

**DETAILED SYLLABUS FOR THE POST OF MEDICAL OFFICER (MARMA)  
(INDIAN SYSTEMS OF MEDICINE)**

(Cat.No. : 95/2022)

(Total Marks- 100)

**Part I :**

**ASTHI SANDHI EVAM MARMA VIGYAN - ORTHOPAEDICS**

**MODULE 1 - MARK 10**

1. Diseases pertaining to Muscles, Tendons, Ligaments, Fascia and Bursae.
2. Diseases and Congenital anomalies of Spine e.g. Ankylosing spondylitis, Infective conditions, Tuberculosis, Spondylolisthesis, Inter-vertebral Disc Prolapse.
3. Diseases and Congenital anomalies of Cervical Spine
4. Diseases and Congenital anomalies Sacroiliac Joint and Bony Pelvis.
5. Principles of Arthroplasty- Joint Replacement.
6. Introduction of Peripheral Vascular Diseases.

**MODULE 2- MARKS 20**

1. Bhagna - Etiology, classification and General Management principles and Prognosis.
2. Modern concept of Bone and Joint injuries - Etiology, Epidemiology, Classification and General management principles.
3. Individual Bone and Joint injuries - Etiology, Epidemiology, Classification and management principles.

4. External immobilization techniques - Classical and traditional Kusha-splints, Plaster of Paris Technique, Knowledge of different splints and Plasters.
- 5 . Pathological Fractures including Fragility fractures, Stress Fractures and Peri- prosthetic Fractures.
6. Fractures in Children - Etiology, Epidemiology, Diagnosis, management and complications.
7. Prognosis of skeletal injuries, Complications of Fractures and Joint Injuries e.g. Myositis ossificans, Volkman's ischemic contracture, Compartment syndrome, Crush Syndrome, DVT, Thromboembolism, Fat Embolism.
8. Rehabilitation of trauma patient and Principles of Sukhchestaprachara - Physiotherapy and its use in skeletal injuries

### **MODULE 3 - MARK 20**

1. Treatment Principles of Asahanta Bhagna - Non-unions, Vishmolvana Sahanta - Malunions and Ignored or un-reduced dislocations.
2. Diagnosis and management principles of injuries of Vessels, Nerves, Tendons and Ligaments.
3. Head, Chest and Abdominal Injuries and management principles.
4. Pelvis and Spine injuries and their management principles.
5. Sports medicine and sports injures - Sports medicine and sports related Shoulder injuries, Elbow injuries, Knee injuries, Ankle Injuries, Recurrent Dislocations and other sports related injuries.
6. Knowledge of Conventional and advanced procedures being done for Different Bone and Joint Injuries e.g. Open Reduction and Internal Fixation, Closed Reduction and Internal Fixation, External fixators and other operative techniques.

### **MODULE 4 - MARKS 5**

1. Asthi Sharira - Etymology, Embryology, Applied Anatomy and Physiology of Asthi. Its Panchbhautik constitution, Poshan (Nutrition),

Asthivaha Srotas, Upadhatu and Mala. Total Number and classification of Asthi. Concept of Dhatwagni in Ayurveda. Asthi Dhatu Kshaya and Vriddhi lakshana. Knowledge about Tarunasthi. Embryology, Ossification, Histology, Metabolism, Blood Supply, Types and Biomechanics of Bone and cartilage.

2. Knowledge of Splints, Orthotics & Prosthetics.
3. Knowledge of Orthopedic implants (*e.g. wires, screws, plates, nails*) and Instruments. Knowledge of equipments (*e.g. C-arm image intensifier and drill machines etc*).
4. Concept of Pain according to Ayurved and Modern Medical science.
5. Principles of Reconstruction, Transplantation, Bone grafting, Bone Banking, Bone transportation and Amputation.

## **MODULE 5 - MARKS 5**

### **A**

1. Vata Vikara - Asthi, Sandhi and Marma related Vata Vikara like Gridhrasi, Bisvachi, Avabahuka, Manyastambha, Khalvi, Dhatugata vata, Snayugata vata, Katishoola, Katigraha. Spondylosis, Scoliosis, Kyphosis, spina bifida, Hemivertebra, Block vertebra, Sacralisation and Lumbrisation.
2. Diseases and Congenital anomalies of Hand.
3. Diseases and Congenital anomalies of Foot.
4. Diseases and Congenital anomalies of Limbs.
5. Orthopedic Neurological Disorders. Post Polio Paralysis & Cerebral Palsy.
6. Snehana, Swedana and Panchakarma in Marma, Asthi and Sandhi Vyadhi.
7. Yogic Practices in Orthopedics.

