# INI CET Dermatology

## Sample Paper – 4

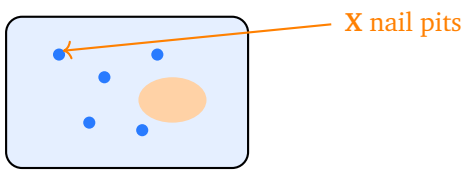
**Duration: 14 Minutes** **Maximum Marks: 15**

### 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.** The nail sketched below shows tiny surface depressions (**X** pits) together with a yellow-brown 'oil-drop' discolouration under the plate, in a patient who also has swollen, tender distal finger joints. These nail changes and the accompanying arthritis point to:



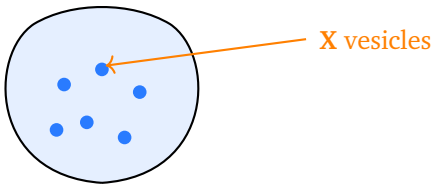

(A) Lichen planus of the nail

(B) Psoriasis with psoriatic arthritis

(C) Onychomycosis

(D) Alopecia areata

**Q2.** The eruption drawn below is a sudden crop of intensely itchy, deep-seated, 'tapioca-like' vesicles (**X**) on the palms and the sides of the fingers, with matching vesicles on the soles, that resolve with peeling. This is:




(A) Psoriasis of the palms

(B) Tinea manuum

(C) Pompholyx (dyshidrotic eczema)

(D) Scabies

**Q3.** An elderly patient with varicose veins and ankle swelling develops itchy, brown-stained, scaly and eczematous skin over the lower legs (the gaiter area), which later ulcerates. The most likely diagnosis is:

(A) Allergic contact dermatitis

(B) Stasis (gravitational) eczema

(C) Cellulitis

(D) Psoriasis

## Cutaneous Infections

**Q4.** A thickened, discoloured (yellow-brown), crumbling great-toe nail with debris under the plate, confirmed by KOH microscopy and fungal culture of nail clippings, is:

(A) Onychomycosis (tinea unguium)

(B) Psoriatic nail disease

(C) Subungual melanoma

(D) Chronic paronychia

**Q5.** A diabetic patient develops a rapidly spreading, dusky, swollen area on the leg with **pain out of proportion** to the skin signs, skin crepitus and systemic toxicity. Urgent surgical exploration and debridement are needed for:

(A) Simple erysipelas

(B) Necrotising fasciitis

(C) Contact dermatitis

(D) Herpes zoster

**Q6.** Recurrent, painful, grouped vesicles on an erythematous base at the vermilion border of the lip, preceded by tingling and showing multinucleate giant cells on a Tzanck smear, are due to:

(A) Impetigo

(B) Aphthous ulceration

(C) Angular cheilitis

(D) Herpes simplex labialis

## Vesiculobullous and Autoimmune Disorders

**Q7.** An infant has blisters and skin erosions present from birth, with marked skin fragility so that minor friction (rubbing, feeding, handling) provokes new blisters. This inherited mechanobullous disorder is:

(A) Pemphigus vulgaris

(B) Bullous pemphigoid

(C) Dermatitis herpetiformis

(D) Epidermolysis bullosa

**Q8.** A young woman develops annular and papulosquamous, photosensitive plaques over the upper back, shoulders and V of the neck, with a positive ANA and strongly positive anti-Ro (SS-A) antibodies. The most likely diagnosis is:

(A) Pemphigus foliaceus

(B) Subacute cutaneous lupus erythematosus

(C) Polymorphic light eruption

(D) Dermatomyositis

## Infestations, Sexually Transmitted Infections and Leprosy

**Q9.** An immunocompromised (HIV-positive) patient develops widespread, thick, hyperkeratotic crusts teeming with mites, with little itch but extreme contagiousness on skin scraping. This is:

(A) Norwegian (crusted) scabies

(B) Classical scabies

(C) Psoriasis

(D) Seborrhoeic dermatitis

**Q10.** A man presents with dysuria and a profuse purulent urethral discharge; a Gram stain of the discharge shows Gram-negative intracellular diplococci within neutrophils. The cause is:

