



राष्ट्रीय प्रौद्योगिकी संस्थान, कुरुक्षेत्र
NATIONAL INSTITUTE OF TECHNOLOGY
(Under the Ministry of Education, Govt. of India)
KURUKSHETRA-136119

RECRUITMENT OF OFFICER CADRE POSTS (REF.:ADVT. NO.:20/2025)

Name of the Post	:	Medical Officer (Level - 10)
Details of the Scheme & Pattern of Examination:	:	<ul style="list-style-type: none">Total Questions :160 (MCQ Type)Maximum Marks :160Negative Marking : 0.25 marks will be deducted for each wrong answer <p>Part-A (General Paper) (60)</p> <ul style="list-style-type: none">General English (15)Numerical Aptitude Arithmetic (15)Reasoning and Data Interpretation (15)General Knowledge and Current Affairs (15) <p>Part-B (Post Related Paper): (100)</p>
Duration of Examination	:	2.5 hours

SYLLABUS FOR SCREENING TEST

Part-A (General Paper)

- General English** - Tenses, Active and Passive, Direct & Indirect speech, Punctuation, Correction of sentence, One word substitutes, Modals, Articles, Clauses, Synonyms, Antonyms, Idioms & Phrases.
- Numerical Aptitude Arithmetic** - Simplification of Fractions, Simple and Compound Interest, Profit and Loss, Percentage, Averages, Number System, Time and Work, Problems on Trains, Calendar, Area, Problems on Numbers, Square root, Cube root, Time and Distance and Other Basic Arithmetic related problems.
- Reasoning and Data Interpretation** - Number Series Compilation, Missing Number finding, Pattern series, Direction Sense Test, Series Compilations, Classification, Missing Character finding, odd man out, Blood relations, Analogy, Coding & Decoding, Letter & Symbol Series, Verbal reasoning, Statements & Conclusions, Letter & Symbol Series, Logical Problems, Arithmetic Reasoning, Logical Sequence of Words, Pie Chart & Bar Chart
- General Knowledge and Current Affairs**- Indian History, Indian Economy, Indian Culture, Indian Polity, Indian Constitution, Indian Geography, Environmental Science, Awards and Honors, Famous Personalities, Days and Years, Basic General Knowledge, Current Affairs, Government Schemes, etc. upto 10th Standard.

Part-B (Post Related Paper)

1. **Knowledge and skills for life-saving procedures:** Medical, Obstetric, Paediatric, including neonatal resuscitation, Surgical and Trauma.
2. **Maternal and child health:** prevention, screening, health education, nutritional guidance and immunization, ante-natal and post-natal check-up, well baby clinic and family planning procedures. Age-specific risk assessment including cancer risk, adolescent health and lifestyle guidance.
3. **Principles of anaesthesia:** local, regional and intravenous sedation
4. **Paediatrics:** Growth and development, infectious diseases, malnutrition, immunization and common paediatric illnesses.
5. **General Medicine:** Initial management of all symptoms/health problems, recognition, assessment, management, follow-up of common medical conditions in the community, prevention and health promotion, geriatric problems in the community, palliative care of terminally ill patients, poisoning, chronic disease conditions; hypertension, diabetes, asthma, ischaemic heart disease, obesity, epilepsy and osteoarthritis. • Diseases of public health importance. e.g., - tuberculosis, leprosy, HIV/AIDS, STD and malaria. • Reproductive and sexual health problems including HIV/STD. • Common dermatological problems and investigations.
6. **Mental health problems in a community setting:** Common psychological problems pertaining to life-cycle, behavioural problems, substance abuse, domestic violence, psychoneurosis, anxiety and depression, dementia and identification of at risk patients by age, sex and environment.
7. **Orthopaedics:** Reduction of simple fractures and dislocations, trauma management and fundamentals of physiotherapy. • Common ophthalmological problems, both curable and incurable. • Common problems in otorhinolaryngology.
8. **Oral health:** management of dental emergencies and preventive measures.
9. Occupational health.
10. **Radiodiagnosis:** Interpretation of x-rays, preparation for radiological and imaging procedures, understanding interpretation and limitations of other imaging technologies.
11. **Hospital and practice management:** Management science/organization, management of clinics, resource management, financial management, accounting and auditing and health economics and health insurance schemes.
12. Basic epidemiology and clinical epidemiology
13. Biostatistics.
14. Behavioral and social sciences related to family medicine.
15. **Research methodology:** use of quantitative and qualitative research methods, use of statistical packages, writing scientific papers.
16. Critical appraisal of literature and evidence-based medicine.
17. Communication skills with patients, peers, through media and publications.
18. Legal and ethical considerations in family practice, Medical negligence and consumer protection act.

