Guidelines

for

Competency Based Training Programme

in

DNB- DERMATOLOGY, VENEREOLOGY & LEPROSY

NATIONAL BOARD OF EXAMINATIONS

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CONTENTS

PROGRAMME GOAL

To provide uniform, standard training in Dermatology, Venereology and Leprosy to the candidates so that after 3 years of training they are able to acquire the necessary competencies in the specialty to work as Senior Resident/ Junior Consultant

PROGRAMME OBJECTIVES

The students after the training should be able to:

- Provide quality patient care
- Able to perform Clinical examination & relevant laboratory investigations
- Adopt a compassionate attitude towards the patient (and their families) under his/her charge
- Describe preventive measures at individual and community levels against communicable Skin, Leprosy and Venereal diseases
- Manage independently and efficiently all medical emergencies related with skin, leprosy and venereal disease
- Describe the current treatment modalities and awareness of latest treatment of various diseases of skin, STD and leprosy.
- Teach the medical and Paramedical students in the specialties
- Conduct research in the field of Skin, Venereal diseases & Leprosy
- Describe the preventive aspects, education, counseling services to the patient and National Control Program of India for Leprosy, STDs and HIV infections.

ELIGIBILITY CRITERIA FOR ADMISSIONS TO THE PROGRAMME

(A) DNB Dermatology , Venereology and Leprosy Course:

1. Any medical graduate with ***MBBS*** qualification, who has qualified the ***Entrance Examination*** conducted by NBE and fulfill the eligibility criteria for admission to DNB ***Broad Specialty*** courses at various NBE accredited Medical Colleges/ institutions/Hospitals in India is eligible to participate in the Centralized counseling for allocation of DNB **Dermatology and Venereology** seats purely on merit cum choice basis.

2. Admission to 3 years post MBBS DNB **Dermatology and Venereology** course is only through ***Entrance Examination*** conducted by NBE and Centralized Merit Based Counseling conducted by National Board of Examination as per prescribed guidelines.

(B) DNB (Post diploma) Dermatology and Venereology Course:

1. Any medical graduate with MBBS qualification who has successfully completed **DVD** (and fulfill the eligibility criteria for admission to DNB (Post Diploma) Broad Specialty courses at various NBE accredited Medical Colleges/ institutions/Hospitals in India is eligible to participate in the Centralized counseling for allocation of DNB (Post Diploma) **Dermatology and Venereology** seats purely on merit cum choice basis.

2. Admission to 2 years post diploma DNB **Dermatology and Venereology** course is only through PDCET Centralized Merit Based Counseling conducted by National Board of Examination as per prescribed guidelines.

Duration of Course:

For Primary candidates : 3 years
For Secondary Candidates : 2 years

Every candidate admitted to the training programme shall pursue a regular course of study (on whole time basis) in the concerned recognized institution under the guidance of recognized post graduate teacher for assigned period of the course.

TEACHING AND TRAINING ACTIVITIES

The fundamental components of the teaching programme should include:

1. Case presentations (long & spot cases) & discussion- once a week
2. Seminar – Once a week
3. Journal club- Once a week
4. Ward round presentation
5. Faculty lecture teaching- once a month
6. Clinicopathological conference – once a week
7. Clinical Audit-Once a Month
8. A poster and have one oral presentation at least once during their training period in a recognized conference.

The rounds should include bedside sessions, file rounds & documentation of case history and examination, progress notes, round discussions, investigations and management plan) interesting and difficult case unit discussions.

The training program would focus on knowledge, skills and attitudes (behavior), all essential components of education. It is being divided into theoretical, clinical and practical in all aspects of the delivery of the rehabilitative care, including methodology of research and teaching.

Theoretical: The theoretical knowledge would be imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs. These are considered necessary in view of an inadequate exposure to the subject in the undergraduate curriculum.

Symposia: Trainees should be encouraged to present symposia based on the curriculum in a period of three years to the combined class of teachers and students. A free discussion would be encouraged in these symposia. The topics of the symposia would be given to the trainees with the dates for presentation.

Clinical: The trainee would be attached to a faculty/senior resident to be able to pick up methods of history taking, examination, prescription writing and management and rehabilitation practice.

SYLLABUS

ANATOMY AND ORGANIZATION OF HUMAN SKIN

Must know	*Should know*	Good to know
• Components of normal human skin • Epidermis • Dermoepidermal Junctional • Dermis • Langerhan's cells • Mast cells	• Nerves and sense organs • Merkel cells • Basophils • Blood vessels • Lymphatic systems	• Embryology • Regional variation of lymphatic

FUNCTION OF THE SKIN

Must know	Should know	Good to know
• Barrier functions • Temperature regulation • Skin Failure • Immunological function	• Mechanical function • Sensory and autonomic function	• Bioengineering and the skin • Socio sexual communication

DIAGNOSIS OF SKIN DISEASE

Must know	Should know	Good to know
• Fundamental of diagnosis • Disease definition • The history • Examination of the skin • Additional clinical investigation (Diascopy , Wood's light, F.N.A.C. of lymph nodes etc.) • Skin testing	• Radiological and imaging • Commonly used laboratory tests examination	• Oral provocation test

EPIDEMIOLOGY OF SKIN DISEASE

Must know	Should know	Good to know
• What is epidemiology and why is it relevant to dermatology • Describing the natural history and association of specific skin disease	How much of public health problem is skin disease What determines the frequency of skin disease	

HISTOPATHOLOGY OF THE SKIN GENERAN PRINCIPLES

Must know	Should know	Good to know
• Biopsy of the skin • Laboraory methodss	• Artefacts • The approach to microscopic examination of tissue sections	

MOLECULAR BIOLOGY

Must know	Should know	Good to know
	• Basic Molecular biology of the cell • Molecular techniques • Cancer genetics • Complex traits	• Strategies for identification of disease causing genes • Future strategies

INFLAMMATION

Must know	Should know	Good to know
• Characteristics of inflammation • Phases of inflammation • Innate defence mechanisms • Apoptosis • Major histocompatibility	• Vasculature and inflammation • Mediators of inflammation	

complex		

CLINICAL IMMUNOLOGY, ALLERGY AND PHOTO IMMUNOLOGY

Must know	Should know	Good to know
• Innate immunity • Acquired immunity • Photo immunology • Overview of structure and function of immune system	• Overview of immunological disease	• Overview of diagnostic testing for immunological and allergic disease

WOUND HEALING

Must know	Should know	Good to know
• Clinical aspects of wound healing	• Biological aspects of wound healing	

GENETICS AND GENODERMATOSES

Must know	Should know	Good to know
• Genetics and disorders of the skin • Histocompatibility antigens and disease association • Chromosomal disorders – down's syndrome, trisomy 18, trisomy 13 (clinical features, diagnosis, management) • Ectodermal dysplasias o Hypohidrotic ED – definition, etiology, clinical features, diagnosis, treatment o EEC syndrome o Hidrotic ED o Rapp Hodgkin syndrome • Syndromes associated with DNA instability o Xeroderma pigmentosa –	• Nosology of genetics in skin disease • Principles of medical genetics • Genetic counseling • Poikilodermatous syndromes : dyskeratosis congenital, rothmund Thompson syndrome • Gardner syndrome • Cowden syndrome	•Miscellaneous syndromes •Focal dermal •hypoplasia •Nail patella syndrome •Pachydermoperiosto sis

definition, etiology, clinical features, diagnosis, treatment ○ Bloom's syndrome ○ Cockayane's syndrome • Sex chromosomal defects – turner's, klinefelter's, noonan syndrome ○ Familial multiple tumour syndromes – neurofibromatosis syndrome 1,2 – (definition, etiology, clinical features, treatment) ○ Tuberous sclerosis complex		

PRENATAL DIAGNOSIS OF GENETIC SKIN DISEASE

Must know	Should know	Good to know
• Methods in prenatal diagnosis • Complication of fetal skin biopsy • Ethical aspects of prenatal diagnosis • Current indications for fetal skin biopsy	• DNA techniques • Preimplantation genetic diagnosis	•

THE NEONATE

Must know	Should know	Good to know
• Skin disorders in the neonate • Collodion baby • Eczematous eruption in the newborn • Inflantile psoriasis and napkin psoriasis	• Disorders caused by transplacental transfer of maternal autoantibody • Blueberry muffin baby • Disorders caused by transfer of toxic • Acute hemorrhagic oedema of childhood	• Substances in maternal milk • Neonatal purpura fulminans

	• Infections • Primary immunodeficiency disorders • Disorders of subcutaneous fat	

NAEVI AND OTHER DEVELOPMENTAL DEFECTS

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Definitions ○ Etiology ○ Classification • Epidermal naevi ○ Keratinocyte naevi ○ VEN ○ ILVEN ○ Follicular naevi ○ Comedonaevus ○ Nevus sebaceous ○ Epidermal naevus syndrome • Vascular naevi ○ Infantile hemangioma ○ Kasabach merritt syndrome • Vascular malformations • Capillary ○ Salmon patch ○ Portwine stain ○ Naevusanemicus ○ Sturge weber syndrome • Mixed vascular • Klippel trenauny • Parkas weber syndrome	• Linear porokeratosis • Apocrine naevus • Eccrine naevus • Dermal and subcutaneous naevi • Eruptive collagenoma • Shagreen patch • Knuckle pads • Pseudoxanthoma elasticum • Proteus syndrome • Zosteriform venous malformation	• Branchial cyst • Branchial sinus and fistula

• Cutis marmorata telangiectatica o Angiokeratomas • Angiokeratoma circumscriptum • Angiokeratoma of Mibelli • Solitary popular • Angiokeratoma of scrotum • Preauricular cyst and sinus • Aplasia cutis congenita		

PRURITUS

• **Classification** • Measurement • Pathophysiology • Central itch • Factors modulating itching • Scratching • Itching in non-inflamed skin • Itching in disease states • Aquagenic pruritus • Psychogenic pruritus • Postmenopausal pruritus • Pruritus of atopic eczema • Acquired immune deficiency syndrome • **Investigation of generalized pruritus** • Management of itching	• Important miscellaneous causes of intense itching	

ECZEMAS

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Definitions,classification, histopathology • Secondary dissemination : mechanism, C/F	• Metabolic eczema • Eczematous drug eruption • Chronic superficial scaly dermatitis	• Papuloerythroderma of Ofujii • Eosinophilic pustular folliculitis

• Infective dermatitis • Dermatophytide • Seborrheic dermatitis : definition, etiology, C/F, morphology, variants, diagnosis, treatment • Seborrheic folliculitis • Asteatotic eczema • Discoid eczema • Hand eczema • Pompholyx • Hyperkeratotic palmar eczema • Ring eczema • Wear tear dermatitis • Finger tip eczema • Gravitational eczema • Juvenile plantar dermatosis • Pityriasis alba • Diagnosis and treatment of eczemas • Lichenification • Lichen simplex • Lichen chronicus • Prurigo • Nodular prurigo • Prurigo pigmentosa • Prurigo of pregnancy • Actinic prurigo • Neurotic excoriation		

ATOPIC DERMATITIS

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Aetio pathogenesis	• Disease prevention and	

• Clinical features • Associated disorders • Complications • Natural history and prognosis • Diagnosis • Differential diagnosis • Investigation • Treatment	occupational advice	

CONTACT DERMATITIS: IRRITANT

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Pathogenesis, Pathology • Predisposing factors • Clinical features • Specific irritant • Investigations • Management • Prevention • Prognosis		

CONTACT DERMATITIS: ALLERGIC

MUST KNOW	SHOULD KNOW	GOOD TO KNOW

• Pathogenesis, Pathology
  ○ Predisposing factors
  ○ Clinical features
• Photo allergic contact dermatitis
• Non-eczematous responses
• Differential diagnosis
• Allergic contact dermatitis
  ○ to specific allergens (airborne contact allergens, plants, cosmetic,robber,latex,)
	• Oral desensitization
	• Immune contact urticaria
	• Multiple patch-test reaction
	• Other test	

