

જાયાનું નામ: સરકારી ડેન્ટલ કોલેજોમાં પ્રાધ્યાપક, વર્ગ-૧(જા.ક.-૦૪/૧૮-૧૯)

ઓરલ પેથોલોજી એન્ડ માઇક્રોબાયોલોજી

કુલ પ્રશ્નો:૩૦૦	પ્રાથમિક કસોટીનો અભ્યાસક્રમ	કુલ ગુણ -૩૦૦
Part-I		
માધ્યમ: ગુજરાતી	સામાન્ય અભ્યાસ	ગુણ -૧૦૦
૧	ભારતની ભૂગોળ- ભૌગોલિક, આર્થિક, સામાજિક, કુદરતી સંસાધન અને વસ્તી અંગેની બાબતો- ગુજરાતના ખાસ સંદર્ભ સાથે	
૨	ભારતનો સાંસ્કૃતિક વારસો- સાહિત્ય, કલા, ધર્મ અને સ્થાપત્યો- ગુજરાતના ખાસ સંદર્ભ સાથે	
૩	ભારતનો ઇતિહાસ - ગુજરાતના ખાસ સંદર્ભ સાથે	
૪	ભારતની અર્થવ્યવસ્થા અને આયોજન	
૫	ભારતીય રાજનીતિ અને ભારતનું બંધારણ: (૧) આમુખ (૨) મૂળભૂત અધિકારો અને ફરજો (૩) રાજ્યનીતિના માર્ગદર્શક સિદ્ધાંતો (૪) સંસદની રચના (૫) રાષ્ટ્રપતિની સત્તા (૬) રાજ્યપાલની સત્તા (૭) ન્યાયતંત્ર (૮) અનુસૂચિત જાતિ, અનુસૂચિત જનજાતિ અને સમાજના પછાત વર્ગો માટેની જોગવાઈઓ (૯) એટર્ની જનરલ (૧૦) નીતિ આયોગ (૧૧) પંચાયતી રાજ (૧૨) નાણા પંચ (૧૩) બંધારણીય તથા વૈધનિક સંસ્થાઓ- ભારતનું ચૂંટણી પંચ, સંઘ લોક સેવા આયોગ, રાજ્ય લોક સેવા આયોગ, કોમ્પ્ટ્રોલર એન્ડ ઓડિટર જનરલ; કેન્દ્રીય સતર્કતા આયોગ, લોકપાલ તથા લોકાયુક્ત અને કેન્દ્રીય માહિતી આયોગ	
૬	સામાન્ય બૌદ્ધિક ક્ષમતા કસોટી	
૭	સામાન્ય વિજ્ઞાન, પર્યાવરણ અને ઈન્ફર્મેશન એન્ડ કોમ્યુનિકેશન ટેકનોલોજી	
૮	ખેલ જગત સહિત રોજબરોજના પ્રાદેશિક, રાષ્ટ્રીય અને આંતરરાષ્ટ્રીય મહત્વના બનાવો	

Post: Oral Pathology & Microbiology, Professor Class-I, (Advt. No.04/18-19) <u>Oral Pathology & Microbiology in Government Dental College</u>	
Total Questions:300 Syllabus of Preliminary Test Total Marks-300	
Part-I	
Medium: Gujarati	General Study
Marks- 100	
1	Geography of India- Physical, Economic, Social, Natural Resources and population related topics- with special reference to Gujarat
2	Cultural heritage of India- Literature, Art, Religion and Architecture- with special reference to Gujarat
3	History of India with special reference to Gujarat
4	Indian Economy and Planning
5	<u>Indian Polity and the Constitution of India:</u> (1) Preamble (2) Fundamental Rights and Fundamental Duties (3) Directive Principles of State Policy (4) Composition of Parliament (5) Powers of the President of India (6) Powers of Governor (7) Judiciary (8) Provisions for Scheduled Castes, Scheduled Tribes and backward classes of the society (9) Attorney General (10) NITI Aayog (11) Panchayati Raj Institutions (12) Finance Commission (13) Constitutional and Statutory Bodies: Election Commission of India, Union Public Service Commission, State Public Service Commission, Comptroller and Auditor General; Central Vigilance Commission, Lokpal and Lokayukta, Central Information Commission
6	General Mental Ability
7	General Science, Environment and Information & Communication Technology
8	Daily events of Regional, National and International Importance including Sports