PROCEDURAL SKILLS:

1. **Anaesthesiology:** Endotracheal intubation; intravenous access (peripheral and central lines, venesection, intravenous infusion); anaesthesia (local, regional, intravenous sedation).
2. **Medicine:** cardio-pulmonary resuscitation (CPR) and advanced cardiac, trauma, obstetric life supports, lumbar puncture, pleural aspiration, peritoneal aspiration, drainage of tension pneumothorax, nasogastric intubation and lavage; intravenous, intramuscular, intradermal and intralesional injections; intra-articular injection and aspiration; take an ECG.
3. **Obstetrics & Gynaecology:** conduction of normal delivery, making and suturing of episiotomy, management of breech delivery and retained placenta; repair of perineal laceration; vacuum extraction, forceps extraction; speculum examination, cervical smear, IUCD insertion.
4. **Ophthalmology:** funduscopy, removal of foreign bodies.
5. **Orthopaedics:** splinting of fractures, reduction of simple fractures and dislocation; application of casts.
6. Otorhinolaryngology: removal of foreign bodies from nose, syringing of ear, nasal packing; use of otoscope.
7. **Paediatrics:** resuscitation of the newborn; intraosseous infusions.
8. **Pathology:** haemoglobin level, erythrocyte sedimentation rate, total and differential leukocyte count, blood picture, routine and microscopic examination of urine and stool; taking swabs from various orifices and wounds; Fine Needles Aspiration; performing Gram stain and Ziehl-Neelsen stain; microscopy of urethral and vaginal discharge; blood sugar with glucometer; use of uristix etc.
9. **Surgery:** Assessment and closure of traumatic wounds; burns; incision and drainage of abscess; in-growing toe-nails; excision and biopsy of superficial swellings; venesection; urethral catheterization; suprapubic cystostomy; circumcision in adults; intercostals tube drainage; tracheostomy; screening for breast cancer.
 - Effective management of common diseases within the limited resources of family practice setting including:
 - Common symptoms/illnesses
 - Psychosocial problems
 - Chronic diseases
 - Common emergencies
 - Identification of complex health problems and appropriate referral
 - Promotion of health and prevention of disease, and knowledge about the national health programmes
 - First aid, CPR, transportation of patients
 - Basic laboratory investigations, techniques, interpretation
 - Essential drug list, rational prescribing and prescription writing
 - Recognition and evaluation of conditions requiring surgical diagnosis and procedure
 - Neonatology, growth and developmental disorders, genetic and paediatric illnesses

- Antenatal, intranatal and postnatal care, normal labour and puerperium, diagnosis and management of pregnancy related complications and awareness of family welfare programmes.
- General epidemiological levels of prevention and control of common CD's and NCS's.
- Soft tissues, bone and joint diseases, fractures, dislocations, sprains, PMR.
- Ability to care for disadvantaged groups in the community such as the elderly, mentally and physically handicapped persons.
- Recognition of common eye diseases and diagnosis, management and referral of all emergencies in eye
- Recognition and first line management of common diseases of ear, nose and throat
- Prevention diagnosis and management of common
- dermatological conditions
- Basic principles of anaesthesiology
- Development of managerial skills
- Behavioural and social sciences related to family medicine
- Legal and ethical considerations in family practice
- National health insurance schemes
- Health education
- Nutrition and dietetics, occupational health, reproductive and child health, disaster management
- Research methodology - use of quantitative and qualitative research methods, use of statistical packages, writing scientific papers
- Palliative care and domiciliary care
- Basics of Biostatistics for analysis of qualitative and quantitative data
- Medical Informatics
- Information retrieval and handling
- Literature searches
- Computer literacy in respect of patient management
- Search for medical information
- Statistical packages for analysis of data
- Database management and auditing
- Basics of hospital management Quality assurance
- Management of basic dental emergencies and preventive measures
- Basics of health economics
- Basics of resource and financial management
- Ability to teach and supervise undergraduates, postgraduates and other levels of para-medical staff
- Development in a particular area of expertise within family medicine e.g., counselling for psychosocial problems
- Venepuncture and Cut-Down
- Gastric Lavage and Enema
- Lumbar Puncture
- Urethral Catheterization
- Thoracentesis and Paracentesis
- Skin Biopsy

- Electro cauterization of warts
 - Evacuation of Incomplete Abortion Dilation and Curettage
 - Using Partogram
 - Fine Needle Aspiration Cytology
 - Incision and Drainage
 - Suturing
 - Dressing of Open Wounds
 - Circumcision
 - Reduction of Paraphimosis
 - Water Seal Drainage
 - Vasectomy
 - Tracheostomy
 - Proctoscopy
 - Refractive Error Assessment
 - Tonometry
 - Fundoscopy
 - Removal of Foreign Body in Eye
 - Otoscopy, Rhinoscopy, Laryngoscopy
 - Foreign Body Removal for Ear & Nose
 - Ear Syringing
 - Hearing Tests
 - Transportation Protocol of trauma patients
 - Plaster of Paris – Types and application
 - Removal of POP
 - First Aid In Traumatic Fractures
 - Cardiopulmonary Resuscitation
 - Defibrillation
10. **Disciplinary Procedures:** CCS(Conduct) Rules, CCS(CCA) Rules, Procedure for disciplinary actions. Essential steps for handling disciplinary cases. CVC Guidelines.
11. **Purchasing:** Purchasing Principles GFR-2017. Various purchasing Systems etc. GeM Rules and Central Public Procurement Portal. Preparation of Budget. Legal aspects of Purchasing. Procurement of Goods, Services and Works. Payment procedure etc. PFMS.CVC Guidelines of Procurement. Functions of CAG Audit in Procurement.
12. **Store Management:** Contract Management, Inventory Management, Bill of Materials. Stores Accounting. Stock-taking/stock verification, Valuation of stock in hand.

Note:- The Syllabus is suggestive and indicative in nature having only broader areas for reference. The Candidate is expected to have the holistic and expanded knowledge of the subject/syllabus.
