

**Himachal Pradesh
Public Service Commission**

No. 3-37/2023-PSC(R-I)

Dated: 6th May, 2024

NOTICE

Apropos of this Commission's advertisement No. 5/2-2024 dated 29.02.2024 vide which 15 posts of Medical Officer (Dental) were advertised to invite Online Recruitment Applications from eligible and desirous candidates for making direct recruitment in the Department of Health & Family Welfare, Himachal Pradesh. In the said advertisement, it was mentioned that the detailed syllabus of Paper-II will be notified separately. The Detailed syllabus of Paper -II (Descriptive type subject aptitude test) for the said post is hereby notified for the information of all the concerned candidates which is available on the link given below :-

Please click on the subject given below:-

1. Medical Officer (Dental)

In case of any enquiry, the candidates can contact Commission's office on any working day from 10:00 A.M. to 5:00 P.M. on telephone No. 0177-2624313/ 2629739 and Toll Free No. 1800-180-8004.

Sd/-
(Devinder Kumar Rattan) IAS
Secretary
H.P. Public Service Commission
Telephone No.-01772623786

Syllabus for Descriptive Subject Aptitude Test (SAT) for recruitment to the post of Medical Officer (Dental), Class-I (Gazetted) in the Department of Health and Family Welfare, H.P. The descriptive SAT paper shall have two parts i.e. Part-I and Part-II and cover the following topics of Bachelor of Dental Surgery level. The SAT shall be of 03 hours duration having 120 Marks.

PART-I (60 MARKS)

1. HUMAN ANATOMY, EMBRYOLOGY, HISTOLOGY & MEDICAL GENETICS:-

Introduction to Anatomical terms, Skin, superficial fascia & deep fascia, Cardiovascular system, portal system collateral circulation and arteries, Lymphatic system, regional lymph nodes, Osteology-including ossification & growth of bones, Myology-including types of muscle tissue & innervations, Syndesmology-Including classification of Joints, Nervous System, Head & Neck, Thorax, Abdomen, Embryology, Histology, Medical Genetics.

2. GENERAL HUMAN PHYSIOLOGY:-

General Physiology, Blood, Muscle and Nerve, Digestive system, Excretory system, Body Temperature & Functions of Skin, Endocrinology, Reproduction, Cardio Vascular System, Respiration system, Central Nervous system, Special senses.

3. BIOCHEMISTRY, NUTRITION & DIETICS:-

Chemistry of bio-organic molecules, Macronutrients and Digestion, Micronutrients, Energy Metabolism, Special aspects of metabolism, Biochemical genetics and Protein Synthesis, Enzyme and Metabolic Regulation, Structural components and Blood proteins, Medical biochemistry.

4. DENTAL ANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY:-

Tooth Morphology: introduction to morphology, Morphology of permanent teeth, Morphology of Deciduous teeth, Occlusion, Oral Embryology: Development of teeth, Eruption of deciduous & Permanent teeth, Shedding of Teeth, Oral Histology, Oral physiology.

5. GENERAL PATHOLOGY:-

General Pathology: Introduction to pathology terminologies, Aetiology and Pathogenesis of Disease, Degenerations, Cell death & Necrosis, Inflammation, Healing, Tuberculosis, Syphilis, Typhoid, Thrombosis, Embolism, Ischaemia and Infraction, Derangements of body fluids, Disorders of circulation, Nutritional disorders, Immunological mechanisms in disease, AIDS and Hepatitis, Hypertension, Diabetes Mellitus, Adaptive disorders of growth, General aspects of neoplasia, Systemic Pathology: Anaemias, Leukaemias, Diseases of Lymph nodes, Diseases of oral cavity, diseases of salivary glands, common diseases of Bones, Diseases of Cardiovascular system, Haemorrhagic Disorders.

6. GENERAL MICROBIOLOGY:-

General microbiology, Immunology: Systematic Bacteriology, Virology, Mycology, Parasitology.