Part-II Syllabus of Preliminary Test
(Oral Pathology & Microbiology)

Medium: English

Questions:200

Marks : 200

1. APPLIED GROSS ANATOMY OF HEAD AND NECK INCLUDING HISTOLOGY

Temporomandibular joint. Trigeminal nerve facial nerve. Muscles of mastication. Tongue. Salivary glands. Nerve supply blood supply, lymphatic drainage and venous drainage of Oro dental tissues. Embryology: Development of face, palate, mandible, maxilla, tongue and applied aspects of the same, Development of teeth and dental tissues and developmental defects of oral and maxillofacial region and abnormalities of teeth. Maxillary sinus. Jaw muscles and facial muscles. Genetics: Introduction modes of inheritance, chromosomal anomalies of oral tissues and single gene disorders.

2. PHYSIOLOGY (GENERAL AND ORAL)

Saliva. Pain. Mastication. Taste. Deglutition. Wound healing. Vitamins. Calcium metabolism. Theories of mineralization. Tooth eruption and shedding. Hormones. Blood and its constituents.

3. CELL BIOLOGY

Cell-structure and function (ultra structural and molecular aspects), intercellular junctions, cell cycle division, cell regulators, cell – cell and cell – extra cellular matrix interactions.

4. GENERAL HISTOLOGY

Light and electron microscopy considerations of epithelial tissues and glands, bone, hematopoietic system, lymphatic system, muscle, neural tissue, endocrinal system (thyroid, pituitary, parathyroid).

5. BIOCHEMISTRY

Chemistry of carbohydrates, lipids and proteins. Methods of identification and purification. Metabolism of carbohydrates, lipids and proteins. Biological oxidation. Various techniques – cell fractionation and ultra filtration, centrifugation, Electrophoresis, Spectrophotometry and radioactive techniques.

6. GENERAL PATHOLOGY

Inflammation and chemical mediators, thrombosis, embolism, necrosis, repair, degeneration, shock, hemorrhage pathogenic mechanisms at molecular level and blood dyscrasias, Carcinogenesis and Neoplasm.

7. GENERAL MICROBIOLOGY

Definitions of various types of infections. Routes of infection and spread. Sterilization, disinfection and antiseptics. Bacterial genetics. Physiology and growth of microorganisms.

8. BASIC IMMUNOLOGY

Basic principles of immunity, antigen and antibody reactions. Cell mediated immunity and Humoral immunity. Immunology of hypersensitivity. Immunological basis of the autoimmune phenomena. Immunodeficiency with relevance to opportunistic infections. Basic principles of transplantation and tumor immunity.

9. SYSTEMIC MICROBIOLOGY/APPLIED MICROBIOLOGY

Morphology, classification, pathogenicity, mode of transmission, methods of prevention, collection and transport of specimen, for laboratory diagnosis, staining methods, common culture media, interpretation of laboratory reports and antibiotic sensitivity tests.

- Staphylococci
- Streptococci
- Corynebacterium diphtheria

- Mycobacteria
- Clostridia, bactericides and fusobacteria
- Actinomycetales
- Spirochetes

Virology: General properties: structure, broad classification of viruses, pathogenesis, pathology of viral infections. Herpes virus: list of viruses, pathogenesis, and mode of infection, list of diagnostic tests, and their interpretations, methods of prevention and control. Human Immunodeficiency virus: structure with relevance to laboratory diagnosis, type of infection, laboratory tests and their interpretation, universal precautions, specific precautions and recent trends in diagnosis and prophylaxis.