(A) Neisseria gonorrhoeae (gonococcal urethritis)

(B) Chlamydia trachomatis

(C) Treponema pallidum

(D) Trichomonas vaginalis

**Q11.** A patient with several asymmetric, variably defined hypopigmented plaques suddenly develops red, swollen, tender skin lesions and painful nerves with new sensory loss. This upgrading (type 1) reaction on a shifting immunity background indicates:

(A) Tuberculoid leprosy, stable

(B) Erythema nodosum leprosum

(C) Vitiligo

(D) Borderline leprosy with a type 1 (lepra) reaction

## Pigmentary, Hair and Drug Reactions

**Q12.** A young man has gradual, patterned hair loss with bitemporal recession and vertex thinning, driven by the action of dihydrotestosterone on genetically sensitive scalp follicles and treated with finasteride and topical minoxidil. This is:

(A) Alopecia areata

(B) Telogen effluvium

(C) Androgenetic alopecia

(D) Tinea capitis

**Q13.** A patient on a tetracycline (or a thiazide diuretic) develops an exaggerated 'sunburn' eruption confined to sun-exposed sites (face, dorsa of hands, V of neck) with sharp cut-off at covered skin. This indicates:

(A) Atopic dermatitis

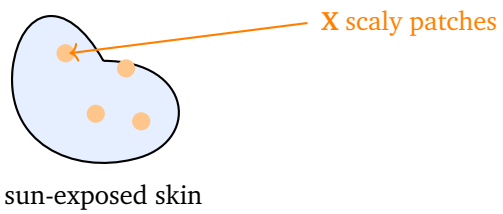
(B) Seborrhoeic dermatitis

(C) Drug-induced photosensitivity

(D) Contact urticaria

## Skin Tumours and Dermatological Emergencies

**Q14.** The lesions marked **X** below sit on the sun-exposed face and bald scalp of an elderly outdoor worker: rough, scaly, sandpaper-like patches on sun-damaged skin that may progress to squamous cell carcinoma. This premalignant lesion is:




(A) Actinic (solar) keratosis

(B) Seborrhoeic keratosis

(C) Basal cell carcinoma

(D) Malignant melanoma

**Q15.** Six weeks after starting an anticonvulsant, a patient develops fever, a widespread morbilliform rash, facial oedema, lymphadenopathy, a raised eosinophil count and deranged liver enzymes. This severe multisystem drug reaction is:

(A) Fixed drug eruption

(B) Acute urticaria

(C) DRESS syndrome (drug reaction with eosinophilia and systemic symptoms)

(D) Erythema multiforme minor

## Detailed Solutions

**Q1.**

### Solution

**Concept – psoriatic nail disease and psoriatic arthritis:** Psoriasis can involve the nails and the joints as well as the skin.

**Step 1 – read the nail signs: Nail pitting** (small surface depressions) and the **'oil-drop' (salmon-patch) sign** (a yellow-brown discolouration under the plate) are classic psoriatic nail changes.

**Step 2 – add the joints:** Swollen, tender distal interphalangeal joints indicate accompanying **psoriatic arthritis**, which is strongly linked to nail disease.

**Why the other options are wrong:**

- A, lichen planus of the nail: gives longitudinal ridging and pterygium, not pits with an oil-drop sign.
- C, onychomycosis: causes fungal thickening and debris, not pitting or joint disease.
- D, alopecia areata: has fine pitting but affects hair, not the finger joints.

**Final Answer:** Psoriasis with psoriatic arthritis $\Rightarrow$ B

**Answer: (B)** Go Back to Q1

**Q2.**

### Solution

**Concept – pompholyx (dyshidrotic eczema):** Pompholyx is an acute vesicular eczema of the palms and soles.

**Step 1 – read the vesicles:** Sudden crops of intensely itchy, **deep-seated 'tapioca' vesicles** on the palms, sides of the fingers and soles, resolving with peeling, define pompholyx.

**Step 2 – the course:** It is recurrent and may be triggered by heat, stress or contact irritants; treat with potent topical steroids and emollients.