7. GENERAL AND DENTAL PHARMACOLOGY AND THERAPEUTICS:-

General pharmacology: General principles of pharmacology; sources and nature of drugs dosage forms; prescriptive writing; pharmacokinetics (absorption, distribution, metabolism and excretion of drugs), mode of action of drugs, combined effects of drugs, receptor mechanism of drug action, factors modifying drug response, adverse drug reactions; drug interactions, implications of General principles in clinical dentistry, pharmacovigilance, CNS drugs; general anaesthetics, hypnotics, analgesics psychotropic drugs, anti-epileptics, muscle relaxants, local anaesthetics, implications of these drugs in clinical dentistry, Autonomic drugs; sympathomimetics, antiadrenergic drugs parasymphomimetics and parasympatholytics drugs; cardiac stimulants, antihypertensive drugs; vasopressor agents, treatment of shock, antianginal agents and diuretics, implications of these drugs in clinical dentistry, Autocoids: Histamine, antihistamine, prostaglandins, leukotriens and bronchodilators, implications of autcoids in clinical dentistry, Drugs acting on blood: coagulants and anticoagulants, hematinics, implications of these drugs in clinical dentistry, G.I.T. Drugs, Purgatives, anti-diarrhoeal, antacids, anti-emetics, implications of these drugs in clinical dentistry, Endocrines, emphasis on treatment of diabetes and glucocorticoids, thyroid and antithyroid agents, drugs affecting calcium balance and anabolic steroids, implications of these drugs in clinical dentistry, Chemotherapy: antimicrobial agents (against bacteria, anaerobic infections, fungi, virus and broad spectrum) infection management in dentistry, pharmacotherapy of Tuberculosis, leprosy and chemotherapy of malignancy in general, implications of chemotherapy in clinical dentistry, Vitamins: Water soluble vitamins, Vit. D, Vit. K and Vit. E, implications of vitamins in clinical dentistry, Pharmacotherapy of emergencies in dental office and emergency drugs tray implications of pharmacotherapy in clinical dentistry, Chealating agents: BAL, EDTA and desferrioxamine, Dental Pharmacology: Anti-septics astringents, obtundents, mummifying agents, bleaching agents, styptics, disclosing agents, dentifrices, mouth washses, caries and fluorides, pharmacotherapy of common oral conditions in dentistry.

8. DENTAL MATERIALS:-

Structure of matter and principles of adhesion, important physical properties applicable to dental materials, Biological considerations in use of dental materials, Gypsum and Gypsum products, Impression materials used in dentistry, Synthetic resins used in dentistry, restorative resins, Metal and Alloys, Direct Filling Gold, Dental Casting Alloys, Dental waxes including inlay casting wax, Dental casting investments, Soldering, Brazing and welding, Wrought base metal alloys, Dental cements, Dental ceramics, Abrasion and Polishing agents, Abrasive action, Die and counter die materials including electroforming and electropolishing.

9. ORAL PATHOLOGY AND ORAL MICROBIOLOGY:-

Introduction, developmental disturbances of teeth, jaws and soft tissues of oral & paraoral region, Dental Caries, Pulp & Periapical Pathology & Osteomyelitis, Periodontal Diseases, Microbial infections of oral soft tissues, Common non-inflammatory diseases involving the jaws, Diseases of TM joint, Cysts of Oral & Paraoral region, Tumours of the Oral Cavity, Traumatic, Reactive & Regressive lesions of Oral Cavity, Non Neoplastic Salivary Gland Diseases, Systemic Diseases involving Oral Cavity, Mucocutaneous Lesions, Diseases of the Nerves, Pigmentation of Oral & Paraoral region & Discolouration of teeth: causes & clinical manifestation, Diseases of Maxillary Sinus, Oral Precancer, Biopsy, Principles of basic Forensic Odontology (Pre-clinical Forensic Odontology).