• **Patch testing**
• **Photopatch testing**
  o Prevention
  o Management
  o Prognosis		

OCCUPATIONAL DERMATOSES

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Eczematous dermatoses • Non-eczematous occupational dermatoses • Medicolegal aspects of occupational dermatoses • Specific occupational hazards		

MECHANICAL AND THERMAL INJURY

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Penetrating injuries • Skin lesions in drug addicts • Skin hazards of swimming and diving • Vibration • Reactions to internal mechanical stress • Mechanical trauma and skin neoplasia • Effects of heat and infrared radiation • Burns	• Biomechanical considerations • Effects of friction • Pressure ulcer • Effects of ction • Miscellaneous reactions to mechanical trauma Foreign bodies	

REACTIONS TO COLD

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Physiological reactions to cold • Disease of cold exposure • -Frostbite - Trench foot • Diseases of abnormal sensitivity to cold • Perniosis • Acrocyanosis • Erythrocyanosis • Livedo reticularis • Raynaud's phenomenon • Cryoglobulinaemia • Cryofibrinogenaemia • Cold agglutinins • Cold haemolysins • Cold urticaria • Cold erythema	• Other syndromes caused by cold • Neonatal cold injury • Cold panniculitis • Hypothermia	

BACTERIAL INFECTIONS

MUST KNOW	SHOULD KNOW	GOOD TO KNOW

• Normal flora of the skin
• Gram positive bacteria
  o *Staphylococcus aureus*
  o *Streptococci*
• Impetigo
• Ecthyma
• Folliculitis
• Furunculosis
• Carbuncle
• Sycosis
• Ecthyma
• Erysipelas
• Cellulitis
• Vulvovaginitis
	• Tissue damage from circulating toxins
	• Scarlet fever
	• Toxic-shock like syndrome
	• Propionibacterium
	• Anthrax
	• Tularaemia
	• Pasturella infection
	• Brucellosis
	• Rickettsial infections
		• Listeriosis

• Perianal infection
• Streptococcal ulcers
• Blistering distal dactylitis
• Necrotising fasciitis
• Cutaneous disease due to effect of bacterial toxin
  ○ Staphylococcal Scalded Skin Syndrome
  ○ Toxic Shock Syndrome
• Non-infective Folliculitis
• Skin lesions due to allergic hypersensitivity to streptococcal antigens
• Erythema nodosum
• Vasculitis
• Coryneform bacteria
  ○ Diphtheria
  ○ Erythrasma
  ○ Trichomycosis axillaris
  ○ Pitted Keratolysis
• Erysipeloid
• Gas gangrene
• Gram negative bacteria
  ○ Meningococcal infection
  ○ Gonococcal infection
  ○ Chancroid
  ○ Salmonella infection
  ○ Pseudomonas infection
  ○ Rhinoscleroma
  ○ Plague & Yersinia infections
  ○ Bacillary angiomatosis
  ○ Anaerobic bacteria
  ○ Tropical ulcer
  ○ Granuloma inguinale
  ○ Spirochetes & spiral bacteria
  ○ Lyme disease		

○ Leptospirosis ○ Botryomycosis ○ Necrotising subcutaneous infections ○ Mycoplasma infections ○ Lymphogranuloma venerum ○ Actinomycete infections ○ Nocardiosis • Dermatoses possibly attributed to bacteria • Chancriform pyoderma • Dermatitis vegetans • Kawasaki disease • Supurative hidradenitis		

MYCOBACTERIAL INFECTIONS

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Mycobacterium tuberculosis- • -Microbiology • -Epidemiology • -Immunology • -The tuberculin test • -Cutaneous tuberculosis-clinical features,classification,histopathology,prognosis, diagnosis,treatment,BCG vaccination,M.tuberculosis • co-infection with HIV	• Non-tuberculous mycobacteria-classification,clinical features,diagnosis and treatment	

MYCOLOGY

MUST KNOW	SHOULD KNOW	GOOD TO KNOW
• Superficial and cutaneous mycoses-Dermatophytosis,laboratory investigations(KOH,Wood's light,culture),candidiasis,pityriasis versicolor,piedra,tinea nigra,onychomycosis • Subcutaneous and deep fungal infections-lab diagnosis and management • Sporotrichosis,mycetoma,chromoblastomycosis • Phaeohyphomycosis,lobomycosis,rhinosoridiosis,subcutaneous zygomycosis,histoplasmosis,blastomycosis,coccidiomycosis,paracoccidiomycosis.		

PARASITIC WORMS AND PROTOZOA

Must Know	Should Know	Good to Know
• Lymphatic filariasis,leishmaniasis-epidemiology,clinical features,diagnosis and treatment	• Larva migrans	• Cutaneous amoebiasis

ARTHROPODS AND NOXIOUS ANIMALS

Must Know	Should Know	Good to Know
• Scabies and pediculosis-epidemiology,clinical features,diagnosis and management	• Cutaneous myiasis,insect bites	

DISORDERS OF KERATINIZATION

Must Know	Should Know	Good to Know
• ICHTHYOSIS – definition, classification • Congenital ichthyosis – histopathology, etiology, pathogenesis, clinical features, treatment • Ichthyosis vulgaris • X linked recessive ichthyosis • Colloidan baby • Non bullous icthyosiform erythroderma • Lamellar ichthyosis • Harlequin ichthyosis • Bullous icthyosiform erythroderma • Ichthyosis bullosa of Seimens • Ichthyosis hystrix • Netherton syndrome • Acquired ichthyosis • Ichthosis with malignancy • Ichthosis with non malignant disease • Drug induced ichthyosis • Erythrokeratoderma • Erythrokeratoderma variabilis • Progressive symmetrical	• Multiple sulphatase deficiency • Sjogren larrson syndrome • Refsum's disease • IBIDIS syndrome • X linked dominant ichthyosis • Pityriasis rotunda • Peeling skin syndrome – acquired, familial • Transient and persistant acantholytic dermatosis • Acrokeratosis verruciformis • Perforating keratotic disorders	• Neutral lipid storage disorders • KID syndrome • HID syndrome • CHILD syndrome • Ichthyosis follicularis with alopecia and photophobia • Ichthyosis with renal disease • Ichthyosis with immune defects • Ichthyosis with cancer • Keratoderma and associated disorders

erythrokeratoderma • Keratosis pilaris • Keratosis follicularis spinulosa decalvans • Pityriasis rubra pilaris • Darier's disease • porokeratosis • PALMOPLANTAR KERATODERMA diffuse, transgradient, focal, striate • -ACANTHOSIS NIGRICANS confluent and reticulate papillomatosis		

PSORIASIS

Must Know	Should Know	Good to Know
• Epidemiology • Aetiology and pathogenesis • Histopathology • Clinical Features • Complications • Differential diagnosis • Prognosis • Management- topical,systemic and biologic therapies • Pustular psoriasis and psoriatic arthropathy		

NON-MELANOMA SKIN CANCER AND OTHER EPIDERMAL SKIN TUMOURS

Must Know	Should Know	Good to Know
• Epidemiology and risk factors • Clinical features, diagnosis and management of NMSC • Basal cell carcinoma • Squamous cell carcinoma • Premalignant epithelial lesions-Actinic keratosis,Bowen's disease,Cutaneous horn • -Erythroplasia of Queyrat,seborrheic keratoses,dermatoses papulosa nigra,skin tags,keratoacanthoma,pseudoepithelioma tous hyperplasia,milia	• Molecular and cellular biology-role of UVR and HPV • -Arsenical keratoses,Disseminated superficial actinic porokeratosis,Bowenoid papulosis • steatomacystoma multiplex • epidermal cyst • trichlemmal cyst • keratoacanthoma	

TUMOURS OF THE SKIN APPENDAGES

Must Know	Should Know	Good to Know
• Syringoma,trichoepithelioma,pilomatricoma ,Paget's disease • Comedone nevus		• Other appendageal tumours

DISORDERS OF CUTANEOUS MELANOCYTE

Must Know	Should Know	Good to Know
• Ephelids,lentiginosis and its types • Naevi – melanocytic, spitz, halo, congenital melanocytic • Nevus of ota and ito • Mongolian spot • Malignant melanoma of the skin- • etiology,variants,histopathology,staging,management and prevention	syndromes	

DISORDERS OF SKIN COLOUR

Must Know	Should Know	Good to Know
• The basics of melanocytes-EMU,distribution,embryology,fine structure,melanogenesis • -Hypermelanosis-Lentiginosis,ephelides,hereditary disorders,hypermelanosis due to systemic disorders and drugs,postinflammatory hypermelanosis,erythema dyschromicum perstans,facial melanoses,dermal melanoses,treatment -Hypomelanosis-Vitiligo,genetic and naevoid disorders	• Melanocyte culture,pathogenesis of disorders of pigmentation Acquired hypomelanosis,endogeneous and exogeneous non-melanin pigmentation	

BULLOUS ERUPTIONS

1) CONGENITAL AND INHERITED DISEASES

MUST KNOW	*SHOULD KNOW*	GOOD TO KNOW
• Epidermolysis Bullosa o Classification, diagnosis • EB simplex: o Molecular pathology o Clinical features o Diagnosis, d/d o Management • Junctional EB: o Molecular pathology o Clinical features o Diagnosis, d/d o Management • Dystrophic EB: o Molecular pathology o Clinical features	Subtypes Subtypes	

○ Diagnosis, d/d ○ Management • Hailey-hailey disease: ○ Etiopathogenesis ○ Clinical features ○ complications, treatment	Subtypes Genetics	

IMMUNOLOGICAL Blistering DISORDERS

a) Intra-epidermal blistering

Must know	Should know	Good to know
● Structure and functioning of Desmosome & Hemi desmosome ● Dermo - epidermal junction • Pemphigus: ○ etiopathogenesis, ○ immuno - pathology, ○ genetics, ○ clinical features, ○ diagnosis (differential), ○ Management, ○ prognosis • P. Vulgaris: as above • P. Vegetans: as above • P. Foliaceus: as above • P. Erythematosus: as above Paraneoplastic pemphigus: as above	Molecular functional anatomy Molecular functional anatomy	

b) Sub-epidermal blistering

Must know	Should know	Good to know
• Bullous Pemphigoid: ○ etiopathogenesis, ○ immuno - pathology,		

○ genetics, ○ clinical features, ○ diagnosis (differential), ○ Management, ○ prognosis • Cicatricial Pemphigoid: as above • Pemphigoid (Herpes) gestationis: as above • Linear IgA Immuno-bullous disease: as above • Epidermolysis Bullosa Acquisita: as above • Bullous SLE: as above Dermatitis Herpetiformis: as above		

c) Miscellaneous Blistering Disorders

Must know	Should know	Good to know
• Sub-corneal Pustular Dermatosis • Acantholytic dermatoses: transient & persistent	• Bullae in renal disease • Diabetic bullae	

LICHEN PLANUS & LICHENOID DISORDERS

Must know	Should know	Good to know
• Lichen Planus & Lichenoid Disorders: ○ etiopathogenesis, ○ clinical Definition, ○ features, ○ variants, ○ Differential diagnosis, ○ histology, ○ complications, ○ associations,	• GVHD • Bullous LP & LP pemphigoides • LP- Psoriasis overlap	• Nekam's disease

○ Treatment, ○ prognosis, • Lichenoid reactions, • Drug induced LP • Lichen nitidus • Concept of Ashy dermatosis and lichen planus pigmentosus		