### **B**

1. Healing mechanism of bone and factors influencing the bone healing according to Ayurvedic and Modern concept. Biological and

- Biophysical technologies for the Enhancement of Fracture Repair.  
Knowledge of Sandhaniya and Ropaniya drugs.
2. Sandhi Sharira - Classification, Applied Anatomy and Physiology of Asthi Sandhi. Classification, Applied Anatomy and Physiology of Joints and Healing Mechanism of a joint.
  3. Knowledge of Plastic Surgery in orthopedics and Bone grafting techniques.
  4. Knowledge of various surgical procedures being done for Different Bone and Joint diseases.
  5. Hand Surgery for Diseases, Deformities and Injuries.
  6. Foot Surgery for Diseases, Deformities and Injuries.
  7. Amputations and Arthrodesis - General Principles of Amputations /Arthrodesis and regional Amputations.
  8. Knowledge of Diagnostic and Therapeutic Arthroscopy.

## **PART - II SHALYA TANTRA VIGYAN**

### **MODULE 6 - MARKS 10**

1. Vrana - Wound management
  - i. Management of Nija Vrana, Dushta Vrana and Nadi Vrana.
  - ii. Vrana Chikitsa - Shasti upakramas, Pathya-apathya.
  - iii. Wound and Ulcer.
  - iv. Dagdha Vrana - Burns, scalds, Dhumopaghata, Ushnavata, Frost bite, electric burns and their management.
  - v. Prameha Pidaka - Diabetic carbuncle, Diabetic wound and its management.
  - vi. Kotha - Gangrene and Principles of Amputation.
  - vii. Sadyo Vrana - Traumatic wounds - Nidana, Prakara, Lakshana, Upadrava and Chikitsa, Bites and stings and its management.
2. Diseases of Rectum and Anal Canal - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and

Management of Arshas, Parikartika, Bhagandara, Guda Vidradi, Gudabhramsa and Sanniruddaguda.

3. Ashmari - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management.
4. Mutraghata and Mutrakrichhra - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management.
5. Niruddhaprakasha - Phimosis, Parivartika - Paraphimosis and Avapatika - Prepuceal ulcer.
6. Vriddhi Roga - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management.

### **Part III - Adhunik Shalyakarma -Modern Surgery**

#### **MODULE 7 - MARKS 5**

1. Rectum and anal canal - Diagnosis and Surgical management of Congenital Anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Prolapse, Haemorrhoids, Fistula-in-ano, Fissure-in-ano, Anorectal Abscess, Incontinence, Injuries, Foreign bodies and Pilonidal sinus.
2. Umbilicus and abdominal wall - Congenital anomalies, Umbilical infections, Sinus, Neoplasm and Desmoid tumor.
3. Diagnosis and surgical measures of diseases of Hepatobiliary system -
4. Liver - Abscess, Cyst - Hydatid cyst, Primary and Secondary malignant tumours, Portal Hypertension and Budd-Chiari Syndrome.
5. Gall bladder and Bile duct - Congenital anomalies, Acute and Chronic Cholecystitis, Cholelithiasis, Neoplasm, Cholangitis, Stenosis, Choledocholithiasis, Choledochal cyst and Cholangiocarcinoma.
6. Spleen - Splenomegaly and Splenic Injury.
7. Diagnosis and surgical management of Hernias - Inguinal, Femoral, Umbilical, Incisional, Abdominal wall and other hernias.
8. Endoscopic procedures - ^Oesophagogastroduodenoscopy, Sigmoidoscopy and Colonoscopy.

**Part - IV - Vishishta Shalya Vigyan- Speciality (Speciality No - 01 Anushastra Vigyan - Parasurgical Therapeutics)**

**MODULE 8 - MARKS 5**

**Kshara Karma and Prayoga - Caustic therapy**

- i. Introduction of different types of Kshara, Method of preparation, Standardization, pH value, Application, Complications and its management.
- ii. Surgical Anatomy and Physiology of Anus and Rectum.
- iii. Arshas - Nidana, Purvaroop, Roopa, Samprapti, Prakara and Chikitsa.
- iv. Haemorrhoids - Aetio-pathogenesis, types and its surgical management. Knowledge of different methods of treating Haemorrhoids - Rubber band ligation, D.G.H.A.L, Radiofrequency, Ablation, Cryo-surgery, Cautery, Laser, Infrared coagulation and other advanced techniques.
- v. Bhagandara - Nidana, Purvaroop, Roopa, Samprapti, Prakara, Chikitsa and application of Kshara Sutra.
- vi. Fistula-in-ano - Definition, Aetio-Pathogenesis, Types, Diagnostic methods and its Surgical and parasurgical management including knowledge of Fibrin Glue, Advanced Flap Therapies and other recent techniques.
- vii. Parikartika - Nidana, Samprapti and its Chikitsa.
- viii. Fissure-in-ano - Aetio-pathogenesis, types and its management.
- ix. Sannirudhaguda and its Chikitsa.
- x. Anal Stenosis - Aetio-pathogenesis and its management.
- xi. Gudavidradhi - Nidana, Purvaroop, Roopa, Samprapti, Prakara and its Chikitsa.
- xii. Anorectal abscesses - Aetio- pathogenesis, types, complications and its management.
- xiii. Anorectal tumour- Types and its management.