10. GENERAL MEDICINE:-

Aims of medicine definition of signs, symptoms, diagnosis, differential diagnosis treatment & prognosis, Infections: Enteric fever, AIDS, herpes simplex, herpes zoster, syphilis diphtheria, G.I.T.: stomatitis, gingival hyperplasia, syphagia, acid peptic disease, jaundice, acute and chronic hepatitis, cirrhosis of liver ascites, CVS: Acute rheumatic fever rheumatic valvular heart disease, hypertension, ischemic heart disease, infective endocarditis, common arrhythmias, congenital heart disease, congestive cardiac failure, RS: Pneumonia, COPD, Pulmonary TB, Bronchial asthma, Hematology: Anemias, bleeding & clotting disorders, leukemias, lymphomas, agranulocytosis, splenomegaly, oral manifestations of hemtologic disorders, generalized Lymphadenopathy, Renal System: Acute nephritis, Nephrotic syndrome, Nutrition: Avitaminosis, CNS: Facial palsy, facial pain including trigeminal neuralgia, epilepsy, headache including migraine, Endocrines: Diabetes Mellitus Acromegaly, Hypothyrodism, Thyrotoxicosis, Calcium Metabolism and parathroids, Critical Care: Syncope, cardiac arrest, CPR, Shock.

11. GENERAL SURGERY:-

History of Surgery, General principles of surgery, wounds, inflammation, infections, transmissible viral infections, shock and haemorrhage, tumours, ulcers, cysts, History of Surgery, General principles of surgery, wounds, inflammation, infections, transmissible viral infections, shock and haemorrhage, tumours, ulcers, cysts, sinus and distulae, Diseases of lymphatic system, diseases of the oral cavity, diseases of larynx, nasopharynx, nervous system, fractures, principles of operative surgery, anomalies of development of face, diseases of thyroid and parathyroid, swelling of the jaw, biopsy.

12. PUBLIC HEALTH DENTISTRY:-

Introduction to Dentistry: definition of Dentistry, History of dentistry, scope, aims and objectives of dentistry, Public Health, Dental Public Health: definition and difference between community and clinical health, Epidemiology of dental diseases-dental caries, periodontal diseases, malocclusion, dental flurosis and oral cancer, Survey procedures, Delivery of dental care, Payments of dental care, Preventive dentistry, Research Methodology and dental statistics: health information, research methodology, bio-statistics.

PART-II (60 MARKS)

1. CONSERVATIVE DENTISTRY AND ENDODONTICS:-

Nomenclature of dentition, Principles of Cavity Preparation, Dental Caries, Treatment Planning for operative dentistry, Gnathological concepts of restoration, Armamentarium for cavity preparation, control of operating filed, amalgam restoration, pulp protection, anterior restoration, direct filling gold restoration, preventive measures in restorative practice, temporisation or interim restoration, pin amalgam restoration indication contra indication, management of deep carious lesions indirect and direct pulp capping, non carious destruction's tooth structures diagnosis and clinical management, hyper sensitive dentine and its management, cast restoration, die materials and preparation of dies, gingival tissue management for cast restoration and impression procedures, recent cavity modification amalgam restoration, differences between amalgam and inlay cavity preparation with note on all the types of bewels used for cast restoration, control of pain during operative procedures, treatment planning for operative dentistry detailed clinical examination radiographic examination, vitality tests, diagnosis and treatment planning and preparation of case sheet, applied dental materials, endodontics, clinical diagnostic methods, emergency endodontic procedures, pulpal diseases causes, types and treatment, periapical diseases, vital pulp therapy, apexogenesis and apexification or problems of open apex, rationale of endodontic treatment case selection indication and contraindications for root canal treatments, principles of root canal treatment mouth preparation root canal instruments, hand instrument, power driven instruments, standardisation color coding principle of using endodontic instruments, sterilisation of root canal instruments and materials rubber dam application, Anatomy of the pulp cavity, Preparation of root canal space, Disinfection of root canal space intracanal medicaments, poly antibiotic paste ross mans paste, mummifying agents, outline of root canal treatment, bacteriological examination, culture methods, problems during cleaning and shaping of root canal spaces, methods of cleaning and shaping like step back crown down and conventional methods, obturation of the root canal system, root canal sealers, ideal properties classification, manipulation of root canal sealers, post endodontic restoration fabrication and components of post core preparation, smear layer and its importance in endodontic and conservative treatment, discoloured teeth and its management, bleaching agents, vital and non vital bleaching methods, traumatised teeth classification of fractured teeth, management of fractured tooth and root, luxated teeth and its management endodontic surgeries indication contraindications, pre operative preparation, pre medication surgical instruments and techniques apicectomy, retrograde filling, post operative sequale trephination hemisection, radiscetomy techniques of tooth reimplantation (both international and accidental) endodontic implants, root resorption, emergency endodontic procedures, lasers in conservative endodontics (introduction only) practice management, Professional association dentist act 1948 and its amendment 1993, duties towards the govt. like payments of professional tax, income tax, financial management of practice, dental materials and basic equipment management, ethics.

2. ORAL AND MAXILLOFACIAL SURGERY:-

Introduction, definition, scope, aims and objectives, diagnosis in oral surgery, principles of infection control and cross-infection control with particular reference to HIV/AIDS and

Hepatitis, Principles of Oral surgery, Exodontia: general consideration, Impacted teeth, pre-prosthetic surgery, diseases of the maxillary sinus, disorders of T.M. Joint, Infections of the oral cavity, Benign cystic lesions of the jaws, Tumours of the Oral cavity, fractures of the jaws, salivary gland diseases, jaw deformities, neurological disorders, cleft lip and palate, medical emergencies in dental practice- primary care of medical emergencies in dental practice particularly: cardio vascular, Respiratory, endocrine, anaphylactic reaction, epilepsy, emergency drugs & intra muscular I.V. injections, Oral implantology, ethics, local anaesthesia, general anaesthesia.

3. **ORAL MEDICINE AND RADIOLOGY:-**

Oral Medicine and diagnostic aids: diagnostic methods: definition and importance of diagnosis and various types of diagnosis, method of clinical examination, investigations, **Diagnosis, differential diagnosis:** Teeth, diseases of bone and Osteodystrophies: development disorders, Temporomandibular Joint, Common cysts and tumours, Periodontal diseases, Granulomatous diseases, Miscellaneous disorders, **Oral Medicine and Therapeutics:** Infections of oral and paraoral, Important common mucosal lesions, Cervico-facial lymphadenopathy, facial pain, altered sensations, tongue in local and systemic disorders, oral manifestations of metabolic disorders, porphyria, haemochromatosis, histocytosis X disease, endocrine disorders, pituitary: Gigantism, Acromegaly, hypopituitarism, Adrenal cortex: Addison's disease (hypofunction), Cushing's Syndrome (Hyperfunction), Parathyroid glands: Hyperparathyroidism, Thyroid gland: (Hypothyroidism) Cretinism, myxedema, Pancreas: Diabetes, Nutritional deficiency, blood disorders, red blood cell disease, white blood cell disease, haemorrhagic disorders, disease of salivary glands, dermatological diseases with oral manifestations, immunological diseases with oral manifestations, allergy, Foci of oral infection and their ill effects on general health, management of dental problems in medically compromised persons, precancerous lesions and conditions, nerve and muscle diseases, forensic odontology, therapeutics, Oral Radiology: Scope of the subject and history of origin, Physics of radiations, biological effects radiation, radiation safety and protection measures, principles of image production, radiographic techniques, factors in production of good radiograph, radiographic normal anatomical landmarks, faulty radiographs and artefacts in radiographs, interpretation of radiographs in various abnormalities of teeth, bones and other orofacial tissues, principles of radiotherapy of oro-facial malignancies and complications of radiotherapy, contrast radiography and basic knowledge of radio-active isotopes, radiography in forensic odontology.