DISORDERS OF THE SEBACEOUS GLANDS

Must know	Should know	Good to know
• **Sebaceous Gland** ○ Structure, ○ Function ○ distribution ○ Funct^{n} of sebum ○ Composition & biosynthesis of sebum • **Acne Vulgaris** ○ definiton ○ etiology ○ Clinical features ○ factors affecting ○ (differential) diagnosis ○ Management • **Acne variants** ○ acne excoriee, ○ acneiform eruptions, ○ cosmetic, ○ occupational, ○ chloracne, ○ acne conglobata, ○ pyoderma faciale, ○ acne fulminans, ○ G-ve folliculitis	○ Histochemistry & ultrastructure ○ Development ○ Endocrine control of sebaceous gland ○ Associations of acne	○ Measurement of sebaceous activity & sebum production

○ Steroid acne ○ Drug induced acne ○ Adult onset acne • **Seborrhea** Ectopic sebaceous glands	• Sebaceous gland tumors ○ Classification ○ Sebaceous cyst	

DISORDERS OF SWEAT GLANDS

Must know	Should know	Good to know
• **Sweat Gland (Eccrine)** ○ Anatomy & Physiology • **Hyperhidrosis** ○ generalized ○ PalmoPlantar & Axillary ○ Asymmetrical ○ Gustatory • **An/Hypo - hidrosis** ○ Definition, ○ Etiopathogenesis, ○ Classification • **Miliaria** ○ Etio- pathogenesis, ○ Clinical features, ○ Variants/types, ○ Management • **Apocrine sweat glands** ○ Chromhidrosis, ○ Bromhidrosis ○ Fox-Fordyce disease	• Naevus sudoriferous • Compensatory hyperhidrosis ○ Associations ○ Heat stress	○ Granulosis rubra nasi ○ Diseases associated with abnormal sweat gland histology ○ Fish odour syndrome ○ Hematohidrosis

DISORDERS OF CONNECTIVE TISSUE

Must know	Should know	Good to know

• **Cutaneous atrophy** ○ Causes / classification, ○ Generalized cutn. atrophy ○ Striae • Localized cutaneous atrophy ○ Atrophoderma ○ Anetoderma ○ Facial hemiatrophy ○ Poikiloderma • **Disorders of Elastin** ○ Lax skin ○ Elastotic striae • Pseudo Xanthoma Elasticum ○ Definition ○ Etio - pathology ○ Clinical features, ○ Diagnosis (differential) ○ Management Actinic elastosis ○ Etio- pathogenesis ○ Clinical features, ○ Diagnosis (differential) ○ Management • Marfan syndrome— ○ Etio - pathogenesis, ○ Clinical features • Ehlers – Danlos syndrome ○ Types/ Classification, Dupuytren's contracture • Knuckle pads Keloid V/s Hypertrophic scars	○ local panatrophy ○ Plantar fibromatosis • Osteogenesis imperfecta • Pachydermoperiostosis • Relapsing polychondritis • Peyronie's disease	○ Achenbach's syndrome ○ Chronic atrophic acrodermatitis ○ Linear focal elastosis • Actinic granuloma ○ Clinical features • Elastofibroma • Elastoderma • Prolidase deficiency

PREMATURE AGEING SYNDROMES

Must know	Should know	Good to know
• Pangeria • Progeria • Acrogeria • Perforating dermatoses: ○ Types/classification, ○ Clinical features, ○ (Etio.) pathology, ○ Management • Colloid milium	• Congenital progeroid syndrome • Diabetic thick skin • Ainhum & pseudo-ainhum	• leprechaunism

DISORDERS OF BLOOD VESSELS

Must know	Should know	Good to know
• Erythemas • Diffuse erythematous eruptions • Annular erythemas ○ Types , ○ Etio - pathology, ○ Clinical features, ○ Diagnosis (differential) ○ Management • Telangiectasias ○ primary & secondary ○ etio(pathology) • Erythema multiforme: ○ Etio- pathogenesis, ○ Clinical features, ○ Diagnosis (differential), ○ Management • Toxic Epidermal Necrolysis ○ Etio - pathogenesis, ○ Clinical features,	○ Functional anatomy of Cutn. blood vessels • Well's syndrome ○ (Etio) pathology, ○ Clinical features ○ Management • Ataxia-Telengectasia	○ Assessment of Cutn. blood vessels ○ Capillary microscopy

○ Differential diagnosis, ○ Management & prognosis		

FLUSHING & FLUSHING SYNDROMES, ROSACEA, PERIORAL DERMATITIS

Must know	Should know	Good to know
• Flushing ○ Definition ○ Etio-pathogenesis, Flushing syndromes ○ Classification • Rosacea ○ Definition ○ Etio-pathology, ○ Clinical features, ○ Diagnosis (differential), ○ Management • Perioral dermatitis— ○ Etio-pathology, ○ Clinical features, ○ Diagnosis (differential), ○ Management & prognosis	• Carcinoid syndrome— ○ Etiopathogenesis, ○ Management	

URTICARIAS, ANGIOEDEMA and MASTOCYTOSIS

Must know	Should know	Good to know
• Urticaria: Definition ○ Classification ○ Etio – pathogenesis ○ Provoking factors ○ Clinical features, • Chronic urticarias ○ Definition , ○ Classification •Mastocytosis • classification • clinical features	• Physical ○ Classification, • Cholinergic urticaria • Cold urticaria • Contact urticaria • Aquagenic • Solar • Autoimmune urticaria • Hereditary angioedema • Etiopathogenesis of mastocytosis	• Omalizumab

• histopathology • investigations • management • Urticarial vasculitis o Definition , o Etiopathogenesis , o Clinical features, o Management • Angioedema o Classification o Etio-pathogenesis o Management & prognosis		

SYSTEMIC DISEASES AND SKIN

Must know	Should know	Good to know
Endocrine disorders o Cushings disease o Adrenal insufficiency o Hyper and hypothyroidism Cutaneous markers of internal malignancy o Paraneoplastic syndromes o Migratory erythemas GI Tract o Crohn's disease o Ulcerative colitis o Celiac disease Liver diseases o Hepatitis o Dermatosis associated with liver diseases Pancreatic diseases	Skin complications of stones Hemochromatosis o Subcutaneous fat necrosis o Migratory thrombophlebitis o Necrolytic migratory	o Hyper and hypopituitarism o Parathyroid o Multiple endocrinopathies syndrome o Autoimmune polyglandular syndrome Dermatosis associated with esophagus and stomach disorders Bowel associated dermatitis arthritis syndrome Intestinal polyposis o Other pancreatic tumours and glucagonoma syndrome

Renal disease o Dermatosis associated with renal failure and dialysis Hematological o Anemia o DIC o Antiphospholipid syndrome Annular and figurate reactive erythemas	erythema	o Renocutaneous syndromes Cardiac disease and respiratory disease Lymphoma, leukemia Skin disorders associated with bony abnormality

PURPURA

Must know	Should know	Good to know
• Purpuras: o Classification, diagnosis	• Thrombocytopenic purpuras o I.T. Purpura • Senile purpura • Toxic purpura • Itching purpura • Majocchi's ds • Disseminated Intravascular Coagulation	
• Anaphylactoid purpura (HSP)-- definition, o Etio-pathogenesis , o Clinical features, o Differential diagnoses, o Management • Capillaritis (pigmented purpuric dermatoses) o Schamberg's o Pigmented purpuric lichenoid dermatosis of		• Painful bruising syndrome • Purpura simplex • Neonatal purpura

Gougerot & Blum o Lichen aureus o Gravitational purpura		

CUTANEOUS VASCULITIS

Must know	Should know	Good to know
• Cutaneous Vasculitis o Classification c/f • Erythema elevatum diutinum • Paniculitides • Poly Arteritis Nodosa • Hypersensitivity angiitis • Vascular lesions of rheumatoid diseases o Etio, path o Investigations • Leucocytoclastic angitis o Definition, o Etio-pathogenesis, o Clinical features, o Management • Henoch Schonlein Purpura o Definition, o Etio-pathogenesis, o Clinical features, o Management • Pyoderma gangrenosum— o Definition, o Etio-pathogenesis, o Clinical features, o Management • Purpura fulminans— o Definition, o Etio-pathogenesis, o Clinical features, o Management	• Granuloma faciale • Degos` disease • Giant cell arteritis	

• Sweet`s syndrome o Definition, o Etio-pathogenesis, o Clinical features,Management • Erythema nodosum— o Definition, o Etio-pathogenesis, o Clinical features, o Management • Erythema induratum— o Definition, o Etio-pathogenesis, o Clinical features, o Management • Wegener's granulomatosis o Definition, o Etio-pathogenesis, o Clinical features, o Management		

DISEASES OF VEINS & ARTERIES : LEG ULCERS

Must know	Should know	Good to know
• Signs & symptoms of arterial diseases • Investigations • Erythromelalgia • Veins o Functional anatomy, o pathology • Atrophie- blanche • Thrombophlebitis migrans • Venous thrombosis • Oedema • Varicose veins	• Atherosclerosis o Prognosis & management • Thromboangiitis obliterans	• Ischaemic ulcer

• Post phlebitic syndr • Causes of leg ulcers • Venous ulcer--management		

DISORDER OF LYMPHATIC VESSELS

Must know	Should know	Good to know
• Lymphangiogenesis • Functional Anatomy of skin lymphatics • Identification of skin lymphatics • Lymph transport • Immune function • Oedema/Lymphoedema ○ Epidemiology ○ Pathophysiology ○ Aetiology and classification ○ Clinical features and diagnosis ○ Complication ○ Investigation • D/d of the swollen limbs • Management of lymphoedema ○ Physical therapy ○ Drug therapy ○ Surgery ○ Provision of care • Congenital lymphatic malformation • Lymphangioma cirucmscriptum • Diffuse lymphangioma • Cystic hygroma • Acquired lymphatic malformation • Acquired lymphangioma	• Primary lymphoedemas • Inherited form • Other genetic form • Congenital non hereditary forms of lymphoedema • Clinical patterns of pri.lymphoedema • Sec. Lymphoedema • Midline lymphoedema • lymphangioma • lymphangiomatosis • lymphangiomyomatosis • recurrent acute	• lymphatic tumor ○ acquired progressive ○ lymphangiosarcoma

• Lymphangitis • Kaposi sarcoma	inflammatory episode • Lymphangiothrombosis • Carcinoma erysipeloides	○ Chylous sarcoma ○ seroma

HISTIOCYTOSIS

Must know	Should know	Good to know
• Ontogeny & Function of histiocytosis • Classification of histiocytosis • Langerhans cell histiocytosis • Class lla histiocytosis • Dermatofibroma • Juvenile xanthogranuloma • Multicentric reticulohistiocytosis • Generalized eruptive histiocytoma • Papular xanthoma • Progressive nodular histiocytosis • Xanthoma disseminatum • Class llb histiocytosis • Diffuse plane xanthomatosis • Familial haemophagocytic lymphohistiocytosis • Malakoplakia • Necrobiotic xanthogranuloma • Sinus histiocytosis with massive lymphadenopathy	• Malignant histiocytosis • Monocytic leukaemia • True histiocytic lymphoma	• Benign cephalic histiocytosis • Erdheim chester disease • Fat storing hemartoma of dermal dendrocytes • Familial sea blue histiocytosis • Hereditary progressive mucinous histiocytosis • Virus associated haemophagocytic syndrome

SOFT TISSUE TUMOURS AND TUMOURS LIKE CONDITIONS

Must know	Should know	Good to know
• Vascular tumours: ○ Classification Pyogenic granuloma ○ Kaposi sarcoma	• Fibrous and myofibroblastic tumors: ○ Classification ○ Nodular fasciitis	○ Fibrous papule of face ○ Pleomorphic fibroma ○ Acquired digital fibrokeratoma ○ Fibro osseous pseudotumour

○ Angiosarcoma ○ Glomus tumour • Peripheral neuroectodermal tumours ○ Schwannoma ○ Solitary neurofibroma ○ Plexiform neurofibroma ○ Diffuse neurofibroma • Tumours of muscle • Skeletal muscle tumours • Tumours of uncertain histogenesis • Tumours of fat cell • Osteoma cutis • Cutaneous calculus ○ Leiomyoma ○ Leiomyosarcoma ○ Rhabdomyoma ○ Cutaneous Rhabdomyosarcoma	○ Fibrohistiocytic tumor ○ Giant cell tumour of tendon sheath ○ Fibrous histiocytoma ○ Angiomatoid fibrous histiocytoma ○ Plexiform fibrous histiocytoma ○ Atypical fibroxanthoma ○ Malignant fibrous histiocytoma ○ Glomeruloid hemangioma ○ Epitheloid hemangioma ○ Sinusoidal hemangioma ○ Dermal nerve sheath myxoma ○ Malignant peripheral nerve sheath tumour ○ Congenital smooth muscle hamartoma	○ Ischemic fasciitis ○ Fibrous hamartoma of infancy ○ Calcifying fibrous tumour ○ Calcifying aponeurotic fibroma ○ Inclusion body fibromatosis ○ Fibroma of tendon sheath ○ Collagenous fibroma ○ Nuchal fibroma ○ Myxofibrosarcoma ○ Kaposiform hemangio-endothelioma

CUTANEOUS LYMPHOMAS AND LYMPHOCYTIC INFILTRATES

A) PRIMARY CUTANEOUS T CELL LYMPHOMA

Must know	Should know	Good to know
• Mycosis Fungoides (MF) • Follicular mucinosis • Pagetoid reticulosis • Granulomatous slack skin • Sezary's syndrome • Lymphomatoid papulosis • Primary cutaneous CD30+ large cell lymphoma CD30+ large cell cutaneous lymphoma with regional nodal involvement	• Epidermotropic CD8+ cytotoxic lymphoma • Large cell CD 30- cutaneous lymphoma • Pleomorphic CD30- cutaneous lymphoma	• CD30+cutaneous lymphoproliferative disorder • Regressing CD30+large cell cutaneous ltmphoma Secondary cutaneous CD30+anaplastic large cell lymphoma

B) SECONDARY CUTANEOUS LYMPHOMA

Must know	Should know	Good to know
• Subcutaneous panniculitis like T cell lymphoma • Adult T cell leukaemia lymphoma • Primary cutaneous B cell lymphoma • Follicle centre cell lymphoma • Leukaemia cutis • Cutaneous Hodgkin s disease	• Extra nodal NK cell lymphoma • Blastic NK cell lymphoma	Lennert's lymphoma

C) PRIMARY CUTANEOUS B CELL LYMPHOMAS

Must know	Should know	Good to know
	• Follicle centre cell lymphoma Cutaneous plasmacytoma	• Marginal zone lymphoma • Large B cell lymphoma

D) PSEUDOLYMPHOMAS

Must know	Should know	Good to know
• Parapsoriasis • Actinic reticuloid • Lymphocytoma cutis Jessner's lymphocytic infiltrate		

SUBCUTANEOUS FAT

Must know	Should know	Good to know
• Obesity • General pathology of adipose tissue • Panniculitis ○ Septal panniculitis ○ Lobular paniculitis ○ Mixed panniculitis	○ Cellulite ○ Frontalis associated lipoma ○ Hibernoma ○ Lipomatosis	

○ Panniculitis with vasculitis • Lipodystrophy • Localized lipoatrophy • Partial or generalized lipoatrophy • Lipoma • Angiolipoma		

THE CONNECTIVE TISSUE DISEASES

Must know	Should know	Good to know
• Lupus erythematosus ○ Discoid lupus erythematosus ○ Subacute cutaneous lupus erythematosus ○ Systemic lupus erythematosus ○ Neonatal lupus erythematosus ○ The lupus anticoagulant, anti cardiolipin antibodies and the antiphospholipid syndrome • Scleroderma ○ Localized morphea ○ Gen. Morphea ○ Pseudoscleroderma ○ Occupational scleroderma ○ Iatrogenic scleroderma ○ Graft –versus –host disease ○ Eosinophilic fasciitis ○ Systemic sclerosis • Mixed connective tissue	• Dermatological manifestation of rheumatoid disease • Still`s disease	

disease • Cold, flexed finger • Lichen sclerosus • Scleroedema • Dermatomyositis • Sjogren syndrome Rheumatic fever		

NUTRITIONAL AND METABOLIC DISEASES

Must know	Should know	Good to know
• The cutaneous porphyrias ○ Etiopathogenesis ○ laboratory testing in porphyria ○ Clinical features ○ The individual porphyrias ○ Porphyrias which cause cutaneous disease ○ Porphrias which cause cutaneous disease and acute attack • Mucinoses ○ Classification of the cutaneous mucinoses ○ Lichen myxoedematous • Amyloid and the amyloidoses of the skin ○ Primary localized cutn. Amyloidosis ○ Sec. Localized cutn. Amyloidosis ○ Systemic amyloidosis ○ Primary and myeloma associated cutn. Amyloidosis ○ Sec. Systemic amyloidosis • Angiokeratoma corporis diffusum	○ Reticular erythematous mucinosis ○ Self healing juvenile cutaneous mucinosis ○ Cutaneous mucinosis of infancy ○ Papulonodular mucinosis associated with S.L.E. ○ Cutaneous focal mucinosis ○ Acral persistant papular mucinosis ○ Mucinosis naevus ○ Follicular mucinosis ○ Secondary mucinoses ○ Mucopolysaccharidoses ○ Mucolipidoses ○ Dialysis related amyloidosis ○ Inherited systemic amyloidosis	○ Cutaneous mucinosis in the toxic oil syndrome G.K ○ Neutral lipid storage disease ○ Farbers disease • Disorders of aminoacid metabolism ○ Hyperphenylalaninaemia syndrome ○ Tyrosinemia ○ Alkaptonuria ○ Homocysteinurias ○ Hartnup disease

• Xanthomas and abnormalities of lipid metabolism and storage
• Lipid metabolism
  ○ Genetic primary Hyperlipidemias
  ○ Lipid storage disease
• Nutrition and the skin
  ○ Malabsorption
  ○ Vitamins
• Kwashiorkor and marasmus
• Calcification and ossification of the skin
• Iron metabolism
• Skin disorders in diabetes mellitus
• Granuloma annulare
• Necrobiosis lipoidica
• Granuloma multiforme
	○ Gaucher's disease
	○ Niemann Pick disease	

SARCOIDOSIS

Must know	Should know	Good to know

• Sarcoidosis
  ○ Definition
  ○ Epidemiology
  ○ Aetiology
  ○ Histopathology
  ○ Immunological aspects
• General manifestations of sarcoidosis
• Staging of the disease
• Systemic features
• Sarcoidosis of the skin
• Management
  ○ Investigation
  ○ Biopsy
  ○ Kveim test
	• Unusual and atypical forms
	• Associated disease
	• Course and prognosis
	• Other sarcoidal reaction
	  ○ Infection
	  ○ Foreign material
	  ○ Crohn's disease
	  ○ Whipple's disease
	  ○ Farmer's lung
	  ○ Other condition	

○ Other investigation ○ Treatment ○ Topical therapy Systemic therapy		

THE SKIN AND THE NERVOUS SYSTEM

Must know	Should know	Good to know
• Skin innervations ○ Sensory innervations ○ Autonomic nervous system ○ Wound healing and the trophic effects • Postherpetic neuralgia ○ Pathophysiology of pain ○ Prevention of P.H.N. ○ Management of P.H.N. • Neuropathic ulcer • Peripheral neuropathy • HIV neuropathy • Syringomyelia • Tabes dorsalis • Spinal dysraphism • Spinal cord injury	• Neuroimmunology • Neurophysiological testing for skin innervations • Disorders associated with autonomic abnormalities • Hereditary sensory autonomic neuropathy • Horner syndrome • Gustatory hyperhidrosis • Chronic skin pain • Notalgia paresthetica • Brachioradial pruritus • Skin ache syndrome • Burning feet syndrome	• Trigeminal trophic syndrome • Peripheral injury • Restless leg syndrome

PSYCHOCUTANEOUS DISORDERS

Must know	Should know	Good to know
• Introduction • Emotional factors in diseases of the skin • Psychological importance of skin • Disability and quality of life • Classification • Delusions of parasitosis • Cutaneous phobias • Anorexia nervosa and bulimia • Self inflicted and simulated skin disease ○ Lichen simplex and neurodermatitis ○ Acne excoriee ○ Trichotillomania • Factitious skin disease ○ Malingering • Cutaneous disease and alcohol misuse • AIDS, HIV infection and Psychological illness • Suicide in dermatological patients ○ Treatment	• Body image • Delusions of smell • Body dysmorphic disorder ○ Epidemic hysteria syndrome and occupational mass psychogenic illness ○ Sick building syndrome ○ Psychogenic excoriation ○ Psychogenic pruritus ○ Onycotillomania and onychophagia ○ Psychogenic purpura ○ Dermatitis simulate ○ Dermatitis passivata ○ Munchausen's syndrome ○ Munchausen's syndrome by proxy ○ Self-mutilation ○ Psychotropic drugs	• Psychoneuroimmunology ○ Mind-body efferent immune interaction ○ Body- Mind afferent immune reactions ○ Habituation to dressings ○ Dermatological pathomimicry ○ Hypnosis ○ Misc. therapies ○ Skin disease in patients with learning disability

DISORDERS OF NAILS

Must know	Should know	Good to know
• Anatomy and biology of nail unit ○ Structure & Development and comparative	○ Nails in childhood and old age ○ Abnormalities of nail attachment	

anatomy ○ Blood supply ○ Nail growth • Nail signs and systemic disease ○ Abnormalities of shape ○ Changes in nail surface ○ Changes in colour • Development abnormalities • Infections- nail and nail folds • Dermatoses of nails • Nail surgery ○ Patterns of nail biopsy ○ Lateral matrix phenolization • Traumatic nail disorders ○ Acute trauma ○ Chronic repetitive trauma • The nail and cosmetics	• Tumours under or adjacent to the nail ○ Benign tumours ○ Other bone tumours ○ Vascular tumours ○ Myxoid cyst ○ Squamous cell carcinoma ○ Epithelioma cuniculatum ○ Keratoacanthoma ○ Melanocytic lesions ○ Other surgical modalities	

DISORDERS OF HAIR

Must know	Should know	Good to know
• Anatomy and physiology ○ Development and distribution of hair follicles ○ Anatomy of hair follicle ○ Hair cycle and hormonal control • Alopecia ○ Common baldness and androgenetic alopecia ○ Alopecia areata ○ Acquired cicatricial alopecia ○ Infections	○ Types of hair ○ Disturbance of hair cycle/shaft ○ Developmental defects and hereditary disorders ○ Congenital alopecia and hypotrichosis ○ Hypertrichosis ○ Shampoos ○ Conditioners ○ Cosmetic hair colouring ○ Permanent waving ○ Hair straightening	○ Alopecia in central nervous system disorders ○ Other abnormalities of shaft

○ Scaling disorders • Excessive growth of hair ○ Hirsutism • Variation in Hair pigmentation	(relaxing) ○ Hair setting ○ Complication	

THE SKIN AND THE EYES

Must know	Should know	Good to know
• Anatomy and physiology of the eye • Chronic blepharitis , rosacea , and seborrhoeic dermatitis ○ Immunopathogenisis ○ Treatment • Atopy and atopic eye disease • Cicatrizing conjunctivitis and the immunobullous disorders ○ Erythema multiforme major and toxic epidermal necrolysis • Systemic disease with skin and eye involvement • Ocular complications of dermatological therapy	○ The eyebrows ○ The eyelids ○ The lacrimal glands ○ The pre-corneal tear film • Disorders affecting the eyebrows and eyelashes • Infections ○ Viral infections ○ Bacterial infection ○ Parasitic infection • Inherited disorder • Tumors ○ Benign and malignant tumors of eyelids	