**MODULE 9 - MARKS 10**

## **1. Agnikarma - Thermo therapy**

- i. Introduction, definition and importance of Agnikarma.
- ii. Agnikarma - Poorva, Pradhana and Paschat karma, various substances and Shalakas used for Agnikarma and their indications, contra-indications and complications.
- iii. Knowledge of modern thermal equipment - Diathermy, Laser therapy, Microwave, Ultracission technique, Cryo Technique and its uses.
- iv. Effect of Agnikarma on skin, muscle tissue, nerves, metabolism, blood circulation and infective lesions.

## **2. Raktamokshana - Bloodletting Procedures**

- i. Indications, contraindications and importance of Raktamokshana.
- ii. Justification of usage of different types of Raktamokshana in various therapeutic applications.
- iii. Different types of Raktamokshana - Sastrakritha - Siravyadhana, Prachana and Asastrakritha - Shringa, Jaluka, Alabu and Ghati.
- iv. Jalauka - Nirukti, Paryaya, Bhedha, Sangrahana, Samrakshana, Jalaukavacharana Vidhi - Poorva, Pradhana and Paschat karma.
- v. Knowledge of Leeches - Morphology, Anatomy, Physiology, Bio-chemical effects of its various constituents present in its saliva.

## **Part - V Shalya Tantra Vangmaya - Literature, RESEARCH AND DEVELOPMENT**

### **MODULE 10 - MARKS 5**

1. Thorough study of the Sushruta Samhita including other relevant portions of Brihatrayee and Laghutrayee.
2. Knowledge and importance of Surgical Audit and Research.
3. Medico legal issues - Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer

- Protection Act, medical profession, national health policy - Implications in a medico-legal case like accidents, assaults etc.
4. Surgical ethics including Informed consent.
  5. Yogya Vidhi - Practical and Experimental training on different types of Surgical Models for Research in Surgery.
  6. Clinical and diagnostic methods in Shalya Tantra - X-rays, U.S.G., Endoscopies (for diagnostic and treatment purposes), MRI, CAT scanning and other recent diagnostic tools.
  7. Concept of Sandhana Karma - Plastic reconstructive and cosmetic surgery. Fundamentals of Sandhana Karma -
    - i. Karna Sandhana - Auroplasty
    - ii. Nasa Sandhana - Rhinoplasty
    - iii. Ostasandhana - Cheiloplasty
    - iv. Grafts and Flaps - Techniques and applications.
    - v. Vascular anastomosis and grafts.
  8. Recent development on Sushruta's surgical principles and practices.

**Part - VI : ADHUNIK SHALYA KARMA - MODERN SURGERY**  
**(5 Marks)**

1. Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.
2. Diagnosis and Surgical treatment of head and spine injury, thoracic trauma and abdominal trauma. Blast injuries and Management.
3. Diagnosis and surgical measures for disorders of Artery, Vein, Ligaments, Muscles and Tendons.
4. Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid, Thyroglossal cyst and Fistula, Branchial cyst and fistula, Cystic hygroma and Lymphadenopathies.
5. Diagnosis and Surgical management of breast diseases, Benign and Malignant breast tumours.
6. Diagnosis and Surgical measures of diseases of Gastrointestinal system -
  - i. Oral cavity - Oral ulcers, Oral cancer, Precancerous conditions, Submucosal fibrosis, Leukoplakia, Cleft lip and palate, Lip tumours, Mucosal cyst, Nasopharyngeal cancer, Tongue ulcer and cancer.



- ii. Oesophagus - Oesophageal varices, Dysphagia, Neoplasm, Strictures and Gastro oesophageal reflux.
- iii. Stomach and duodenum - Congenital anomalies, Injuries, Inflammation, Ulcer, Neoplasm, Pyloric stenosis, Acute dilatation ,Hiatus hernia and Foreign bodies.
- iv. Pancreas - Congenital anomalies, Acute and Chronic pancreatitis, Calculi Neoplasm and Cysts of pancreas.
- v. Peritoneum, Omentum, Mesentery, Retroperitoneal Space - Peritonitis, Abscess, Neoplasm, Mesenteric cyst, Torsion of mesentery, Vascular thrombosis, Retroperitoneal cyst and Fibrosis.
- vi. Abdominal mass - Diagnosis and Management.
- vii. Small intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Peutz-jeghers syndrome, Chron's disease, Carcinoid tumours, Enteric perforation and Intestinal fistula.
- viii. Large intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Faecal fistula, Amoebiasis and Familial polyposis coli.
- ix. Caecum and Vermiform appendix- Appendicitis, Appendicular abscess, Appendicular mass, Perforation, Carcinoid Tumor and other Neoplasm.
- x. Gastrointestinal bleeding - Haemetemesis, Malaena, Haemobilia, Bleeding per anum - Causes, Diagnosis and Management.

**NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper**