INI CET Dermatology

Sample Paper – 3

Duration: 14 Minutes **Maximum Marks: 15**

Instructions

- This paper contains **15** Multiple Choice Questions (Single Best Response), modelled on the Dermatology and Venereology content of **INI CET** (Institutes of National Importance Combined Entrance Test) conducted by AIIMS New Delhi.
- The **15-question** length matches the number of Dermatology items you actually meet in the real 200-question paper.
- Each correct answer carries **+1 mark**. There is **negative marking of one-third (0.33) mark** for every incorrect answer; unattempted questions carry no penalty.
- Every question has **exactly one best answer**. Choose the single most appropriate option.
- Attempt this practice paper in one timed sitting of about **14 minutes**, the pace the real computer-based test demands.

Papulosquamous and Eczematous Disorders

Q1. A teenager develops a sudden shower of small, drop-like ('raindrop') scaly pink papules scattered over the trunk and limbs about two weeks after a streptococcal sore throat. The most likely diagnosis is:

(A) Guttate psoriasis

(B) Nummular eczema

(C) Pityriasis rosea

(D) Secondary syphilis

Q2. Multiple sharply defined, intensely itchy, coin-shaped (round) plaques of oozing and crusted eczema on the limbs of an adult, unrelated to any single contact allergen, indicate:

(A) Plaque psoriasis

(B) Tinea corporis

(C) Nummular (discoid) eczema

(D) Lichen planus

Q3. A solitary, well-circumscribed plaque of thickened, leathery skin with exaggerated skin markings on the nape of the neck of a patient who admits to constant habitual scratching and rubbing is:

(A) Psoriasis

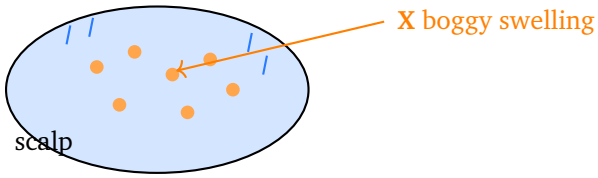
(B) Hypertrophic lichen planus

(C) Nummular eczema

(D) Lichen simplex chronicus

Cutaneous Infections

Q4. The scalp lesion sketched below is a boggy, tender, pus-studded inflammatory swelling (marked **X**) with patchy hair loss and broken-off hairs in a young child, arising from a dermatophyte infection of the scalp. This kerion is a form of:



(A) Alopecia areata

(B) Seborrhoeic dermatitis

(C) Bacterial folliculitis

(D) Tinea capitis

Q5. A tender, red, dome-shaped nodule centred on a hair follicle that develops a central pustule and points to discharge pus, caused by Staphylococcus aureus infection of the follicle, is a:

(A) Epidermoid cyst

(B) Herpetic whitlow

(C) Furuncle (boil)

(D) Hidradenitis nodule

Q6. A firm, rough, hyperkeratotic papule with a cauliflower-like surface and tiny black dots (thrombosed capillaries) on a child's finger, caused by human papillomavirus, is:

(A) Verruca vulgaris (common wart)

(B) Molluscum contagiosum

(C) Seborrhoeic keratosis

(D) Actinic keratosis

Vesiculobullous and Autoimmune Disorders

Q7. Superficial, scaly, crusted erosions over the face and upper trunk with no mucosal involvement, showing a subcorneal split and IgG antibodies against desmoglein 1, characterise:

(A) Pemphigus foliaceus

(B) Bullous pemphigoid

(C) Dermatitis herpetiformis

(D) Pemphigus vulgaris

Q8. A well-defined, disc-shaped erythematous plaque on the face and scalp with adherent scale showing keratotic follicular plugging, atrophy and scarring hair loss, worsened by sunlight, is:

(A) Psoriasis

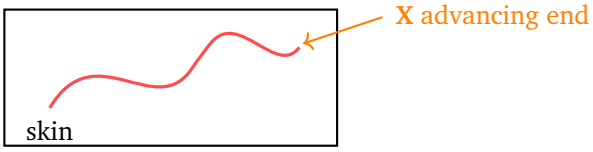
(B) Discoid lupus erythematosus

(C) Lichen planus

(D) Seborrhoeic dermatitis

Infestations, Sexually Transmitted Infections and Leprosy

Q9. The lesion drawn below is an intensely itchy, raised, red, snake-like (serpiginous) track on the foot (arrow **X**) that advances a few millimetres each day, after the patient walked barefoot on contaminated sand. It is caused by:



(A) Sarcoptes scabiei

(B) A dermatophyte fungus

(C) Schistosome cercariae

(D) Hookworm larva (cutaneous larva migrans)

Q10. A young man develops tender, matted inguinal lymph nodes above and below the inguinal ligament producing a linear 'groove sign', a few weeks after a transient painless genital sore, caused by L1–L3 serovars of Chlamydia trachomatis. This is:

(A) Chancroid

(B) Lymphogranuloma venereum

(C) Primary syphilis

(D) Genital herpes

Q11. A single, large, well-defined hypopigmented anaesthetic plaque with a dry, hairless surface and a thickened nerve, with very few bacilli on slit-skin smear and strong cell-mediated immunity, is:

(A) Lepromatous leprosy

(B) Tuberculoid leprosy

(C) Vitiligo

(D) Pityriasis versicolor

Q12. Ill-defined brown to grey-brown macules appearing exactly at the sites of a resolved inflammatory eruption (such as acne or eczema), from melanin deposition after skin inflammation, indicate:

(A) Vitiligo

(B) Melasma

(C) Post-inflammatory hyperpigmentation

(D) Pityriasis versicolor

Q13. A patient on a new anticonvulsant develops fever, painful mucosal erosions of the lips and eyes, and widespread 'target' lesions with epidermal detachment of under 10% of the body surface. The most likely diagnosis is:

(A) Fixed drug eruption

(B) Acute urticaria

(C) Stevens-Johnson syndrome

(D) Erythema multiforme minor

Skin Tumours and Dermatological Emergencies

Q14. An elderly farmer has a slowly enlarging, firm, ulcerated nodule with a keratotic crust on the sun-exposed lower lip, which can spread to regional lymph nodes. The most likely diagnosis is:

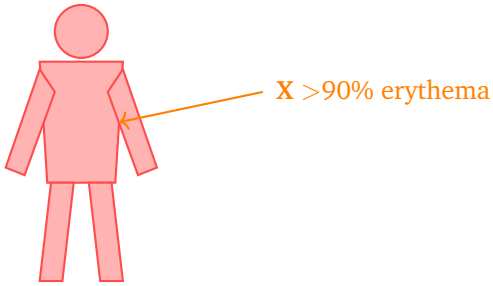
(A) Basal cell carcinoma

(B) Squamous cell carcinoma

(C) Keratoacanthoma

(D) Seborrhoeic keratosis

Q15. The patient sketched below has generalised bright erythema with fine scaling covering more than 90% of the body surface (shaded region **X**), feels cold and shivery, and is at risk of hypothermia and high-output cardiac failure. This dermatological emergency is:



(A) Erythroderma (exfoliative dermatitis)

(B) Extensive plaque psoriasis

(C) Toxic shock syndrome

(D) Staphylococcal scalded skin syndrome

Detailed Solutions

Q1.

Solution

Concept – guttate psoriasis: Guttate psoriasis is an acute papular form of psoriasis triggered by streptococcal infection.

Step 1 – read the trigger: A crop of small **drop-like ('raindrop')** scaly pink papules over the trunk and limbs **two weeks after a streptococcal sore throat** is classic guttate psoriasis.

Step 2 – the mechanism: Streptococcal antigens drive a T-cell response that cross-reacts with skin, producing many small psoriatic papules at once.

Why the other options are wrong:

- B, nummular eczema: gives coin-shaped oozing eczematous plaques, not a post-streptococcal papular shower.
- C, pityriasis rosea: has a herald patch and a 'Christmas-tree' pattern, not a streptococcal trigger.
- D, secondary syphilis: gives a symmetrical rash including palms and soles, with serological confirmation.

Final Answer: Guttate psoriasis $\Rightarrow$ A

Answer: (A) Go Back to Q1

Q2.

Solution

Concept – nummular (discoid) eczema: Nummular eczema is a chronic eczema forming discrete coin-shaped plaques.

Step 1 – read the shape: Sharply defined, intensely itchy, **coin-shaped** plaques of oozing and crusted eczema on the limbs define nummular (discoid) eczema.

Step 2 – the course: It is often dry-skin related, relapsing, and responds to emollients and potent topical steroids.

Why the other options are wrong:

- A, plaque psoriasis: gives silvery scale on extensor surfaces, not weeping coin-shaped eczema.
- B, tinea corporis: shows central clearing with a raised border and is KOH positive.

- D, lichen planus: gives violaceous flat-topped papules with Wickham striae.

Final Answer: Nummular (discoid) eczema ⇒ C

Answer: (C) Go Back to Q2

Q3.

Solution

Concept – lichen simplex chronicus: Lichen simplex chronicus is skin thickening produced by repeated scratching and rubbing.

Step 1 – read the clue: A solitary plaque of **thickened, leathery skin** with **exaggerated skin markings (lichenification)** at a site of **habitual scratching**, such as the nape of the neck, is lichen simplex chronicus.

Step 2 – the itch-scratch cycle: Chronic rubbing thickens the epidermis, which itches more and provokes further scratching.

Why the other options are wrong:

- A, psoriasis: gives silvery-scaled plaques with the Auspitz sign, not scratch-induced lichenification.
- B, hypertrophic lichen planus: gives violaceous warty plaques, usually on the shins.
- C, nummular eczema: gives multiple weeping coin-shaped plaques, not a single lichenified plaque.

Final Answer: Lichen simplex chronicus ⇒ D

Answer: (D) Go Back to Q3

Q4.

Solution

Concept – tinea capitis and kerion: Tinea capitis is a dermatophyte infection of the scalp, common in children.

Step 1 – read the lesion: A **boggy, tender, pus-studded** inflammatory scalp swelling (a **kerion**, marked **X**) with patchy hair loss and **broken-off hairs** is inflammatory tinea capitis.

Step 2 – confirmation and treatment: KOH and fungal culture confirm the dermatophyte; *oral* antifungals (griseofulvin or terbinafine) are needed, as topical agents cannot reach the hair root.

Why the other options are wrong:

- A, alopecia areata: gives smooth non-scarring bald patches without pus or scaling.
- B, seborrhoeic dermatitis: gives greasy diffuse scaling, not a boggy pustular swelling.
- C, bacterial folliculitis: gives follicular pustules without KOH-positive broken hairs and central clearing of a dermatophyte.

Final Answer: Tinea capitis $\Rightarrow$ D

Answer: (D) Go Back to Q4

Q5.

Solution

Concept – furuncle (boil): A furuncle is a deep bacterial infection of a hair follicle and surrounding tissue.

Step 1 – read the clue: A **tender red nodule centred on a follicle** with a **central pustule** that points and discharges pus, caused by **Staphylococcus aureus**, is a furuncle (boil).

Step 2 – the spectrum: Superficial follicular infection is folliculitis; when it deepens into a painful nodule it becomes a furuncle, and several coalescing furuncles form a carbuncle.

Why the other options are wrong:

- A, epidermoid cyst: is a non-tender mobile cyst with a central punctum, unless secondarily infected.
- B, herpetic whitlow: gives grouped painful vesicles on a digit, not a follicular pustular nodule.
- D, hidradenitis nodule: occurs in apocrine areas (axillae, groin) with sinuses and scarring.

Final Answer: Furuncle (boil) $\Rightarrow$ C

Answer: (C) Go Back to Q5

Q6.

Solution

Concept – verruca vulgaris (common wart): The common wart is a benign epidermal growth caused by human papillomavirus.

Step 1 – read the lesion: A **firm, rough, hyperkeratotic** papule with a **cauliflower-like surface** and **tiny black dots** (thrombosed capillaries) on a finger, caused by **HPV**, is verruca vulgaris.

Step 2 – the course: Many warts regress spontaneously; options include salicylic acid, cryotherapy and other destructive methods.

Why the other options are wrong:

- B, molluscum contagiosum: gives smooth, umbilicated pearly papules, not rough keratotic ones.
- C, seborrhoeic keratosis: is a 'stuck-on' warty plaque of older adults, not an HPV wart of a child.
- D, actinic keratosis: is a rough scaly patch on chronically sun-damaged skin.

Final Answer: Verruca vulgaris (common wart) $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q6

Q7.

Solution

Concept – pemphigus foliaceus: Pemphigus foliaceus is a superficial autoimmune blistering disease.

Step 1 – read the features: Superficial scaly, crusted erosions over the face and upper trunk with **no mucosal involvement**, a **subcorneal split** and IgG against **desmoglein 1**, define pemphigus foliaceus.

Step 2 – contrast with pemphigus vulgaris: Desmoglein 1 predominates in the superficial epidermis and is scarce in mucosa, so blisters are superficial and mucosae are spared (unlike vulgaris, which targets desmoglein 3).

Why the other options are wrong:

- B, bullous pemphigoid: gives tense subepidermal bullae with linear IgG/C3 at the basement membrane.
- C, dermatitis herpetiformis: gives itchy grouped vesicles with granular IgA, linked to coeliac disease.
- D, pemphigus vulgaris: has painful mucosal erosions and deeper

(suprabasal) flaccid bullae from anti-desmoglein 3.

Final Answer: Pemphigus foliaceus $\Rightarrow$ A

Answer: (A) Go Back to Q7

Q8.

Solution

Concept – discoid lupus erythematosus: Discoid lupus erythematosus is a chronic scarring photosensitive form of cutaneous lupus.

Step 1 – read the plaque: A **disc-shaped** erythematous plaque with **adherent scale and follicular plugging**, **atrophy and scarring hair loss**, worsened by sunlight, is discoid lupus erythematosus.

Step 2 – the outcome: Longstanding lesions leave scarring, central atrophy and dyspigmentation; a minority progress to systemic lupus.

Why the other options are wrong:

- A, psoriasis: gives silvery non-scarring plaques with the Auspitz sign.
- C, lichen planus: gives violaceous flat-topped papules with Wickham striae.
- D, seborrhoeic dermatitis: gives greasy non-scarring scale of the scalp and face.

Final Answer: Discoid lupus erythematosus $\Rightarrow$ B

Answer: (B) Go Back to Q8

Q9.

Solution

Concept – cutaneous larva migrans: Cutaneous larva migrans is a creeping eruption caused by animal hookworm larvae.

Step 1 – read the track: An intensely itchy, raised, **serpiginous (snake-like)** track that **advances a few millimetres a day** (arrow **X**) on the foot after walking barefoot on contaminated sand is cutaneous larva migrans.

Step 2 – the parasite: Animal hookworm larvae (commonly *Ancylostoma braziliense*) penetrate the skin but cannot complete their cycle in humans, so they wander in the epidermis; treatment is albendazole or ivermectin.

Why the other options are wrong:

- A, Sarcoptes scabiei: makes short burrows in web spaces, not a long advancing track.
- B, a dermatophyte: gives an annular scaly plaque, not a migrating linear track.
- C, schistosome cercariae: cause a transient itchy papular 'swimmer's itch', not a creeping track.

Final Answer: Hookworm larva (cutaneous larva migrans) $\Rightarrow$ D

Answer: (D) Go Back to Q9

Q10.

Solution

Concept – lymphogranuloma venereum: Lymphogranuloma venereum is a sexually transmitted infection of lymphatic tissue.

Step 1 – read the clues: Tender, matted inguinal nodes **above and below the inguinal ligament** giving a **'groove sign'**, after a transient painless genital sore, caused by **Chlamydia trachomatis serovars L1–L3**, define lymphogranuloma venereum.

Step 2 – the course: Untreated disease can cause suppurating buboes and later genital lymphoedema or rectal strictures; treatment is doxycycline.

Why the other options are wrong:

- A, chancroid: causes a *painful* ragged ulcer with a unilateral suppurating bubo (Haemophilus ducreyi).
- C, primary syphilis: causes a painless indurated chancre with non-tender rubbery nodes, not a groove sign.
- D, genital herpes: causes painful recurrent vesicles and ulcers, not matted grooved nodes.

Final Answer: Lymphogranuloma venereum $\Rightarrow$ B

Answer: (B) Go Back to Q10

Q11.

Solution

Concept – tuberculoid leprosy: Tuberculoid leprosy is the paucibacillary, high-immunity pole of the leprosy spectrum.

Step 1 – read the clues: A **single, large, well-defined** hypopigmented **anaesthetic** plaque with a dry hairless surface and a **thickened nerve**, with **very few bacilli** on smear and **strong cell-mediated immunity**, is tuberculoid leprosy.

Step 2 – the spectrum: Strong immunity limits the organism, so lesions are few and bacilli scanty but nerve damage is prominent.

Why the other options are wrong:

- A, lepromatous leprosy: has many symmetrical lesions, abundant bacilli and weak immunity.
- C, vitiligo: is depigmented with *normal* sensation and no nerve thickening.
- D, pityriasis versicolor: is a scaly fungal dyspigmentation with normal sensation.

Final Answer: Tuberculoid leprosy $\Rightarrow$ B

Answer: (B) Go Back to Q11

Q12.

Solution

Concept – post-inflammatory hyperpigmentation: Post-inflammatory hyperpigmentation is excess melanin left behind after skin inflammation.

Step 1 – read the pattern: Brown to grey-brown macules appearing **exactly at the sites of a resolved eruption** (such as acne or eczema) indicate post-inflammatory hyperpigmentation.

Step 2 – the mechanism: Inflammation stimulates melanocytes and disperses melanin into the dermis; it is commoner and more persistent in darker skin, and fades slowly with sun protection.

Why the other options are wrong:

- A, vitiligo: is *loss* of pigment, not increased pigment.
- B, melasma: is symmetrical facial pigmentation related to hormones and sun, not confined to prior lesion sites.
- D, pityriasis versicolor: is a scaly fungal dyspigmentation, not pigment at healed lesion sites.

Final Answer: Post-inflammatory hyperpigmentation ⇒ C

Answer: (C) Go Back to Q12

Q13.

Solution

Concept – Stevens-Johnson syndrome: Stevens-Johnson syndrome is a severe drug-induced mucocutaneous reaction.

Step 1 – read the clues: Fever, **painful mucosal erosions** of lips and eyes, and widespread **target lesions** with **epidermal detachment under 10%** of the body surface after a new drug (here an anticonvulsant) define Stevens-Johnson syndrome.

Step 2 – the spectrum: Under 10% detachment is Stevens-Johnson syndrome, over 30% is toxic epidermal necrolysis, and 10–30% is the overlap; the culprit drug must be stopped at once.

Why the other options are wrong:

- A, fixed drug eruption: is a localised recurring plaque at the same site, not widespread mucosal disease.
- B, acute urticaria: is transient itchy wheals without mucosal erosions or detachment.
- D, erythema multiforme minor: has target lesions with little or no mucosal involvement and no significant detachment.

Final Answer: Stevens-Johnson syndrome ⇒ C

Answer: (C) Go Back to Q13

Q14.

Solution

Concept – squamous cell carcinoma: Cutaneous squamous cell carcinoma is a malignant tumour of keratinocytes with metastatic potential.

Step 1 – read the lesion: A slowly enlarging, firm, **ulcerated keratotic nodule** on **sun-exposed** skin (here the lower lip) that can **spread to regional lymph nodes** is squamous cell carcinoma.

Step 2 – risk factors: Chronic ultraviolet exposure, actinic keratoses, immunosuppression and chronic wounds predispose; lip and ear lesions carry a higher metastatic risk.

Why the other options are wrong:

- A, basal cell carcinoma: is a pearly rolled-edge nodule with telangiectasia that rarely metastasises.
- C, keratoacanthoma: grows rapidly then often regresses, and is less aggressive.
- D, seborrhoeic keratosis: is a benign 'stuck-on' warty plaque with no metastatic potential.

Final Answer: Squamous cell carcinoma $\Rightarrow$ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept – erythroderma (exfoliative dermatitis): Erythroderma is generalised inflammatory redness and scaling of nearly all the skin.

Step 1 – read the clues: Generalised bright erythema with scaling over more than 90% of the body surface (region **X**), with shivering and risk of **hypothermia and high-output cardiac failure**, defines erythroderma.

Step 2 – the physiology: Widespread vasodilatation causes heat, fluid and protein loss and a high cardiac demand; causes include psoriasis, eczema, drug reactions and lymphoma, and the underlying cause must be treated.

Why the other options are wrong:

- B, extensive plaque psoriasis: is one *cause* of erythroderma, but the syndrome of over 90% erythema is called erythroderma itself.
- C, toxic shock syndrome: presents with fever, hypotension and a diffuse macular rash with later desquamation, driven by toxins, not chronic scaling erythema.
- D, staphylococcal scalded skin syndrome: causes superficial peeling from a toxin in young children, not generalised scaling erythroderma.

Final Answer: Erythroderma (exfoliative dermatitis) $\Rightarrow$ A

Answer: (A) Go Back to Q15

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	C	3	D	4	D	5	C
6	A	7	A	8	B	9	D	10	B
11	B	12	C	13	C	14	B	15	A