EXTERNAL EAR

Must know	Should know	Good to know
• Dermatoses and external ear • Systemic disease and the external ear	• Anatomy and physiology • Examination • Developmental defects • Traumatic conditions	• Ageing changes • Tumors of pinna and external auditory canal

THE ORAL CAVITY AND LIPS

Must know	Should know	Good to know
• Biology of the mouth • Immunity in the oral cavity ○ Examination of the mouth and perioral region • Disorders affecting the oral mucosa or lips • Genetic and acquired disorders affecting the oral mucosa or lips ○ White or whitish lesions ○ Pigmented lesions ○ Red lesions ○ Vesicoerosive disorders ○ Lumps and swellings ○ Various orocutaneous syndromes • Oral manifestations of systemic diseases • Acquired lip lesions ○ Cheilitis ○ Lupus erythematosus ○ Sarcoidosis	• Disorders affecting the teeth and skin ○ Ectodermal dysplasia • Disorders affecting the periodontium ○ Gingival disorders affecting the periodontium ○ Genetic disorders affecting the peridontium ○ Acquired disorders affecting the peridontium	

THE BREAST

Must know	Should know	Good to know
• Gynaecomastia ○ Physiological ○ In endocrine disorders ○ In nutritional, metabolic, renal and hepatic disease ○ Drug-induced • Morphea • Silicone breast implant and autoimmune disease	• Breast hypertrophy • Gigantomastia ○ Management of gynaecomastia • Hypomastia • Rudimentary nipples • Adnexal polyp of neonatal skin • Inverted nipple	• Supernumerary breast or nipples

• Cracked nipple in lactation • Lupus panniculitis • Sarcodosis of breast • Sebaceous hyperplasia of areolae • Breast abscess • Basal cell carcinoma of nipple • Seborrhoeic wart • Mondor's disease	• Hyperkeratosis of nipple and areola • Jogger's and cyclist's nipples • Nipple piercings • Artefactual breast disease • Vasculitis of the breast • Erosive adenomatosis of nipple • Breast telangiectasia	

THE GENITAL, PERIANAL AND UMBILICAL REGIONS

Must know	Should know	Good to know
• General approach • Genitocrural dermatology ○ Inflammatory ○ Infections • Male genital dermatology ○ Structure and function ○ Trauma and artifact ○ Inflammatory dermatoses ○ Non-sexually transmitted infections ○ Precancerous dermatoses ○ Squamous carcinoma • Female genital dermatology ○ Structure and function ○ Trauma and artifact ○ Inflammatory dermatoses ○ Ulcerative and bullous disorders ○ Non-sexually transmitted infections ○ Benign tumours and tumor-like lesions of vulva ○ Precancerous dermatoses	○ Congenital and developmental abnormalities of male and female genitalia ○ Other malignant neoplasms ○ Vulval malignancy	• Umbilical dermatology ○ Structure and function ○ Congenital and developmental abnormalities ○ Trauma and artifact ○ Inflammatory dermatoses

• Perineal and perianal dermatology ○ Structure and function ○ Infections	○ Benign tumours ○ Premalignant dermatoses and frank malignancies	

GENERAL ASPECTS OF TREATMENT

Must know	Should know	Good to know
• General measures in treatment like explanation, avoidance of aggravating factors, regimen, role of diet, food metabolites and toxins • Topical therapy - Cosmetic camouflage - Dressings • Systemic drug therapy • Gene therapy	• Emergency treatment of anaphylaxis • Treatment for anxiety and depressive states in dermatology • **Medicolegal aspects of dermatology**	• Alternative therapies like - Physiotherapy - Acupuncture - Biofeedback techniques - Behaviour therapy - Heliotherapy - Actinotherapy - Climatotherapy - Homeopathy

DRUG REACTIONS

Must know	Should know	Good to know
• Classification and mechanism • Histopathology • Types of clinical reaction ○ Exanthematous, ○ purpuric, ○ pityriasis rosea like, ○ psoriasiform, ○ exfoliative dermatitis, ○ anaphylaxis, ○ urticaria, ○ drug hypersensitivity syndrome, ○ fixed drug eruptions,	• Incidence • Annular erythemas • Acute generalized exanthematous pustulosis • Serum sickness • Eczematous • Acanthosis nigricans • Erythromelagia	

○ lichenoid eruptions, ○ photosensitivity, ○ pigmentation, ○ acneform eruption, ○ bullous eruptions, ○ vasculitis, ○ LE like, DM like, scleroderma like ○ erythema nodosum, ○ anticonvulsant hypersensitivity, ○ hair and nail changes, • Management of drug reactions - Diagnosis - Treatment		

ERYTHEMA MULTIFORME, STEVENS JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS

Must know	Should know	Good to know
• Erythema multiforme, Stevens-Johnson syndrome and toxic epidermal necrolysis: - Etiology - Predisposition in HIV - Pathology - SCORTEN - Diagnosis - Treatment - Prevention	• Incidence	

RADIOTHERAPY AND REACTIONS OF IONIZING RADIATION

Must know	Should know	Good to know
• Indications - Acute - Chronic • Radiodermatitis	• Role in benign diseases like psoriasis, keloids	• Role in malignant diseases • Radiation induced tumors

LASERS

Must know	Should know	Good to know

• Basic principles
• Laser safety
• Target tissues
• Main types of lasers
  - Enumeration
  - Wavelengths
  - Indications
	• Laser ablation
	• Resurfacing
	• Non-ablative skin remodeling	

RACIAL INFLUENCES ON SKIN DISEASES

Must know	Should know	Good to know
• Classification of races and their main characteristics	• Racial variations in pigmentation, hair and cutaneous appendages • Diseases with distinct racial or ethnic predisposition	• Racial variation in common diseases

THE AGES OF MAN AND THEIR DERMATOSIS

• Somatic growth • Sexual development and its effect on skin, especially sebaceous activity • Puberty associated hormonal events and cutaneous changes • Enumeration of puberty dermatosis and their clinical features • Cutaneous changes with menstrual cycle • Physiological changes related to pregnancy • Vascular changes • Pregnancy dermatoses - Pruritus gravidarum - Pemphigoid gestationis - Pruritiuc urticarial papules and plaques of pregnancy - Prurigo of pregnancy - Pruritic folliculitis	• Premature and delayed puberty - causes and presentation • Disorders of menopause • **Aging skin** **-Concept of Geriatric patients & physiological changes in ageing skin** **-Polypharmacy** **-Management of late onset Vitiligo,Psoriasis.** - **Skin disorders associated with aging** • Autoimmune progesterone dermatitis	• Enumeration and identification of common syndromes with short stature

SYSTEMIC THERAPY

Must know	Should know	Good to know
• Systemic steroids • Antihistamines • Retinoids • Cyclophosphamide • Methotrexate • Mycophenolate mofetil • Cyclosporin	• Hormonal preparations • NSAIDs • Cytokines • Interferons • Essential fatty acids • Bleomycin • Fumaric acid esters	• Interleukins • Chlorambucil • Dacarbazine • Hydroxyuria • Melphelan • Gold • Other antiviral drugs like

• PUVA
• Intravenous immunoglobulin
• Penicillamine
• Antibiotics
• Antitubecular drugs
• Antileprosy drugs
• Antifungal drugs
• Antiviral drugs
  - Acyclovir and its congeners
• Anti-retroviral drugs
• Ivermectin
• Drugs of peripheral circulation
  - Pentoxyphyllin
  - Calcium channel blockers
  - Sildenafil citrate
  - ACE-inhibitors and antagonists
• Antimalarials
• Thalidomide
• Colchicine
	• Photopharesis
	• Plasmapheresis
	• Other anti-retroviral
	• Dethylcarbamazine
	• Sulfasalazine
		Vidarabine, Idoxuridine
		• Recent advances in therapeutics.

TOPICAL THERAPY

Must know	Should know	Good to know

• General principles - Choice of vehicle - Frequency and mode of application - Quantity to be applied • Various formulation - Enumeration with main characteristics - Enumeration of vehicle components • Anti-perspirants • Topical antibiotics - Fusidic acid - Mupirocin - Clindamycin - Silver sulfadiazine - Metronidazole • Antifungals - Allyamines - Imidazoles - Ciclopirox olamine - Morpholines • Antiparasitic agents - Pyrethroids - Malathion - Benzyl benzoate • Antiviral agents - Acyclovir • Astringents - Potassium permanganate - Aluminium acetate - Silver nitrate • Corticosteroids - Mechanism - Side effects (local and	- Erythromycin - Polyenes - Bleomycin - 5-flurouracil - Cyclocsporin - Bexarotene - Depilators - Contact sensitizers - Capsaicin	- Bacitracin - Gentamicin - Polymyxin B - Tetracyclines - Tolnaftate - Undecylenic acid - Pencyclovir - Idoxuridine - Mechlorethamine - T4 endonuclease V - Camphor - Menthol - Dyes

systemic) - Classification - Intralesional steroids - Indications • Cytotoxic and antineoplastic agents - Imiquimod - Podophyllin and podophyllotoxin • Depigmenting agents - Hydroquinone - Retinoic acid - Kligman cream - Azelaic acid - Kojic acid • Emollients • Immunomodulators - Tacrolimus - Pimecrolimus • Retinoids - Retinoic acid - Adapalene - Tazarotene • Miscellaneous - Dithranol - Sunscreen - Tars - Vit D analogue - Minoxidil		-

BASIC PRINCIPLES OF DERMATOSURGERY

Must know	Should know	Good to know
• RSTL • Instruments used in dermatosurgery • Methods of sterilization	• Types of wound healing • Wound management	○ Tissue glues, staples, wound closure tapes,

• Suture materials: ○ Classification, ○ Suture size, ○ Type and size of needle • Types of suturing: ○ simple interrupted, ○ mattress, vertical & horizontal ○ Intradermal buried, ○ S.C. buried, ○ Running subcuticular, ○ Figure of 8 • Suture removal • Preoperative workup: ○ medication, ○ part preparation ○ relevant investigation • Types of local anesthesia: ○ Topical/surface, ○ infiltration, ○ tumescent, ○ field blocks, ○ nerve block • Types of Anesthetic agents • Waste segregation & disposal • Patient counseling, psychological assessment and consent • Emergencies and their management in dermatosurgery (vasovagal reaction, anaphylaxis, haemorrhage)		

STANDARD DERMATOSURGICAL PROCEDURES

Must know	Should know	Good to know
• Electrosurgery: ○ Types (Electro-fulguration, -section, -cautery, etc.)	○ Physics: basic principles	• Intralesional sclerotherapy

○ Indications • Curettage: ○ Indications, ○ Techniques: combination with E.C. • Intralesional steroid therapy: ○ Indications ○ Dosage • Chemical cautery: ○ Use of Agents (TCA, Phenol) ○ Indications • Cryosurgery : ○ Mech. Of action, ○ Cryogens and their properties, ○ Techniques – dip stick, spray, probe, ○ Indications • Excision Bx • Epidermal cyst excision – Indication and technique • Corn enucleation	• Radiofrequency surgery: ○ Physics, circuitry, ○ Techniques, ○ Types, ○ Indications ○ Agents other than TCA, Phenol	

SPECIAL DERMATOSURGICAL PROCEDURES:

Must know	Should know	Good to know
• Dermabrasion: ○ Preoperative work up, ○ instruments used, ○ indications, ○ Techniques ○ Post-op care • Vitiligo surgery & skin grafting: ○ Punch graft, ○ Suction blister graft, ○ ideal donor sites/sites to be	○ Facial cosmetic units ○ Microdermabrasion ▪ Mechanism of action, ▪ Indications/Limitations ○ Split-thickness graft ○ Tattooing	▪ Instrument use, ▪ procedure, ▪ complication ○ Non cultured Melanocyte-keratinocyte transfer

avoided ○ types of post operative dressing • Nail surgery : ○ Intra matrix injection, ○ Nail matrix Bx, ○ Nail unit Bx ○ Partial & complete nail avulsion • Hair restoration surgery ○ Principles ○ Types ○ Indications • Lasers • Dermal fillers – - type and indications • Iontophoresis: ○ Mechanism, indications, contra-Indications ○ Procedures • Eletroepilation: ○ Indications ○ Contraindications, ○ Types - electrolysis, thermolysis	• Chemical peel: ○ Classification/types (AHA, BHA, others), ○ Combination peels • Scar revision – techniques • Male genitalia – ○ dorsal slit • Botunimum toxin: ○ Pharmacology& mechanism of action, ○ Indications, ○ contra indications, ○ available preparation	technique Keloid: debulking ○ Methodology ○ Pre- & Post-op care ○ Circumcision • Tissue Augmentation: ○ Principles ○ Materials ○ Techniques • Ear, nose and body piercing • Ear lobe repair ○ storage, ○ dilution and dosage, ○ procedure, ○ complications • Liposuction

STD CURRICULUM FOR POST GRADUATES

MUST KNOW	***SHOULD KNOW***	***GOOD TO KNOW***
Anatomy • Anatomy of male and female genital tract (including blood supply and lymphatic drainage) Microbiology & Immunology • Normal/abnormal genital flora	• Role of lactobacilli • Risk factors for	• Mucosal immune system in males and

	transmission of STD	females • Bacterial adhesins • Strategies for development of mucosal immune response to control STI
Syndromic approach • Etiology, clinical features, and management of the following STI syndromes: ➢ Genital ulcer disease ➢ Vaginal discharge ➢ Urethral discharge ➢ Inguinal bubo ➢ Scrotal swelling ➢ Lower abdominal pain ➢ Ophthalmia neonatorum • NACO guidelines for management of various STDs		• CDC guidelines for management of various STDs
Viral STDs **<u>Genital herpes virus infection (HPG)</u>** • Life cycle including latency & reactivation • Clinical presentation ➢ Primary episode ➢ Non-primary first episode ➢ Recurrent episode • Lab diagnosis ➢ Specimen collection ➢ Cytology (Tzanck)	• Epidemiology & transmission • Immune response • Complications like aseptic meningitis, encephalitis, radiculomyelopathy dissemination etc. • Lab diagnosis ➢ Antigen detection by IF, IP, EIA etc. ➢ DNA hybridization	• Morphology of virus

➢ Culture ➢ Histopathology ➢ Serological diagnosis ➢ Nucleic acid amplification tests (NAATs) including PCR & LCR	based molecular tests	
• Treatment ➢ Drugs for HSV ➢ NACO guidelines for treatment of primary & recurrent episodes in immunocompetent & immunocompromised host.	• Treatment ➢ Parenteral treatment for severe infection ➢ Treatment of acyclovir-resistant herpes ➢ Treatment of HPG in pregnancy • HIV & genital herpes	• Treatment - CDC guidelines • HSV Vaccines • Recent advances in diagnosis and treatment
<u>Neonatal herpes simplex infection</u> • Modes of transmission and relation with nature of maternal infection and immunity. • • Clinical presentation – asymptomatic, localized, disseminated disease.	• Laboratory diagnosis • Treatment	
<u>Human papilloma virus infections (HPV)</u> • Clinical presentation – condyloma acuminata, papular, macular, giant warts (Buschke-Lownestein) etc.	• Epidemiology & transmission • Immune response	• HPV induced carcinogenesis – high-risk serotypes, mechanism of neoplasia & screening
• Lab diagnosis ➢ Acetowhite test	• Lab diagnosis ➢ Antigen detection	

➢ Histopathology • Treatment ➢ Treatment options like chemical cauterization, physical modalities and other drugs. ➢ NACO guidelines **<u>Genital molluscum contagiosum (MC)</u>** • Clinical features • Lab diagnosis – ➢ Microscopy – HP bodies ➢ Pathology (biopsy) • Treatment options for localized and disseminated lesions **<u>HIV</u>** • Structure & biology of HIV • Modes / risk factors for transmission • Cutaneous manifestation of HIV (infective / non infective) • PEP prophylaxis – indications, source code, exposure code, regimen, monitoring, side effects, adherence	➢ Molecular tests – DNA hybridization, PCR etc • Treatment in pregnancy • HPV infection with HIV • Morphology of virus • MC in HIV infection • Lab diagnosis of HIV • Disease classification / staging • HAART ➢ Classification of ART drugs ➢ NACO guidelines on indications, first line regimens, patient monitoring ➢ Side effects of ART drugs	• Treatment - CDC guidelines • HPV vaccines • Recent advances in diagnosis & treatment • Differential diagnosis of MC-like umblicated lesions • Mechanism of depletion of CD4 cells, role of cytokines etc. • HAART ➢ ART failure & second line regimens ➢ Pediatric ART – dose, regimens, side effects, monitoring ➢ Adherence to ART & ART drug resistance

• Sentinel surveillance	• Management of HIV in pregnancy – regimen, doses, monitoring, side effects • Prevention of mother to child transmission • National AIDS control programme (NACP) - phases, goals, targets and achievements	• Management of HIV patient in tuberculosis, hepatitis, injection drug abusers • Immune reconstitution inflammatory syndrome (IRIS) • Indications for CPT prophylaxis & management of opportunistic infections • Kaposi's sarcoma – etiology, clinical variants, treatment modalities • New drugs or approaches to target HIV
Bacterial STDs ***Syphilis*** • Structure of *Treponema pallidum* • Modes of transmission • Natural history of disease (course of untreated syphilis) • Classification of syphilis • Clinical presentations of primary, secondary, tertiary syphilis • Clinical features of different	• History of syphilis – Columbian and environmental theory • Pathogenesis of disease • Immune response	• Mechanism of motility • Treponemal antigens

stages – primary chancre, variants of secondary stage (chancre redux, syphilis de emblee, pseudochancre redux), tertiary syphilis (gumma, other manifestations) • Lab diagnosis – DGI, serological tests (treponemal and non treponemal tests), false positive VDRL / TPHA • Treatment – NACO guidelines • Congenital syphilis – clinical manifestations **<u>Chancroid</u>** • Morphology *of H ducreyi* • Clinical features including variants • Lab diagnosis ➢ Microscopy ➢ Culture ➢ Serology • Treatment – NACO guidelines	• Malignant syphilis • Cardiovascular syphilis • Neurosyphilis- different stages • Charcot joints • Lab diagnosis -technique, monitoring & positivity of tests in different stages • Treatment in pregnant patient • Jarisch herxheimer reaction- etiology, clinical features, management • Syphilis & HIV • Congenital syphilis - management • Growth characteristics *of H ducreyi* • Lab diagnosis ➢ Histopathology ➢ Molecular techniques like PCR • Chancroid & HIV	• Complications of primary and secondary stages • Histopathology in different stages • Treatment ➢ CDC guidelines ➢ Treatment of penicillin-allergic patients & desensitization • Syphilis vaccines • Endemic syphilis (yaws) - clinical features, diagnosis & treatment • Drug resistance in chancroid • Treatment – CDC guidelines

Gonococcal infections • Morphology & biology of *N gonorrhoea* • Clinical features & complications including acute urethritis, acute & chronic complications, anorectal, pharyngeal and disseminated infection • Lab diagnosis – ➢ Specimen collection & transport ➢ Microscopy ➢ Culture ➢ Nucleic acid amplification tests (NAATs) including PCR & LCR • Treatment – NACO guidelines for uncomplicated and complicated gonococcal infections	• Genetic characteristics and strains • Lab diagnosis – ➢ Antigen detection tests ➢ Serological tests ➢ DNA hybridization based molecular tests like PACE etc. • Gonorrhoea in pregnancy • HIV & gonorroea • Drug resistance in gonorrhoea	• Treatment – CDC guidelines • Gonococcal vaccines • Recent advances in diagnosis & treatment
<u>Chlamydia trachomatis infections</u> • Clinical features & complications – entire spectrum of urethritis, cervicitis, proctitis, neonatal conjunctivitis, and related complications. • Lab diagnosis – ➢ Specimen collection & transport ➢ Microscopy	• Morphology & biology of *C trachomatis* • Lab diagnosis – ➢ Antigen detection tests ➢ Serological tests ➢ DNA hybridization	

➢ Culture ➢ Nucleic acid amplification tests (NAATs) including PCR & LCR • Treatment – NACO guidelines	based molecular tests like PACE etc	• Treatment – CDC guidelines
<u>Lymphogranuloma venereum</u> • Clinical features – including different stages and complications • Lab diagnosis – ➢ specimen collection ➢ cytology ➢ culture • Treatment ➢ NACO guidelines ➢ Surgical	• Epidemiology & transmission • Pathogenesis & pathology • Lab diagnosis – ➢ antigen detection ➢ serological tests molecular tests like PCR, RFLP • HIV & LGV	• Treatment – CDC guidelines
Donovanosis • Morphology of organism • Clinical features including clinical variants & complications • Lab diagnosis- ➢ specimen collection ➢ microscopy ➢ histopathology ➢ isolation of organism • Treatment ➢ NACO guidelines	• Epidemiology & transmission • Pathogenesis & spread of disease • HIV & Donovanosis	• Treatment – CDC guidelines

➢ Surgical ***Bacterial vaginosis (BV)*** • Epidemiology & risk factors • Pathogenesis including alteration of mucosal microflora and biochemical changes • Clinical features • Lab diagnosis – Amsel's criteria • Treatment – NACO guidelines **<u>Pelvic inflammatory disease (PID)</u>** • Epidemiology & risk factors • Microbiology of PID • Clinical features & complications • Lab diagnosis • Treatment - NACO guidelines Fungi, protozoa & arthropod infections **<u>Genital candidal infections (VVC & CBP)</u>** • Clinical features ➢ VVC in females - uncomplicated and complicated disease ➢ CBP in males ➢ Candidal hypersensitivity • Lab diagnosis – microscopy	• Complications • Lab diagnosis – Nugent's criteria • BV in pregnancy • Epidemiology including risk factors • Mycology of albicans and non-albicans candida • Lab diagnosis – newer	• Treatment – CDC guidelines • Differential diagnosis of acute pelvic pain • Treatment - CDC guidelines

and culture • Treatment ➢ topical and oral drugs ➢ NACO guidelines for uncomplicated & complicated disease (including pregnancy) **<u>Trichomonas vaginilis infection</u>** • Morphology of *T vaginilis* • Clinical features • Lab diagnosis ➢ microscopy • Treatment - NACO guidelines **Genital scabies** • Morphology & life cycle of the mite • Epidemiology & transmission • Clinical features – typical and special variants • Lab diagnosis by microscopy • Treatment – ➢ Principles and options ➢ NACO guidelines *Phthiriasis pubis* • Morphology & life cycle of the mite	tests like PCR • Treatment of fluconazole resistant *C albicans* and non-albicans Candidiasis • HIV & genital candidiasis • Lab diagnosis – culture methods, molecular techniques. • Trichomonas infection in pregnancy • Immunity in scabies • Lab diagnosis by newer techniques – epiluminiscence microscopy, PCR • HIV & Scabies • Epidemiology & transmission	• Treatment - CDC guidelines • Recent advances like newer topical and systemic anti-mycotic drugs (like voriconazole) • Treatment – CDC guidelines

• Clinical features • Diagnosis • Treatment – NACO guidelines **Miscellaneous**	• Epididymo-orchitis • Dhat syndrome – etiology, clinical features, treatment	• Treatment – CDC guidelines • Treatment – CDC guidelines • Acute & chronic prostatitis • Chronic pelvic pain syndrome

LEPROSY CURRICULUM FOR POST GRADUATE

MUST KNOW	***SHOULD KNOW***	***GOOD TO KNOW***
History Epidemiology • Transmission • Recent Status of Leprosy in India • Leprosy control programmes **Microbiology & Immunology** • Structure of *M leprae*	• Global scenario	• History of leprosy and treatments of historical interest