**Why the other options are wrong:**

- A, palmar psoriasis: gives scaly plaques and pustules, not fleeting vesicles.
- B, tinea manuum: is scaly and KOH-positive, usually unilateral ('one hand, two feet').
- D, scabies: gives burrows and nocturnal itch, not palmar vesicle crops.

**Final Answer:** Pompholyx (dyshidrotic eczema) ⇒ C

**Answer: (C)** Go Back to Q2

## Q3.

### Solution

**Concept – stasis (gravitational) eczema:** Stasis eczema is a chronic eczema of the lower legs caused by venous insufficiency.

**Step 1 – read the clues:** Varicose veins, ankle oedema, **haemosiderin (brown) staining** and itchy eczematous scaling over the **gaiter area** point to stasis eczema.

**Step 2 – the mechanism and sequel:** Venous hypertension leaks red cells and fluid into the skin; if untreated it progresses to venous ulceration.

**Why the other options are wrong:**

- A, allergic contact dermatitis: needs an external allergen and follows the contact area (though it can complicate stasis eczema).
- C, cellulitis: is acutely hot, painful and febrile, not a chronic itchy eczema.
- D, psoriasis: gives silvery extensor plaques, not brown-stained venous skin.

**Final Answer:** Stasis (gravitational) eczema ⇒ B

**Answer: (B)** Go Back to Q3

## Q4.

### Solution

**Concept – onychomycosis (tinea unguium):** Onychomycosis is a fungal infection of the nail plate and bed.

**Step 1 – read the nail:** A **thickened, yellow-brown, crumbling** toenail with **subungual debris** is typical of onychomycosis.

**Step 2 – confirmation:** KOH microscopy of nail clippings shows hyphae, and fungal culture identifies the dermatophyte before starting oral terbinafine.

**Why the other options are wrong:**

- B, psoriatic nail disease: gives pitting and an oil-drop sign, and is KOH-negative.
- C, subungual melanoma: shows a pigmented streak with Hutchinson sign, not fungal debris.

- D, chronic paronychia: causes nail-fold swelling and loss of the cuticle, not a crumbling plate full of hyphae.

**Final Answer:** Onychomycosis (tinea unguium) $\Rightarrow$ A

**Answer: (A)** Go Back to Q4

## Q5.

### Solution

**Concept – necrotising fasciitis:** Necrotising fasciitis is a rapidly progressive infection of the deep fascia and a surgical emergency.

**Step 1 – read the red flags: Pain out of proportion** to the skin signs, rapid spread, dusky discolouration, crepitus and systemic toxicity indicate necrotising fasciitis.

**Step 2 – management:** Immediate **surgical debridement**, broad-spectrum intravenous antibiotics and resuscitation are life-saving; delay increases mortality.

**Why the other options are wrong:**

- A, erysipelas: is a sharply demarcated superficial infection without deep necrosis or crepitus.
- C, contact dermatitis: is itchy and eczematous, not toxic with severe pain.
- D, herpes zoster: gives dermatomal vesicles, not spreading fascial necrosis.

**Final Answer:** Necrotising fasciitis $\Rightarrow$ B

**Answer: (B)** Go Back to Q5

## Q6.

### Solution

**Concept – herpes simplex labialis:** Herpes labialis (cold sores) is recurrent HSV infection at the lip.

**Step 1 – read the pattern: Recurrent grouped vesicles** on an erythematous base at the **vermilion border**, preceded by tingling, are herpes simplex labialis.

**Step 2 – confirmation:** A **Tzanck smear** shows **multinucleate giant cells**; recurrences follow reactivation of latent HSV, treated with aciclovir.

**Why the other options are wrong:**

- A, impetigo: gives honey-coloured crusts, not recurrent grouped vesicles

with giant cells.
- B, aphthous ulcers: are intra-oral ulcers, not vesicles on the lip.
- C, angular cheilitis: causes fissured, macerated angles of the mouth, not vesicles.

**Final Answer:** Herpes simplex labialis ⇒ D

**Answer: (D)** Go Back to Q6

## Q7.

### Solution

**Concept – epidermolysis bullosa:** Epidermolysis bullosa (EB) is an inherited group of mechanobullous disorders.

**Step 1 – read the clues: Blistering and skin fragility from birth**, with new blisters provoked by minor friction, indicate epidermolysis bullosa.

**Step 2 – the mechanism:** Mutations in structural proteins (keratins, laminins, collagen VII) weaken skin adhesion, so trivial trauma splits the skin.

**Why the other options are wrong:**

- A, pemphigus vulgaris: is an acquired autoimmune disease of adults, not present from birth.
- B, bullous pemphigoid: is an acquired disease of the elderly.
- C, dermatitis herpetiformis: is itchy grouped vesicles linked to coeliac disease, not neonatal fragility.

**Final Answer:** Epidermolysis bullosa ⇒ D

**Answer: (D)** Go Back to Q7

## Q8.

### Solution

**Concept – subacute cutaneous lupus erythematosus (SCLE):** SCLE is a photosensitive form of cutaneous lupus.

**Step 1 – read the clues: Photosensitive** annular or papulosquamous plaques over the upper trunk and V of the neck define SCLE.

**Step 2 – the serology:** SCLE is strongly associated with a positive **ANA** and **anti-Ro (SS-A)** antibodies; it usually heals without scarring.

**Why the other options are wrong:**

- A, pemphigus foliaceus: gives superficial scaly erosions, not photosensitive annular plaques with anti-Ro.
- C, polymorphic light eruption: is a transient itchy photodermatosis without anti-Ro antibodies.
- D, dermatomyositis: shows a heliotrope rash and Gottron papules with muscle weakness.

**Final Answer:** Subacute cutaneous lupus erythematosus $\Rightarrow$ B

**Answer: (B)** Go Back to Q8

## Q9.

### Solution

**Concept – Norwegian (crusted) scabies:** Crusted scabies is a hyperinfestation with Sarcoptes scabiei in immunocompromised hosts.

**Step 1 – read the clues: Widespread thick hyperkeratotic crusts** teeming with mites, with **little itch** but extreme contagiousness, in an immunocompromised (HIV) patient, indicate Norwegian scabies.

**Step 2 – management:** It needs combined oral ivermectin and topical scabicide, plus strict isolation, because thousands of mites are present.

**Why the other options are wrong:**

- B, classical scabies: has few mites, intense nocturnal itch and burrows, not thick crusts.
- C, psoriasis: gives silvery scaly plaques without mites.
- D, seborrhoeic dermatitis: gives greasy scale on the face and scalp, not crusts full of mites.

**Final Answer:** Norwegian (crusted) scabies $\Rightarrow$ A

**Answer: (A)** Go Back to Q9

## Q10.

### Solution

**Concept – gonococcal urethritis:** Gonorrhoea is a sexually transmitted infection by Neisseria gonorrhoeae.

**Step 1 – read the clues:** Dysuria with a **profuse purulent urethral discharge** and **Gram-negative intracellular diplococci** within neutrophils on Gram stain define gonococcal urethritis.

**Step 2 – management:** Treat with ceftriaxone (plus cover for chlamydia), trace contacts and screen for other STIs.

**Why the other options are wrong:**

- B, Chlamydia trachomatis: causes a scanty, watery discharge and is not seen on Gram stain.
- C, Treponema pallidum: causes a painless ulcer (chancre), not a purulent discharge.
- D, Trichomonas vaginalis: is a flagellate causing vaginitis and frothy discharge, not gonococcal diplococci.

**Final Answer:** Neisseria gonorrhoeae (gonococcal urethritis) $\Rightarrow$ $\boxed{\text{A}}$

**Answer: (A)** Go Back to Q10

## Q11.

### Solution

**Concept – borderline leprosy with a type 1 (lepra) reaction:** Borderline leprosy is immunologically unstable and prone to reactions.

**Step 1 – read the baseline:** Several **asymmetric, variably defined** hypopigmented plaques suggest borderline leprosy.

**Step 2 – read the reaction:** Sudden **redness, swelling and tenderness** of existing lesions with **painful nerves and new sensory loss** is a **type 1 (reversal/upgrading) reaction**, driven by a shift in cell-mediated immunity; treat urgently with corticosteroids to save nerve function.