4. **ORTHODONTICS AND DENTAL ORTHOPAEDICS:-**

Introduction, definition, historical background, aims and objectives of orthodontics and need for orthodontics care, growth and development in general, morphologic development of craniofacial structures, functional development of dental arches and occlusion, clinical application of growth and development, malocclusion-in general, classification of malocclusion, normal and abnormal function of stomatognathic system, aetiology of malocclusion, diagnosis and diagnostic aids, general principles in orthodontics treatment planning of dental and skeletal malocclusions, anchorage in orthodontics, biomechanical principles in orthodontic tooth movement, preventive orthodontics, interceptive orthodontics,

corrective orthodontics, orthodontic appliances: general, ethics, removable orthodontic appliances, fixed orthodontic appliances, extraoral appliances, myofunctional appliances.

5. PAEDIATRIC & PREVENTIVE DENTISTRY:-

Introduction to pedodontics & preventive dentistry, growth and development, development of occlusion from birth through adolescence, dental anatomy and histology, dental radiology related to pedodontics, oral surgical procedures in children, dental caries, gingival & periodontal diseases in children, child psychology, behavioural management, pediatric operative dentistry, pediatric endodontics, traumatic injuries in children, preventive and interceptive orthodontics, oral habits in children, dental care of children with special needs, congenital abnormalities in children, dental emergencies in children and their management, dental materials used in pediatric dentistry, preventive dentistry, dental health education and school dental health programmes, fluorids, case history recording, setting up of pedodontic clinical, ethics.

6. PERIODONTOLOGY:-

Introduction, Development of perio-dontal tissues, micro structural anatomy and biology of periodontal tissues in detail Gingiva, junctional epithelium in detail, epithelial mesenchymal interaction, periodontal, ligament Cementum, alveolar bone, Defensive mechanisms in the oral cavity, age changes in periodontal structures and their significance in Geriatric dentistry, Classification of periodontal diseases, Gingival diseases, Epidemiology of periodontal diseases, extension of inflammation from gingival, pocket, etiology, risk factors, host response, periodontitis, diagnosis, prognosis, treatment plan, periodontal therapy, pocket eradication procedures, osseous surgery, mucogingival surgery & periodontal plastic surgeries, splints, hypersensitivity, implants, maintenance phase (SPT), pharmaco-therapy, periodontal management of medically compromised patients, inter-disciplinary care, systemic effects of periodontal diseases in brief, infection control protocol, ethics.

7. PROSTHODONTICS AND CROWN & BRIDGE:-

Complete dentures: Applied anatomy and physiology, Communicating with the patient, diagnosis and treatment planning for patients, articulators-discussion, improving the patient's denture foundation and ridge relation-an overview, Principles of retention, support and stability, impressions-detail, record bases and occlusion rims in detail, biological consideration in jaw relation & jaw movements-cranio-mandibular relations, relating the patient to the articulator, recording maxilla mandibular relation, tooth selection and arrangement, relating inclination of teeth to concept of occlusion in brief, trial dentures, laboratory procedures, denture insertion, treating problems with associated dentures use-in brief, treating abused tissues in brief, relining and rebasing of dentures in brief, immediate complete dentures construction procedure in brief, the single complete denture in brief, overdentures denture in brief, dental implants in complete denture, Removable Flexible Dentures: introduction, classification, examination, diagnosis & treatment planning & evaluation of diagnostic data, components of a removable partial denture, principles of removable partial denture design, survey and design in brief, mouth preparation and master cast, impression materials for procedures for removable partial dentures, preliminary jaw relation an esthetic try in for some anterior replacement teeth, laboratory procedures for

framework construction in brief, fitting the framework in brief, try-in of the partial denture in brief, completion of the partial denture in brief, inserting the removable partial denture in brief, postinsertion observations, temporary acrylic partial dentures, immediate removable partial denture, removable partial dentures opposing complete denture, Fixed Partial Dentures: intro