INI CET Dermatology

Sample Paper – 1

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. Well-defined silvery-white scaly plaques on the extensor surfaces of the elbows and knees, with pinpoint bleeding when the scale is scraped away (Auspitz sign), indicate:

(A) Atopic dermatitis

(B) Lichen planus

(C) Psoriasis

(D) Pityriasis rosea

Q2. An itchy, chronic, relapsing eczema affecting the flexures of a child who also has asthma and allergic rhinitis (the atopic triad) is:

(A) Atopic dermatitis

(B) Psoriasis

(C) Allergic contact dermatitis

(D) Scabies

Q3. An intensely itchy eruption of violaceous (purple), polygonal, flat-topped papules with fine white surface lines (Wickham striae) over the flexor wrists is:

(A) Psoriasis

(B) Pityriasis rosea

(C) Lichen planus

(D) Seborrhoeic dermatitis

Cutaneous Infections

Q4. An annular, scaly, itchy plaque with central clearing and an active raised advancing border, showing septate branching hyphae on potassium hydroxide (KOH) microscopy, is caused by:

(A) A dermatophyte fungus (tinea)

(B) A DNA virus

(C) Sarcoptes scabiei

(D) Staphylococcus aureus

Q5. A contagious superficial skin infection with honey-coloured (golden) crusts around the mouth and nose of a child, caused by Staphylococcus aureus or Streptococcus pyogenes, is:

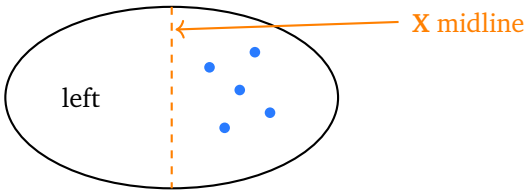
(A) Herpes simplex

(B) Impetigo

(C) Tinea faciei

(D) Allergic contact dermatitis

Q6. The eruption sketched below is a painful crop of vesicles confined to a single unilateral dermatome that stops at the midline (marked **X**), from reactivation of latent varicella-zoster virus. It is:



(A) Herpes simplex

(B) Impetigo

(C) Allergic contact dermatitis

(D) Herpes zoster (shingles)

Vesiculobullous and Autoimmune Disorders

Q7. Flaccid intraepidermal blisters that rupture easily to leave raw erosions, a positive Nikolsky sign and IgG antibodies against desmoglein (a 'fish-net' intercellular pattern on immunofluorescence) characterise:

(A) Bullous pemphigoid

(B) Pemphigus vulgaris

(C) Dermatitis herpetiformis

(D) Allergic contact dermatitis

Q8. Tense subepidermal blisters in an elderly patient, with a negative Nikolsky sign and linear IgG and C3 deposition along the basement membrane, indicate:

(A) Pemphigus vulgaris

(B) Pemphigus foliaceus

(C) Dermatitis herpetiformis

(D) Bullous pemphigoid

Infestations, Sexually Transmitted Infections and Leprosy

Q9. Intense nocturnal itching with linear burrows in the finger webs, wrists and genitalia, spreading among household contacts, is caused by:

(A) Pediculus humanus

(B) A dermatophyte fungus

(C) Sarcoptes scabiei

(D) Candida albicans

Q10. A painless, indurated genital ulcer (chancre) with a clean base, appearing about three weeks after exposure, is the primary lesion of:

(A) Syphilis (Treponema pallidum)

(B) Chancroid (Haemophilus ducreyi)

(C) Genital herpes

(D) Gonorrhoea

Q11. A single hypopigmented skin patch with loss of sensation over it and a thickened palpable peripheral nerve nearby, caused by Mycobacterium leprae, is:

(A) Vitiligo

(B) Pityriasis versicolor

(C) Leprosy (Hansen disease)

(D) Pityriasis alba

Pigmentary, Hair and Drug Reactions

Q12. Well-demarcated, completely depigmented (milky-white) macules that glow bright under a Wood lamp, arising from autoimmune destruction of melanocytes, indicate:

(A) Pityriasis versicolor

(B) Pityriasis alba

(C) Indeterminate leprosy

(D) Vitiligo

Q13. Well-circumscribed round patches of non-scarring hair loss with short, tapered ‘exclamation-mark’ hairs at the margins indicate:

(A) Alopecia areata

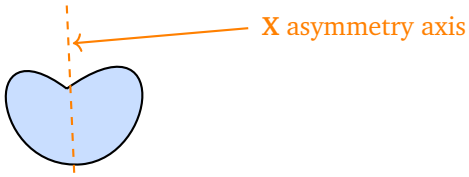
(B) Androgenetic alopecia

(C) Tinea capitis

(D) Telogen effluvium

Skin Tumours and Dermatological Emergencies

Q14. The pigmented lesion below is being assessed with the ABCDE rule (Asymmetry, Border irregularity, Colour variation, Diameter over 6 mm, Evolving), where the dashed line **X** shows the two halves do not match. This rule screens for:



(A) Basal cell carcinoma

(B) Malignant melanoma

(C) Seborrhoeic keratosis

(D) Actinic keratosis

Q15. A severe drug reaction with widespread epidermal detachment involving more than 30% of the body surface, mucosal erosions and a positive Nikolsky sign is:

(A) Erythema multiforme minor

(B) Toxic epidermal necrolysis (TEN)

(C) Fixed drug eruption

(D) Acute urticaria

Detailed Solutions

Q1.

Solution

Concept – plaque psoriasis: Psoriasis is a chronic immune-mediated disorder of accelerated epidermal turnover.

Step 1 – read the signs: Silvery-white scaly plaques on the extensor elbows and knees with a positive **Auspitz sign** (pinpoint bleeding on scraping) are classic for psoriasis.

Step 2 – supporting features: Nail pitting and the Koebner phenomenon (lesions at sites of trauma) support the diagnosis.

Why the other options are wrong:

- A, atopic dermatitis: is an itchy flexural eczema, not scaly extensor plaques.
- B, lichen planus: gives purple polygonal papules with Wickham striae.
- D, pityriasis rosea: gives a herald patch and a 'Christmas-tree' truncal rash.

Final Answer: Psoriasis $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q1

Q2.

Solution

Concept – atopic dermatitis: Atopic dermatitis is an itchy, chronic, relapsing eczema linked to the atopic diathesis.

Step 1 – read the clues: A child with **flexural** itchy eczema plus asthma and allergic rhinitis (the **atopic triad**) has atopic dermatitis.

Step 2 – the mechanism: Skin-barrier dysfunction (filaggrin mutations) and a Th2 immune response drive it.

Why the other options are wrong:

- B, psoriasis: is extensor and scaly, not flexural and itchy.
- C, allergic contact dermatitis: is localised to the contact site with a clear trigger.
- D, scabies: shows burrows and is intensely itchy at night, without the atopic triad.

Final Answer: Atopic dermatitis $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q2

Q3.

Solution

Concept – lichen planus: Lichen planus is a T-cell-mediated papulosquamous disorder.

Step 1 – recall the '6 Ps': Pruritic, purple (violaceous), polygonal, planar (flat-topped) papules and plaques with **Wickham striae** define lichen planus.

Step 2 – typical sites: The flexor wrists, forearms and oral mucosa (lacy white streaks) are commonly involved.

Why the other options are wrong:

- A, psoriasis: has silvery scale on extensor surfaces, not violaceous papules.
- B, pityriasis rosea: has a herald patch and collarette scale.
- D, seborrhoeic dermatitis: gives greasy scale on the scalp and face.

Final Answer: Lichen planus $\Rightarrow$ C

Answer: (C) Go Back to Q3

Q4.

Solution

Concept – dermatophyte (tinea) infection: Dermatophytes are keratin-digesting fungi that cause ringworm.

Step 1 – read the lesion: An **annular** plaque with **central clearing** and an active scaly border, with **septate hyphae** on KOH, is a dermatophyte (tinea) infection.

Step 2 – confirmation: KOH microscopy of skin scrapings shows branching septate hyphae; culture identifies the species.

Why the other options are wrong:

- B, a virus: causes warts or vesicles, not a KOH-positive ring.
- C, Sarcoptes scabiei: causes itchy burrows, not annular scaly plaques.
- D, Staphylococcus aureus: causes impetigo or folliculitis, not KOH-positive hyphae.

Final Answer: A dermatophyte fungus (tinea) $\Rightarrow$ A

Answer: (A) Go Back to Q4

Q5.

Solution

Concept – impetigo: Impetigo is a common contagious superficial bacterial skin infection.

Step 1 – read the clue: Honey-coloured (golden) crusts around the mouth and nose of a child are classic for non-bullous impetigo.

Step 2 – the organisms: Staphylococcus aureus (commonest) and Streptococcus pyogenes are responsible; treat with topical or oral antibiotics.

Why the other options are wrong:

- A, herpes simplex: gives grouped vesicles on an erythematous base, not honey crusts.
- C, tinea faciei: is an annular scaly KOH-positive plaque.
- D, contact dermatitis: is itchy and eczematous with a clear contact trigger.

Final Answer: Impetigo $\Rightarrow$ B

Answer: (B) Go Back to Q5

Q6.

Solution

Concept – herpes zoster (shingles): Herpes zoster is reactivation of varicella-zoster virus latent in a dorsal root ganglion.

Step 1 – read the pattern: A painful vesicular rash confined to **one dermatome** that **does not cross the midline** (marked **X**) is herpes zoster.

Step 2 – management: Early oral antivirals (aciclovir, valaciclovir) reduce the risk of post-herpetic neuralgia.

Why the other options are wrong:

- A, herpes simplex: recurs at the same mucocutaneous site, not in a whole dermatome.
- B, impetigo: gives honey crusts, not dermatomal vesicles.
- C, contact dermatitis: follows the contact area, not a dermatome.

Final Answer: Herpes zoster (shingles) $\Rightarrow$ D

Answer: (D) Go Back to Q6

Q7.

Solution

Concept – pemphigus vulgaris: Pemphigus vulgaris is an autoimmune blistering disease of the epidermis.

Step 1 – read the features: Flaccid intraepidermal bullae, a positive **Nikolsky sign** and IgG against **desmoglein** (fish-net intercellular staining) define pemphigus vulgaris.

Step 2 – the mechanism: Antibodies break desmosomal adhesion (acantholysis), so blisters form within the epidermis and rupture easily.

Why the other options are wrong:

- A, bullous pemphigoid: has tense subepidermal bullae and a negative Nikolsky sign.
- C, dermatitis herpetiformis: gives intensely itchy grouped vesicles linked to coeliac disease.
- D, contact dermatitis: is eczematous, not an autoimmune bullous disease.

Final Answer: Pemphigus vulgaris $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q7

Q8.

Solution

Concept – bullous pemphigoid: Bullous pemphigoid is a subepidermal autoimmune blistering disease of the elderly.

Step 1 – read the features: Tense subepidermal bullae, a **negative Nikolsky sign** and **linear IgG and C3** along the basement membrane define bullous pemphigoid.

Step 2 – the target: Antibodies are directed against hemidesmosomal antigens (BP180, BP230), so the split is below the epidermis, making the blisters tense.

Why the other options are wrong:

- A, pemphigus vulgaris: has flaccid intraepidermal bullae with a positive Nikolsky sign.
- B, pemphigus foliaceus: is a superficial pemphigus with scaly erosions.
- C, dermatitis herpetiformis: shows granular IgA at dermal papillae, not linear IgG.

Final Answer: Bullous pemphigoid ⇒ D

Answer: (D) Go Back to Q8

Q9.

Solution

Concept – scabies: Scabies is an infestation by the mite Sarcoptes scabiei.

Step 1 – read the clues: Intense nocturnal itch, **burrows** in the finger webs, wrists and genitalia, and spread among close contacts point to scabies.

Step 2 – management: Topical permethrin (or oral ivermectin) applied to the whole body, and treatment of all close contacts, is the mainstay.

Why the other options are wrong:

- A, Pediculus humanus: causes lice with nits on hair, not web-space burrows.
- B, a dermatophyte: gives annular scaly plaques, not burrows.
- D, Candida albicans: causes moist intertriginous rashes, not burrows.

Final Answer: Sarcoptes scabiei ⇒ C

Answer: (C) Go Back to Q9

Q10.

Solution

Concept – primary syphilis: The primary lesion of syphilis is a painless genital ulcer.

Step 1 – read the ulcer: A **painless, indurated** ulcer with a **clean base** (a chancre), about three weeks after exposure, is primary syphilis (Treponema pallidum).

Step 2 – confirmation: Dark-ground microscopy shows spirochaetes; serology (VDRL/RPR and treponemal tests) confirms it.

Why the other options are wrong:

- B, chancroid: causes a *painful* ragged ulcer (Haemophilus ducreyi).
- C, genital herpes: gives painful grouped vesicles and ulcers, not a single indurated chancre.
- D, gonorrhoea: causes urethral discharge, not a genital ulcer.

Final Answer: Syphilis (Treponema pallidum) ⇒ A

Answer: (A) Go Back to Q10

Q11.

Solution

Concept – leprosy (Hansen disease): Leprosy is a chronic infection of skin and nerves by Mycobacterium leprae.

Step 1 – read the clues: A **hypopigmented, anaesthetic** skin patch with a **thickened peripheral nerve** is diagnostic of leprosy.

Step 2 – the hallmark: Loss of sensation over the patch (from nerve involvement) distinguishes it from other pale patches.

Why the other options are wrong:

- A, vitiligo: is depigmented but has *normal* sensation.
- B, pityriasis versicolor: is a scaly fungal dyspigmentation with normal sensation.
- D, pityriasis alba: gives pale, mildly scaly facial patches with normal sensation.

Final Answer: Leprosy (Hansen disease) $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

Concept – vitiligo: Vitiligo is autoimmune loss of melanocytes causing depigmentation.

Step 1 – read the macules: Well-demarcated, milky-white macules that **fluoresce bright** under a Wood lamp indicate vitiligo.

Step 2 – associations: It is linked to other autoimmune diseases such as thyroid disease and pernicious anaemia.

Why the other options are wrong:

- A, pityriasis versicolor: is *hypo*pigmented and scaly, not fully depigmented.
- B, pityriasis alba: gives faint pale patches, not sharply depigmented macules.
- C, indeterminate leprosy: has sensory changes and does not fluoresce like vitiligo.

Final Answer: Vitiligo $\Rightarrow$ D

Answer: (D) Go Back to Q12

Q13.

Solution

Concept – alopecia areata: Alopecia areata is autoimmune, non-scarring, patchy hair loss.

Step 1 – read the clue: Round **non-scarring** bald patches with **'exclamation-mark' hairs** (short, tapered towards the scalp) at the margins define alopecia areata.

Step 2 – the course: Hair follicles are preserved, so regrowth is possible; nail pitting may coexist.

Why the other options are wrong:

- B, androgenetic alopecia: is diffuse patterned thinning, not discrete patches.
- C, tinea capitis: has scaling and broken hairs and is KOH/culture positive.
- D, telogen effluvium: is diffuse shedding after a stressor, not patchy.

Final Answer: Alopecia areata $\Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept – the ABCDE rule for melanoma: Early melanoma is screened by simple clinical features of a changing mole.

Step 1 – apply the rule: **A**symmetry (the halves across **X** do not match), **B**order irregularity, **C**olour variation, **D**iameter over 6 mm and **E**volving change screen for **malignant melanoma**.

Step 2 – next step: A suspicious lesion needs excision biopsy for histology and Breslow thickness.

Why the other options are wrong:

- A, basal cell carcinoma: is a pearly nodule with telangiectasia, assessed differently.
- C, seborrhoeic keratosis: is a benign 'stuck-on' warty plaque.

- D, actinic keratosis: is a rough, scaly sun-damage patch.

Final Answer: Malignant melanoma $\Rightarrow$ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept – toxic epidermal necrolysis (TEN): TEN is a life-threatening drug reaction with massive epidermal loss.

Step 1 – read the clues: Widespread epidermal detachment over 30% of the body surface, mucosal erosions and a positive Nikolsky sign define TEN.

Step 2 – management: Stop the culprit drug immediately and manage like a burn (fluids, skin and eye care) in a specialist unit.

Why the other options are wrong:

- A, erythema multiforme minor: has target lesions with little or no mucosal or detachment burden.
- C, fixed drug eruption: is a localised recurring plaque at the same site.
- D, urticaria: is transient itchy wheals without epidermal detachment.

Final Answer: Toxic epidermal necrolysis (TEN) $\Rightarrow$ B

Answer: (B) Go Back to Q15

Answer Key

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