**Why the other options are wrong:**

- A, stable tuberculoid leprosy: has a single well-defined lesion and is not in reaction.
- B, erythema nodosum leprosum: is a type 2 reaction with tender nodules, mainly in lepromatous disease.

- C, vitiligo: is depigmentation with normal sensation and no nerve involvement.

**Final Answer:** Borderline leprosy with a type 1 (lepra) reaction ⇒ D

**Answer: (D)** Go Back to Q11

## Q12.

### Solution

**Concept – androgenetic alopecia:** Androgenetic alopecia is patterned hair loss driven by androgens in genetically susceptible follicles.

**Step 1 – read the pattern:** Gradual **bitemporal recession and vertex thinning** in a young man is male-pattern androgenetic alopecia.

**Step 2 – the mechanism and treatment: Dihydrotestosterone** miniaturises sensitive scalp follicles; **finasteride** (a 5-alpha-reductase inhibitor) and topical **minoxidil** are used.

**Why the other options are wrong:**

- A, alopecia areata: gives discrete round patches with exclamation-mark hairs, not diffuse patterned thinning.
- B, telogen effluvium: is diffuse shedding after a stressor, and is reversible.
- D, tinea capitis: has scaling and broken hairs and is KOH/culture positive.

**Final Answer:** Androgenetic alopecia ⇒ C

**Answer: (C)** Go Back to Q12

## Q13.

### Solution

**Concept – drug-induced photosensitivity:** Certain drugs make the skin react abnormally to ultraviolet light.

**Step 1 – read the distribution:** An exaggerated 'sunburn' confined to **sun-exposed sites** (face, dorsa of hands, V of neck) with sharp cut-off at covered skin is drug-induced photosensitivity.

**Step 2 – the culprits: Tetracyclines** and **thiazide diuretics** are classic causes; stop the drug and advise sun protection.

**Why the other options are wrong:**

- A, atopic dermatitis: is a flexural itchy eczema, not a photodistributed eruption.
- B, seborrhoeic dermatitis: gives greasy scale on the scalp and nasolabial folds.
- D, contact urticaria: causes transient wheals at the contact site, not a fixed photodistribution.

**Final Answer:** Drug-induced photosensitivity ⇒ C

**Answer: (C)** Go Back to Q13

## Q14.

### Solution

**Concept – actinic (solar) keratosis:** Actinic keratosis is a premalignant lesion of chronically sun-damaged skin.

**Step 1 – read the lesion: Rough, scaly, sandpaper-like patches** on the sun-exposed face and bald scalp of an elderly outdoor worker are actinic keratoses.

**Step 2 – the significance:** They are **premalignant** and a proportion progress to **squamous cell carcinoma**; treat with cryotherapy, topical 5-fluorouracil or imiquimod.

**Why the other options are wrong:**

- B, seborrhoeic keratosis: is a benign 'stuck-on' warty plaque, not premalignant.
- C, basal cell carcinoma: is a pearly nodule with rolled edge and telangiectasia.
- D, malignant melanoma: is a pigmented lesion assessed by the ABCDE rule.

**Final Answer:** Actinic (solar) keratosis ⇒ A

**Answer: (A)** Go Back to Q14

## Q15.

### Solution

**Concept – DRESS syndrome:** DRESS (drug reaction with eosinophilia and systemic symptoms) is a severe delayed drug hypersensitivity.

**Step 1 – read the clues:** Onset **weeks** after a drug, with **fever**, a widespread morbilliform rash, **facial oedema**, lymphadenopathy, **eosinophilia** and **organ (liver)**

**involvement**, defines DRESS.

**Step 2 – management:** Stop the culprit drug at once (often an anticonvulsant or allopurinol) and give systemic corticosteroids with organ monitoring.

**Why the other options are wrong:**

- A, fixed drug eruption: is a localised recurring plaque at the same site, without systemic upset.
- B, acute urticaria: is transient itchy wheals without fever or organ involvement.
- D, erythema multiforme minor: has target lesions with little systemic disturbance.

**Final Answer:** DRESS syndrome $\Rightarrow$ C

**Answer: (C)** Go Back to Q15

# Answer Key

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