• Humoral response • Cell mediated immune response • Tests for assessment of CMI Classification of leprosy • Immunopathological spectrum of leprosy • Ridley Jopling classification • Paucibacillary and multibacillary leprosy **Clinical features** • Cutaneous • Nerve involvement • Ocular involvement-causes, effects due to infiltration and inflammation and reactions • Involvement of other mucosae • Systemic Involvement in Leprosy-muskuloskeletal, hepatic, renal and reproductive • Variants of leprosy like Neuritic, indeterminate, single skin lesion, lucio, histoid , lazarine Differential diagnosis of: • Hypopigmental macules • Erythematous skin lesions • Nodules • Peripheral nerve thickening **Investigations** • Slit skin smear including bacterial index, morphological index	• Important M.leprae antigens • Role of macrophages in leprosy • Difference Between Madrid and Ridley Jopling classification • Sensory and motor dysfunction	• Biochemical characteristics of M leprae • Other classification systems in leprosy

• Histopathology of skin according to Ridley Jopling classification • Lepromin test • Clinical tests for sensory, motor and autonomic functions **Treatment of leprosy** • Conventional drugs-dapsone, rifampicin and clofazamine –meachanism of action, pharmacokinetics and side effects • Standard and alternative regimes • Drug resistance • Investigational drugs • Vaccines in leprosy **Reactions in Leprosy** • Aetiopathogenesis • Clinical features-cutaneous and systemic • Differentiate between relapse and reversal • Histopathology • Treatment - corticosteroids, thalidomide, clofazamine, antimalarials etc **Special situations like** • Pregnancy • Childhood Leprosy • Leprosy and HIV Experimental models in leprosy	• Histopathology of nerves • Serology in leprosy esp., PGL-1 ELISA • Newer and short duration regimes • Uniform MDT • Tests for drug resistance • Immunotherapy in leprosy • Classify severity of type 2 reaction • Management of nerve abscess	• Histopathology of other tissues like kidneys, liver, lymph nodes, mucosae • In-vitro testing of M. leprae

• Mice • Armadillos **Deformities in leprosy** • Types- anesthetic, motor and specific deformities involving hands, feet (including trophic ulcer) and face • Nerve damage- clinical features and management • Assessment • Prevention • Management- • medical, surgical and physiotherapy Disability prevention & Rehabilitation	• Disability assessment • Physical – prosthesis, surgical	• Other non human primates • Vocational and social

Biostatistics, Research Methodology and Clinical Epidemiology

Ethics

Medico legal aspects relevant to the discipline

Health Policy issues as may be applicable to the discipline

POSTING SCHEDULE

Place	DURATION
CLINICS 9AM-1PM DAILY (MON-SATURDAY)	
1. WARD	6 MONTHS
2. STD CLINIC	6 MONTHS
3. LEPROSY CLINIC	3 MONTHS
4. MINOR OT	3 MONTHS
5. OPD	18 MONTHS

SPECIAL CLINICS (ONCE A WEEK): EVENINIG 2-4PM

1. VITILIGO CLINIC	3 MONTHS
2. PSORIASIS CLINIC	3 MONTHS
3. VESICO BULLOUS CLINIC	3 MONTHS
4. PIGMENTARY CLINIC	3 MONTHS
5. PSORIASIS CLINIC	3 MONTHS
6. DERMATOSURGERY	3 MONTHS
7. PHOTOTHERAPY	3 MONTHS
8. COSMETOLOGY (PEELS, FILLERS ETC.)	3 MONTHS

SKILLS

1. Clinical skills
2. Bed side diagnostic skills
3. Dermatopathology skills
4. Dermatosurgery skills

Clinical skills

- Take detailed and reliable history and record appropriate details
- Demonstrate detailed and correct physical examination, including skin & appendages, mucous membranes, and other relevant body systems
- Formulate accurate, complete and appropriate differential diagnosis
- Select appropriate investigations for diagnosis
- Select appropriate treatment plan
- Communicate treatment plan to the patient and/or relatives or care-takers
- Recognize potentially serious skin diseases
- Recognize urgency of patients requiring immediate assessment and treatment, and differentiate from non-urgent cases
- Recognize own limits and choose appropriately when to ask for help.

Dermatopathology skills

- Recognize importance of histopathology in appropriate cases
- Regularly review biopsy specimens with histopathologist
- Evaluate histological skin slides, giving appropriate differential diagnosis
- Discuss appropriate differential diagnosis with histopathology team
- Interpret special stains/immunohistochemistry correctly
- Participate actively in departmental clinicopathological review

Bed side diagnostic skills

Perform and interpret the following tests/diagnostic procedures:

- KOH smear examination
- Tzanck test
- Gram staining

- Giemsa staining
- Zeil-Neilson staining for acid fast bacilli (AFB)
- Dark ground illumination (DGI) microscopy for treponemes
- Wood's lamp examination

Dermatosurgery skills

- Accurately evaluate surgical options for individual skin lesions
- Perform the following surgical procedures safely and effectively:
    1. Biopsies – skin, nail, and nerve
    2. Cryotherapy
    3. Curettage with and without cautery
    4. Shave excision
    5. Wound closure using different suturing techniques
    6. Chemical peeling
- Observe the following with proper understanding of the procedure:
    1. Patch testing
    2. Phototherapy (PUVA and NB-UVB)
    3. Dermabrasion
    4. Nail surgery
    5. Split thickness grafting
    6. LASER
- Identify complications of skin surgery, including medico-legal aspects
- Participate in surgical audit
- Recognize limits of own surgical skills, and consult with plastic surgeon appropriately

THESIS PROTOCOL & THESIS

The candidates are required to submit a thesis at the end of three years of training as per the rules and regulations of NBE.

Guidelines for Submission of Thesis Protocol & Thesis by candidates

Research shall form an integral part of the education programme of all candidates registered for DNB degrees of NBE. The Basic aim of requiring the candidates to write a thesi protocol & thesis/dissertation is to familiarize him/her with research methodology. The members of the faculty guiding the thesis/dissertation work for the candidate shall ensure that the subject matter selected for the thesis/dissertation is **feasible, economical** and **original**.

Guidelines for Thesis Protocol

The protocol for a research proposal (including thesis) is a study plan, designed to describe the background, research question, aim and objectives, and detailed methodology of the study. In other words, the protocol is the 'operating manual' to refer to while conducting a particular study.

The candidate should refer to the NBE Guidelines for preparation and submission of Thesis Protocol before the writing phase commences. The minimum writing requirements are that the language should be clear, concise, precise and consistent without excessive adjectives or adverbs and long sentences. There should not be any redundancy in the presentation.

The development or preparation of the Thesis Protocol by the candidate will help her/him in understanding the ongoing activities in the proposed area of research. Further it helps in creating practical exposure to research and hence it bridges the connectivity between clinical practice and biomedical research. Such research exposure will be helpful in improving problem solving capacity, getting updated with ongoing research and implementing these findings in clinical practice.

Research Ethics: Ethical conduct during the conduct and publication of research is an essential requirement for all candidates and guides, with the primary responsibility of ensuring such conduct being on the thesis guide. Issues like Plagiarism, not maintaining the confidentiality of data, or any other distortion of the research process will be viewed seriously. The readers may refer to standard documents for the purpose.

The NBE reserves the right to check the submitted protocol for plagiarism, and will reject those having substantial duplication with published literature.

PROTOCOL REQUIREMENTS

1. All of the following will have to be entered in the online template. The thesis protocol should be restricted to the following word limits.

- Title : 120 characters (with spacing) page
- Synopsis [structured] : 250-300
- Introduction : 300-500
- Review of literature : 800-1000
- Aim and Objectives : Up to 200
- Material and Methods : 1200-1600
- 10-25 References [ICMJE style]

2. It is mandatory to have ethics committee approval before initiation of the research work. The researcher should submit an appropriate application to the ethics committee in the prescribed format of the ethics committee concerned.

Guidelines for Thesis

1. The proposed study must be approved by the institutional ethics committee and the protocol of thesis should have been approved by NBE.

2. The thesis should be restricted to the size of 80 pages (maximum). This includes the text, figures, references, annexures, and certificates etc. It should be printed on both sides of the paper; and every page has to be numbered. Do not leave any page blank. To achieve this, following points may be kept in view:

    a. The thesis should be typed in 1.5 space using Times New Roman/Arial/ Garamond size 12 font, 1" margins should be left on all four sides. Major sections viz., Introduction, Review of Literature, Aim & Objectives, Material and Methods, Results, Discussion, References, and Appendices should start from a new page. Study proforma (Case record form), informed consent form, and patient information sheet may be printed in single space.
    b. Only contemporary and relevant literature may be reviewed. Restrict the introduction to 2 pages, Review of literature to 10-12 pages, and Discussion to 8-10 pages.
    c. The techniques may not be described in detail unless any modification/innovations of the standard techniques are used and reference(s) may be given.
    d. Illustrative material may be restricted. It should be printed on paper only. There is no need to paste photographs separately.

3. Since most of the difficulties faced by the residents relate to the work in clinical subject or clinically-oriented laboratory subjects, the following steps are suggested:
    a. The number of cases should be such that adequate material, judged from the hospital attendance/records, will be available and the candidate will be able to collect case material within the period of data collection, i.e., around 6-12 months so that he/she is in a position to complete the work within the stipulated time.
    b. The aim and objectives of the study should be well defined.
    c. As far as possible, only clinical/laboratory data of investigations of patients or such other material easily accessible in the existing facilities should be used for the study.
    d. Technical assistance, wherever necessary, may be provided by the department concerned. The resident of one specialty taking up some problem related to some other specialty should have some basic knowledge about the subject and he/she should be able to perform the investigations independently, wherever some specialized laboratory investigations are required a co-guide may be co-opted from the concerned investigative department, the quantum of laboratory work to be carried out by the candidate should be decided by the guide & co-guide by mutual consultation.

4. The clinical residents are not ordinarily expected to undertake experimental work or clinical work involving new techniques, not hitherto perfected OR the use of chemicals or radioisotopes not readily available. They should; however, be free to enlarge the scope of their studies or undertake experimental work on their own initiative but all such studies should be feasible within the existing facilities.

5. The DNB residents should be able to freely use the surgical pathology/autopsy data if it is restricted to diagnosis only, if however, detailed historic data are required the resident will have to study the cases himself with the help of the guide/co-guide. The same will apply in case of clinical data.

6. Statistical methods used for analysis should be described specifically for each objective, and name of the statistical program used mentioned.

General Layout of a DNB Thesis:

- **Title-** A good title should be brief, clear, and focus on the central theme of the topic; it should avoid abbreviations. The Title should effectively summarize the proposed research and should contain the PICO elements.
- **Introduction-** It should be focused on the research question and should be directly relevant to the objectives of your study.

- **Review of Literature -** The Review should include a description of the most relevant and recent studies published on the subject.

- Aim and Objectives - The 'Aim' refers to what would be broadly achieved by this study or how this study would address a bigger question / issue. The 'Objectives' of the research stem from the research question formulated and should at least include participants, intervention, evaluation, design.

- **Material and Methods-** This section should include the following 10 elements: Study setting (area), Study duration; Study design (descriptive, case-control, cohort, diagnostic accuracy, experimental (randomized/non-randomized)); Study sample (inclusion/exclusion criteria, method of selection), Intervention, if any, Data collection, Outcome measures (primary and secondary), Sample size, Data management and Statistical analysis, and Ethical issues (Ethical clearance, Informed consent, trial registration).

- **Results-** Results should be organized in readily identifiable sections having correct analysis of data and presented in appropriate charts, tables, graphs and diagram etc.