Mycology: General properties of fungi, classification bases on disease, superficial, subcutaneous, deep opportunistic infections. General principles of fungal infections, diagnosis rapid diagnosis method of collection of sample and examination for fungi.

10. ORAL BIOLOGY (ORAL AND DENTAL HISTOLOGY)

Structure and function of oral, dental and perioral tissues including their ultra-structure, molecular and biochemical aspects. Study of morphology of permanent and deciduous teeth.

11. BASIC MOLECULAR BIOLOGY AND THECHNIQUES

Experimental aspects – DNA extraction, PCR, western blotting.

12. BASIC HISTO TECHNOUES AND MICROSCOPY

Routine hematological tests and clinical significance of the same. Biopsy procedures for oral lesions. Processing of tissues for Paraffin lesions. Microtome and principles of microtomy. Routine stains, principles and theories of staining techniques. Microscope, principles and theories of microscopy. Light microscopy and various other types including electron microscopy. Methods of tissue preparation for ground sections, decalcified sections. Specialized

Histotechniques and Special Stains: Special staining techniques for different tissues. Immunohistochemistry. Preparation of frozen sections and cytological smears.

13. ORAL PATHOLOGY

Developmental defects of oral and maxillofacial region and abnormalities of teeth. Dental caries (Introduction, Epidemiology, microbiology, cariogenic bacterial including properties , acid production in plaque, development of lesion, response of dentine – pulp unit, histopathology, root caries, squeal and immunology). Pulpal and Periodical diseases. Infections of oral and Para oral regions (bacterial, viral and fungal infections). Non – neoplastic disorders of salivary glands. Bone pathology. Hematological disorders. Physical and chemical injuries, allergic and Immunological diseases. Cysts of odontogenic origin. Dermatologic diseases. Periodontal diseases. Oral manifestations of systemic diseases. Facial pain and neuromuscular disorders including TMJ disorders. Regressive alterations of teeth. Detailed description of disease affecting oral mucosa, teeth, supporting tissues & jaws. Cysts of the oral & Para-oral regions. Systemic diseases affecting oral cavity.

14. DERMATOLOGY

Study of selected mucocutaneous lesions-etio-pathogenesis, pathology, clinical presentation and diagnosis.

15. ORAL ONCOLOGY

Detailed study including Pathogenesis, molecular and biochemical changes of various tumors, tumor like lesions and Premalignant lesions affecting the hard and soft tissues of oral and paraoral tissues, Tumour markers.

16. ORAL MICROBIOLOGY AND IMMUNOLOGY

Normal Oral microbial flora. Defense mechanism of the oral cavity. Microbiology and immunology of Dental caries and Periodontal diseases. Dental caries. Tumor immunology. Infections of Pulp and Periodical and periodontal tissues. Oral sepsis and Bacteremia. Microbial genetics. Infections of oral and Para oral regions.

17. FORENSIC ODONTOLOGY

Legal procedures like inquest medico-legal evidences post mortem examination of violence around mouth and neck, identification of deceased individual-dental importance.

18. BIOSTATISTICS AND RESEARCH METHODOLOGY

Study of Biostatistics as applied to dentistry and research. Understanding and evaluating dental research, scientific method and the behavior of scientists, understanding to logic-analogy, models, authority, hypothesis and causation, Quacks, Cranks, Abuses of Logic, Measurement and Errors of measurement, presentation of results, Reliability, Sensitivity and specificity diagnosis test measurement, Research Strategies, Observation, Correlation, Experimentation and Experimental design. Logic of statistical interference balance judgments, judgment under uncertainty, clinical vs. scientific judgment, problem with clinical judgment, forming scientific judgments, the problem of contradictory evidence, citation analysis as a Means of literature evaluation, influencing judgment : Lower forms of Rhetorical life, Denigration, Terminal, Inexactitude.

19. Current Trends and Recent Advancements in Oral Pathology & Oral Microbiology.