
 23. Problems of small joints
 24. Dupuytren's disease
 25. Principles and treatment of old and neglected hand deformities
 26. Rheumatoid arthritis of hand
 27. Hand infections
 28. Congenital deformities of hand, finger, thumb
 29. Tendon transfers for radial, ulnar and median nerve injury
 30. Rehabilitation of hand, prosthesis
10. Microvascular
 1. Principles of microsurgery and its applications in plastic surgery
 2. Replantation and revascularization surgery
 3. Microvascular tissue transfers
11. Burns
 1. Thermal burns
 2. Electrical burns
 3. Chemical burns
 4. Radiation burn
 5. Pathophysiology of burn shock
 6. Nutrition in burns
 7. Facial burns
 8. Tangential excision and sequential excision
 9. Reconstruction of burn hand and upper extremity

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10. Post burn contractures –treatment of sequelae
11. Burn wound infection, sepsis
12. Principles of planning in event of burn disaster
13. Organization of Burns Unit

Following pattern will be used for formation of paper I & II as far as possible.

Paper I				
Part	Section	Weightage	No. Questions & Weightage	
			Objective Multiple Choice	Subjective
I	A	20		2 Questions X 10 Mark = 20
	B	30		3 Questions X 10 Mark = 30
II	C	25	25 Questions X 1 Mark = 25	
	D	25	25 Questions X 1 Mark = 25	
Paper II				
Section		Weightage	No. Questions & Weightage	
			Long answer	Critical Analysis
A		45	3 Questions X 10 Mark = 30	1 Questions X 15 Mark = 15
B		55	4 Questions X 10 Mark = 40	1 Questions X 15 Mark = 15

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