- **Discussion–**It should start by summarizing the results for primary and secondary objectives in text form (without giving data). This should be followed by a comparison of your results on the outcome variables (both primary and secondary) with those of earlier research studies.

- **Summary and Conclusion-** This should be a précis of the findings of the thesis, arranged in four paragraphs: (a) background and objectives; (b) methods; (c) results; and (d) conclusions. The conclusions should strictly pertain to the findings of the thesis and not outside its domain.

- **References-** Relevant References should be cited in the text of the protocol (in superscripts).

- **Appendices -**The tools used for data collection such as questionnaire, interview schedules, observation checklists, informed consent form (ICF), and participant information sheet (PIS) should be attached as appendices. Do not attach the master chart.

Thesis Protocol Submission to NBE

1. DNB candidates are required to submit their thesis protocol within 90 days of their joining DNB training.

2. Enclosures to be submitted along with protocol submission form:
    a) Form for Thesis Protocol Submission properly filled.
    b) Thesis Protocol duly signed.
    c) Approval letter of institutional Ethical committee. *(Mandatory, non receivable of any one is liable for rejection)*

Thesis Submission to NBE

1. As per NBE norms, writing a thesis is essential for all DNB candidates towards partial fulfillment of eligibility for award of DNB degree.
2. DNB candidates are required to submit the thesis before the cut-off date which shall be 30th June of the same year for candidates appearing for their scheduled December final theory examination. Similarly, candidates who are appearing in their scheduled June DNB final examination shall be required to submit their thesis by 31st December of preceding year.
3. Candidates who fail to submit their thesis by the prescribed cutoff date shall NOT be allowed to appear in DNB final examination.
4. Fee to be submitted for assessment (In INR): 3500/-
5. Fee can be deposited ONLY through pay-in-slip/challan at any of the Indian bank branch across India. The challan can be downloaded from NBE website www.natboard.edu.in
6. Thesis should be bound and the front cover page should be printed in the standard format. A bound thesis should be accompanied with:
    a. A Synopsis of thesis.
    b. Form for submission of thesis, duly completed
    c. NBE copy of challan (in original) towards payment of fee as may be applicable.
    d. Soft copy of thesis in a CD duly labeled.
    e. Copy of letter of registration with NBE.

7. A declaration of thesis work being bonafide in nature and done by the candidate himself/herself at the institute of DNB training need to be submitted bound with thesis. It must be signed by the candidate himself/herself, the thesis guide and head of the institution, failing which thesis shall not be considered.

The detailed guidelines and forms for submission of Thesis Protocol & Thesis are available at www.natboard.edu.in.thesis.php.

LOG BOOK

A candidate shall maintain a log book of operations (assisted / performed) during the training period, certified by the concerned post graduate teacher / Head of the department / senior consultant.

This log book shall be made available to the board of examiners for their perusal at the time of the final examination.

The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s) The candidate will maintain the record of all academic activities undertaken by him/her in log book .

1. Personal profile of the candidate
2. Educational qualification/Professional data
3. Record of case histories
4. Procedures learnt
5. Record of case Demonstration/Presentations
6. Every candidate, at the time of practical examination, will be required to produce performance record (log book) containing details of the work done by him/her during the entire period of training as per requirements of the log book. It should be duly certified by the supervisor as work done by the candidate and countersigned by the administrative Head of the Institution.
7. In the absence of production of log book, the result will not be declared.

Leave Rules

1. DNB Trainees are entitled to leave during the course of DNB training as per the Leave Rules prescribed by NBE.
2. A DNB candidate can avail a maximum of 20 days of leave in a year excluding regular duty off/ Gazetted holidays as per hospital/institute calendar/policy.
3. MATERNITYLEAVE:
    a. Afemale candidate is permitted a maternity leave of 90 days once during the entire duration of DNB course.
    b. The expected date of delivery (EDD) should fall within the duration of maternity leave.
    c. Extension of maternity leave is permissible only for genuine medical reasons and after prior approval of NBE. The supporting medical documents have to be certified by the Head of the Institute/hospital where the candidate is undergoing DNB training. NBE reserves its rights to take a final decision in such matters.
    d. The training of the candidate shall be extended accordingly in case of any extension of maternity leave being granted to the candidate.
    e. Candidate shall be paid stipend during the period of maternity leave. No stipend shall be paid for the period of extension of leave.
4. Male DNB candidates are entitled for paternity leave of maximum of one week during the entire period of DNB training.
5. No kind of study leave is permissible to DNB candidates. However, candidates may be allowed an academic leave as under across the entire duration of training program to attend the conferences/CMEs/Academic programs/Examination purposes.

DNB COURSE	NO. OF ACADEMIC LEAVE
DNB 3 years Course (Broad & Super Specialty)	14 Days
DNB 2 years Course (Post Diploma)	10 Days
DNB Direct 6 years Course	28 days

6. Under normal circumstances leave of one year should not be carried forward to the next year. However, in exceptional cases such as prolonged illness the leave

across the DNB training program may be clubbed together with prior approval of NBE.

7. Any other leave which is beyond the above stated leave is not permissible and shall lead to extension/cancellation of DNB course.
8. Any extension of DNB training for more than 2 months beyond the scheduled completion date of training is permissible only under extra-ordinary circumstances with prior approval of NBE. Such extension is neither automatic nor shall be granted as a matter of routine. NBE shall consider such requests on merit provided the seat is not carried over and compromise with training of existing trainees in the Department.
9. Unauthorized absence from DNB training for more than 7 days may lead to cancellation of registration and discontinuation of the DNB training and rejoining shall not be permitted.
10. Medical Leave
    a. Leave on medical grounds is permissible only for genuine medical reasons and NBE should be informed by the concerned institute/hospital about the same immediately after the candidate proceeds on leave on medical grounds.
    b. The supporting medical documents have to be certified by the Head of the Institute/hospital where the candidate is undergoing DNB training and have to be sent to NBE.
    c. The medical treatment should be taken from the institute/ hospital where the candidate is undergoing DNB training. Any deviation from this shall be supported with valid grounds and documentation.
    d. In case of medical treatment being sought from some other institute/hospital, the medical documents have to be certified by the Head of the institute/hospital where the candidate is undergoing DNB training.
    e. NBE reserves its rights to verify the authenticity of the documents furnished by the candidate and the institute/hospital regarding Medical illness of the candidate and to take a final decision in such matters.
11.

a. Total leave period which can be availed by DNB candidates is 120+28 = 148 days for 6 years course, 60+14=74 days for 3 years course and 40+10 = 50 days for 2 years course. This includes all kinds of eligible leave including academic leave. Maternity / Paternity leave can be availed separately by eligible candidates. Any kind of leave including medical leave exceeding the aforementioned limit shall lead to extension of DNB training. It is clarified that prior approval of NBE is necessary for availing any such leave.
b. The eligibility for DNB Final Examination shall be determined strictly in accordance with the criteria prescribed in the respective information bulletin.

EXAMINATION

FORMATIVE ASSESSMENT

Formative assessment includes various formal and informal assessment procedures by which evaluation of student's learning, comprehension, and academic progress is done by the teachers/ faculty to improve student attainment. Formative assessment test (FAT) is called as "Formative "as it informs the in process teaching and learning modifications. FAT is an integral part of the effective teaching .The goal of the FAT is to collect information which can be used to improve the student learning process.

Formative assessment is essentially positive in intent, directed towards promoting learning; it is therefore part of teaching. Validity and usefulness are paramount in formative assessment and should take precedence over concerns for reliability. The assessment scheme consists of Three Parts which has to be essentially completed by the candidates.

The scheme includes:-

Part I:- Conduction of theory examination
Part-II :- Feedback session on the theory performance
Part-III :- Work place based clinical assessment

Scheme of Formative assessment

PART – I	**CONDUCT OF THEORY EXAMINATION**	Candidate has to appear for Theory Exam and it will be held for One day.
PART – II	**FEEDBACK SESSION ON THE THEORY PERFORMANCE**	Candidate has to appear for his/her Theory Exam Assessment Workshop.
PART – III	**WORK PLACE BASED CLINICAL ASSESSMENT**	After Theory Examination, Candidate has to appear for Clinical Assessment.

The performance of the resident during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student

1. Personal attributes:

- **Behavior and Emotional Stability:** Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
- **Motivation and Initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- **Honesty and Integrity:** Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.

- **Interpersonal Skills and Leadership Quality:** Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

- **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- **Diligence:** Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- **Clinical Performance:** Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. Academic Activity: Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

FINAL EXAMINATION

The summative assessment of competence will be done in the form of DNB Final Examination leading to the award of the degree of Diplomate of National Board in Dermatology and Venereology. The DNB final is a two-stage examination comprising the theory and practical part. An eligible candidate who has qualified the theory exam is permitted to appear in the practical examination.

Theory Examination

1. The theory examination comprises of ***Four*** papers, maximum marks 100 each.
2. There are 10 short notes of 10 marks each, in each of the papers. The number of short notes and their respective marks weightage may vary in some subjects/some papers.
3. Maximum time permitted is 3 hours.
4. Candidate must score at least 50% in the aggregate of ***Four*** papers to qualify the theory examination.
5. Candidates who have qualified the theory examination are permitted to take up the practical examination.
6. The paper wise distribution of the Theory Examination shall be as follows:

Paper I:
Basic sciences, anatomy, physiology, biochemistry, pathology etc. in relation to the speciality

Paper II:
Principles of dermatology diagnosis and therapeutics

Paper III:
Venereology and Leprology, Principals of diagnosis and therapeutics

Paper IV:
Dermatology in internal medicine, including applied clinical aspects, therapeutics, pathology, immunopathology, bacteriology and recent advances.

a) Practical Examination:

1. Maximum Marks: 300.
2. Comprises of Clinical Examination and Viva.
3. Candidate must obtain a minimum of 50% marks in the Clinical Examination (including Viva) to qualify for the Practical Examination.
4. There are a maximum of three attempts that can be availed by a candidate for Practical Examination.
5. First attempt is the practical examination following immediately after the declaration of theory results.
6. Second and Third attempt in practical examination shall be permitted out of the next three sessions of practical examinations placed alongwith the next three successive theory examination sessions; after payment of full examination fees as may be prescribed by NBE.
7. Absentation from Practical Examination is counted as an attempt.
8. Appearance in first practical examination is compulsory;
9. Requests for Change in center of examination are not entertained, as the same is not permissible.
10. Candidates are required not to canvass with NBE for above.

Declaration of DNB Final Results

1. DNB final is a qualifying examination.
2. Results of DNB final examinations (theory & practical) are declared as PASS/FAIL.
3. DNB degree is awarded to a DNB trainee in the convocation of NBE.

RECOMMENDED TEXT BOOKS AND JOURNALS

Books

DERMATOLOGY

1. ***Rook's Textbook of Dermatology - Dr D.A. Burns, Dr S.M. Breathnach, Dr N.H. Cox, vol- I-IV***
2. Fitzpatrick's Dermatology in General Medicine (McGraw-Hill), Wolff, Klaus, Goldsmith et al, vol –I-II
3. Dermatology - Samuel L. Moschella, Harry J. Hurley , vol 1.2

LEPROSY

1. **Jopling textbook of leprosy**
2. **Hasting's textbook of leprosy**
3. National leprosy elimination programme
4. WHO guidelines for leprosy

STD

1. **HOLMES Sexually Transmitted Diseases - King K. Holmes, Frederick P. Sparling, Walter E. Stamm**
2. King nicolle's book on STD
3. NACO and CDC guidelines for management of STD

Journals

1. Indian Journal of Dermatology, Venerology & Leprology
2. Indian Journal of Dermatology
3. Indian Journal of Leprosy
4. Indian Journal of Sexually Transmitted diseases
5. International Journal of Dermatology
6. International Journal of Leprosy
7. Leprosy review
8. Archieves of Dermatology
9. British Journal of Dermatology
10. Journal of American Academy of Dermatology
11. Dermatologic Surgery

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