INI CET Dermatology

Sample Paper – 7

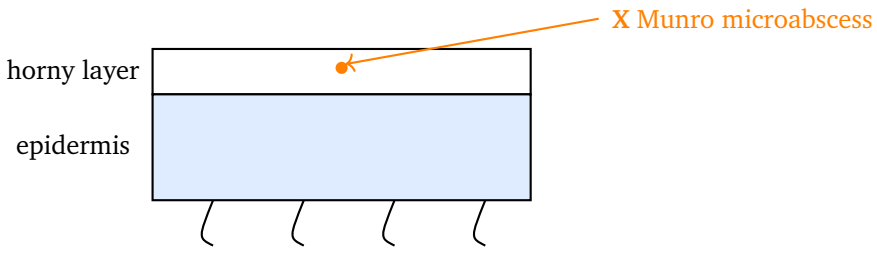
Duration: 14 Minutes **Maximum Marks: 15**

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 epidermal histology sketched below is from a scaly plaque, with the collection of neutrophils in the horny layer marked **X**. Together with parakeratosis (retained nuclei in the stratum corneum), regular elongation of the rete ridges and acanthosis, this picture is diagnostic of:



(A) Psoriasis

(B) Lichen planus

(C) Bullous pemphigoid

(D) Pemphigus vulgaris

Q2. Regarding lichen planus of the nails and mouth, which single statement is correct?

(A) Erosive oral lichen planus carries a risk of squamous cell carcinoma, and nail disease may cause a dorsal pterygium

(B) Lichen planus never involves the oral mucosa or the nails

(C) Oral lichen planus is always asymptomatic and can never undergo malignant change

(D) Nail involvement produces honey-coloured crusting of the nail folds

Q3. Generalised erythema and scaling affecting more than 90% of the body surface, most often arising as a flare of a pre-existing dermatosis such as psoriasis or atopic eczema, and risking hypothermia and high-output cardiac failure, is best termed:

(A) Pityriasis rosea

(B) Erythroderma (exfoliative dermatitis)

(C) Localised plaque psoriasis

(D) Fixed drug eruption

Cutaneous Infections

Q4. A chronic, painless swelling of the foot with multiple discharging sinuses that extrude coloured grains, developing slowly after a penetrating thorn injury in a barefoot farmer (Madura foot), is:

(A) Cellulitis

(B) Tinea pedis

(C) Mycetoma (Madura foot)

(D) Impetigo

Q5. A deep pyoderma in which a thick adherent crust overlies a punched-out ulcer that extends into the dermis, typically on the lower legs and healing with scarring, is:

(A) Impetigo contagiosa

(B) Ecthyma

(C) Erysipelas

(D) Folliculitis

Q6. A rough hyperkeratotic papule on the sole that interrupts the normal skin markings and shows thrombosed capillaries (black dots) when the surface is pared, caused by human papillomavirus, is a plantar wart. Which single statement is correct?

(A) A corn (clavus) shows black dots and interrupts the skin lines

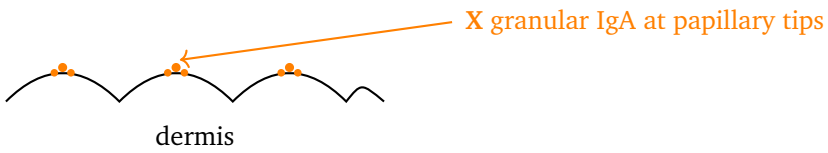
(B) Plantar warts are caused by herpes simplex virus

(C) Common warts are caused only by HPV types 6 and 11

(D) A plantar wart interrupts the skin lines and bleeds as black dots on paring, unlike a corn which preserves the lines and has a central keratin plug

Vesiculobullous and Autoimmune Disorders

Q7. The direct immunofluorescence pattern sketched below shows granular deposits at the tips of the dermal papillae (marked **X**). This pattern indicates:



(A) Pemphigus vulgaris (intercellular fish-net IgG)

(B) Bullous pemphigoid (linear IgG and C3 at the basement membrane)

(C) Pemphigus foliaceus (superficial intercellular IgG)

(D) Dermatitis herpetiformis (granular IgA at the dermal papillae)

Q8. Tight, bound-down skin of the fingers (sclerodactyly) with Raynaud phenomenon, facial telangiectasia and calcinosis, associated with anti-centromere and anti-Scl-70 antibodies, indicates:

(A) Systemic sclerosis (scleroderma)

(B) Systemic lupus erythematosus

(C) Dermatomyositis

(D) Solitary morphoea

Infestations, Sexually Transmitted Infections and Leprosy

Q9. The first-line treatment of classical scabies, applied to the whole body from the neck down, washed off after 8 to 12 hours and repeated after one week, with all close contacts treated at the same time, is:

(A) Oral fluconazole

(B) Topical permethrin 5% (with oral ivermectin as an alternative)

(C) Topical mupirocin

(D) Oral aciclovir

Q10. The WHO multidrug therapy regimen recommended for multibacillary leprosy consists of:

(A) Rifampicin, dapsone and clofazimine

(B) Isoniazid, rifampicin and pyrazinamide

(C) Dapsone and streptomycin only

(D) Rifampicin and ethambutol only

Q11. In the WHO disability grading of leprosy, a visible deformity such as a claw hand, foot drop or trophic plantar ulcer, resulting from peripheral nerve damage, is classified as:

(A) Grade 0 (no anaesthesia and no deformity)

(B) Grade 1 (loss of protective sensation without visible deformity)

(C) Grade 2 (visible deformity or damage)

(D) Grade 3 (reversible sensory change only)

Pigmentary, Hair and Drug Reactions

Q12. Diffuse generalised hyperpigmentation can be caused by Addison disease, haemochromatosis and certain drugs. Which single cause classically produces pigmentation of the palmar creases and buccal mucosa together with hypotension, fatigue and weight loss?

(A) Vitiligo

(B) Addison disease (primary adrenal insufficiency)

(C) Pityriasis versicolor

(D) Localised post-inflammatory hyperpigmentation

Q13. Diffuse, non-scarring hair shedding that begins two to three months after childbirth, a high fever, major surgery or starting a new drug, with a positive hair-pull test and no bald patches, is:

(A) Alopecia areata

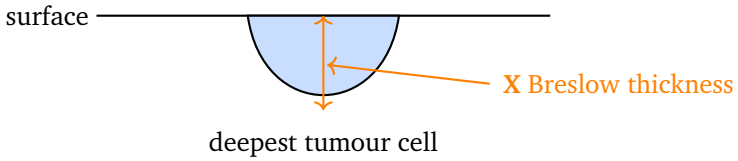
(B) Androgenetic alopecia

(C) Tinea capitis

(D) Telogen effluvium

Skin Tumours and Dermatological Emergencies

Q14. The cross-section below shows a melanoma arising in a dysplastic naevus, with its vertical depth measured from the top of the granular layer to the deepest tumour cell (marked **X**). This measurement, the single most important prognostic factor in cutaneous melanoma, is the:



(A) Clark level of invasion alone

(B) Maximum surface diameter of the lesion

(C) Breslow thickness

(D) Total number of dysplastic naevi on the body

Q15. The acute onset of numerous small sterile non-follicular pustules on an oedematous erythematous background, with fever and neutrophilia, appearing within a day or two of starting a drug (often a beta-lactam antibiotic) and resolving with superficial desquamation, is:

(A) Generalised pustular psoriasis

(B) Bullous impetigo

(C) Acute generalised exanthematous pustulosis (AGEP)

(D) Toxic epidermal necrolysis

Detailed Solutions

Q1.

Solution

Concept – histology of psoriasis: Psoriasis is a chronic disorder of accelerated epidermal turnover with a distinctive microscopic picture.

Step 1 – read the schematic: The collection of neutrophils in the horny layer marked **X** is a **Munro microabscess**, the histological hallmark of psoriasis.

Step 2 – the supporting features: Parakeratosis (nuclei retained in the stratum corneum), regular **elongation of the rete ridges**, **acanthosis** and thinning of the suprapapillary plates complete the classic pattern.

Why the other options are wrong:

- B, lichen planus: shows a saw-tooth rete pattern with a band-like lymphocytic infiltrate and hypergranulosis, not Munro microabscesses.
- C, bullous pemphigoid: shows a subepidermal blister rich in eosinophils.
- D, pemphigus vulgaris: shows intraepidermal acantholysis, not neutrophils in the horny layer.

Final Answer: Psoriasis $\Rightarrow$ A

Answer: (A) Go Back to Q1

Q2.

Solution

Concept – lichen planus of nails and mucosa: Lichen planus commonly involves sites other than skin, and some variants carry long-term risk.

Step 1 – the oral variant: Erosive (ulcerative) oral lichen planus is a recognised premalignant condition and may progress to **squamous cell carcinoma**, so affected patients need long-term follow-up.

Step 2 – the nail variant: Nail lichen planus causes longitudinal ridging and thinning, and severe disease can scar the matrix to form a **dorsal pterygium**.

Why the other options are wrong:

- B: is false, because lichen planus frequently involves the mouth and nails.
- C: is false, because oral disease is often symptomatic and can undergo malignant change.
- D: honey-coloured crusting is a feature of impetigo, not of nail lichen planus.

Final Answer: Erosive oral lichen planus has malignant potential and nail disease may cause a pterygium ⇒ A

Answer: (A) Go Back to Q2

Q3.

Solution

Concept – erythroderma (exfoliative dermatitis): Erythroderma is a dermatological emergency defined by extensive skin inflammation.

Step 1 – read the definition: Generalised erythema and scaling over more than 90% of the body surface is termed erythroderma.

Step 2 – the causes: The commonest causes are flares of a **pre-existing dermatosis** (psoriasis, atopic eczema), drug reactions, cutaneous lymphoma and idiopathic disease; the loss of the skin barrier risks hypothermia, dehydration and high-output cardiac failure.

Why the other options are wrong:

- A, pityriasis rosea: is a self-limiting truncal rash, not near-total erythema.
- C, localised plaque psoriasis: is confined to plaques, by definition not erythrodermic.
- D, fixed drug eruption: is a localised recurring plaque, not generalised.

Final Answer: Erythroderma (exfoliative dermatitis) ⇒ B

Answer: (B) Go Back to Q3

Q4.

Solution

Concept – mycetoma (Madura foot): Mycetoma is a chronic subcutaneous infection following traumatic inoculation.

Step 1 – read the clues: A **painless swollen foot** with **multiple discharging sinuses** that extrude **coloured grains**, developing after a penetrating thorn injury, is mycetoma (Madura foot).

Step 2 – the causes: It may be fungal (eumycetoma) or actinomycotic (actinomycetoma); the grain colour and grain histology guide the cause and treatment.

Why the other options are wrong:

- A, cellulitis: is an acute painful spreading infection, not a chronic grain-

discharging swelling.
- B, tinea pedis: is a superficial itchy scaling between the toes.
- D, impetigo: is a superficial crusted infection, not a deep sinus-forming swelling.

Final Answer: Mycetoma (Madura foot) $\Rightarrow$ C

Answer: (C) Go Back to Q4

Q5.

Solution

Concept – ecthyma: Ecthyma is a deep, ulcerative form of pyoderma.

Step 1 – read the lesion: A **thick adherent crust** over a **punched-out ulcer** extending into the dermis, usually on the lower legs and healing with a scar, is ecthyma.

Step 2 – the organisms: Streptococcus pyogenes and Staphylococcus aureus are responsible; poor hygiene, malnutrition and minor trauma predispose to it.

Why the other options are wrong:

- A, impetigo contagiosa: is superficial with honey crusts and heals without scarring.
- C, erysipelas: is a well-demarcated tender erythema of the dermis, not an ulcer with crust.
- D, folliculitis: is inflammation around hair follicles, not a punched-out ulcer.

Final Answer: Ecthyma $\Rightarrow$ B

Answer: (B) Go Back to Q5

Q6.

Solution

Concept – plantar warts versus corns: A plantar wart (verruca) is a human papillomavirus infection of the sole, and it must be told apart from a corn.

Step 1 – read the lesion: A **plantar wart interrupts the skin lines** (dermatoglyphics) and **bleeds as small black dots** (thrombosed capillaries) when pared.

Step 2 – contrast with a corn: A **corn (clavus)** preserves the skin lines and has a central translucent keratin plug rather than black dots. Plantar warts are usually caused by HPV type 1, common warts by types 2 and 4, while types 6 and 11 cause

anogenital warts.

Why the other options are wrong:

- A: is reversed, because it is the wart, not the corn, that shows black dots and breaks the skin lines.
- B: plantar warts are caused by HPV, not herpes simplex virus.
- C: common warts are due to HPV 2 and 4, not only 6 and 11.

Final Answer: A plantar wart interrupts the skin lines and bleeds as black dots on paring, unlike a corn ⇒ D

Answer: (D) Go Back to Q6

Q7.

Solution

Concept – direct immunofluorescence patterns: Direct immunofluorescence separates the autoimmune bullous diseases by the site and shape of the immune deposits.

Step 1 – read the schematic: Granular deposits at the tips of the dermal papillae (marked **X**) are granular IgA, which is diagnostic of **dermatitis herpetiformis**.

Step 2 – the association: Dermatitis herpetiformis is linked to coeliac disease and responds to a gluten-free diet and to dapsone.

Why the other options are wrong:

- A, pemphigus vulgaris: shows intercellular fish-net IgG throughout the epidermis.
- B, bullous pemphigoid: shows linear IgG and C3 along the basement membrane.
- C, pemphigus foliaceus: shows superficial intercellular IgG in the upper epidermis.

Final Answer: Dermatitis herpetiformis (granular IgA at the dermal papillae) ⇒ D

Answer: (D) Go Back to Q7

Q8.

Solution

Concept – systemic sclerosis (scleroderma): Systemic sclerosis is an autoimmune connective-tissue disease with fibrosis of the skin and internal organs.

Step 1 – read the features: Sclerodactyly (tight, bound-down finger skin), **Raynaud phenomenon**, telangiectasia and calcinosis point to systemic sclerosis.

Step 2 – the antibodies: Anti-centromere antibodies mark limited disease (the CREST pattern), while **anti-Scl-70** (anti-topoisomerase) marks diffuse disease with a higher risk of lung and renal involvement.

Why the other options are wrong:

- B, systemic lupus erythematosus: gives a malar rash and anti-dsDNA antibodies, not bound-down skin.
- C, dermatomyositis: gives a heliotrope rash and Gottron papules with proximal myopathy.
- D, solitary morphoea: is a single localised sclerotic plaque without Raynaud or systemic antibodies.

Final Answer: Systemic sclerosis (scleroderma) $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q8

Q9.

Solution

Concept – treatment of scabies: Scabies is treated with a topical scabicide together with treatment of all contacts.

Step 1 – the first-line agent: Topical permethrin 5% applied to the whole body from the neck down, left on for 8 to 12 hours and repeated after one week, is first line.

Step 2 – the alternative and the contacts: Oral ivermectin is a useful alternative, especially in crusted scabies or outbreaks. All close and household contacts must be treated **at the same time**, and bedding and clothing washed hot, to prevent reinfestation.

Why the other options are wrong:

- A, oral fluconazole: is an antifungal, useless against a mite.
- C, topical mupirocin: is an antibacterial for impetigo, not a scabicide.
- D, oral aciclovir: is an antiviral, with no action on Sarcoptes.

Final Answer: Topical permethrin 5% (with oral ivermectin as an alternative) ⇒ B

Answer: (B) Go Back to Q9

Q10.

Solution

Concept – WHO multidrug therapy for leprosy: Leprosy is treated with fixed multidrug regimens to prevent resistance and interrupt transmission.

Step 1 – recall the drugs: The multibacillary regimen combines **rifampicin, dapsone and clofazimine**.

Step 2 – the schedule: Rifampicin and clofazimine are given monthly under supervision, dapsone and clofazimine daily, for 12 months in multibacillary disease and 6 months in paucibacillary disease.

Why the other options are wrong:

- B: isoniazid, rifampicin and pyrazinamide are the anti-tuberculosis drugs, not the leprosy regimen.
- C: dapsone plus streptomycin is not a WHO leprosy regimen.
- D: rifampicin plus ethambutol does not cover leprosy adequately.

Final Answer: Rifampicin, dapsone and clofazimine ⇒ A

Answer: (A) Go Back to Q10

Q11.

Solution

Concept – WHO disability grading in leprosy: Nerve damage in leprosy is graded to guide care and to monitor programme outcomes.

Step 1 – read the grade: A **visible deformity or damage** of the hand, foot or eye (claw hand, foot drop, trophic ulcer, lagophthalmos) is **Grade 2** disability.

Step 2 – the full scale: Grade 0 means no anaesthesia and no deformity; Grade 1 means loss of protective sensation (in hands or feet) or reduced vision without visible deformity; Grade 2 means visible deformity or damage. There is no Grade 3.

Why the other options are wrong:

- A, Grade 0: means no sensory loss and no deformity.

- B, Grade 1: means sensory loss only, without visible deformity.
- D, Grade 3: is not part of the WHO leprosy grading.

Final Answer: Grade 2 (visible deformity or damage) $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

Concept – generalised hyperpigmentation: Diffuse hyperpigmentation can be endocrine, metabolic or drug-induced.

Step 1 – read the clues: Pigmentation of the **palmar creases and buccal mucosa** with **hypotension, fatigue and weight loss** is classic for **Addison disease** (primary adrenal insufficiency), where high ACTH stimulates melanocytes.

Step 2 – the differential: Haemochromatosis gives a slate-grey (bronze) skin with diabetes, and drugs such as amiodarone, minocycline and chemotherapy agents can also darken the skin.

Why the other options are wrong:

- A, vitiligo: causes *loss* of pigment, not hyperpigmentation.
- C, pityriasis versicolor: is a localised scaly dyspigmentation, not diffuse mucosal pigmentation.
- D, post-inflammatory hyperpigmentation: is localised to sites of prior inflammation, without systemic features.

Final Answer: Addison disease (primary adrenal insufficiency) $\Rightarrow$ B

Answer: (B) Go Back to Q12

Q13.

Solution

Concept – telogen effluvium: Telogen effluvium is diffuse non-scarring shedding when many hairs enter the resting (telogen) phase together.

Step 1 – read the clues: Diffuse shedding beginning **two to three months** after a trigger, with a **positive hair-pull test** and no bald patches, is telogen effluvium.

Step 2 – the triggers: Common triggers are **childbirth** (post-partum), high fever or severe illness, major surgery, crash dieting and drugs; it usually recovers once the trigger is removed.

Why the other options are wrong:

- A, alopecia areata: gives discrete round bald patches with exclamation-mark hairs, not diffuse shedding.
- B, androgenetic alopecia: is gradual patterned thinning, not a sudden diffuse shed after a trigger.
- C, tinea capitis: gives scaly patches with broken hairs and is KOH or culture positive.

Final Answer: Telogen effluvium ⇒ D

Answer: (D) Go Back to Q13

Q14.

Solution

Concept – Breslow thickness in melanoma: A dysplastic naevus raises melanoma risk, and once melanoma is diagnosed its depth predicts prognosis.

Step 1 – read the schematic: The vertical depth from the top of the granular layer to the **deepest tumour cell** (marked **X**) is the **Breslow thickness**, measured in millimetres.

Step 2 – why it matters: Breslow thickness is the single most important prognostic factor: the thinner the tumour, the better the survival, and it drives the excision margin and the decision on sentinel node biopsy.

Why the other options are wrong:

- A, Clark level: describes the anatomical layer reached and is less predictive than Breslow depth.
- B, surface diameter: is part of screening (ABCDE) but does not measure depth or prognosis.
- D, number of dysplastic naevi: is a risk factor for developing melanoma, not a prognostic measure of an existing tumour.

Final Answer: Breslow thickness ⇒ C

Answer: (C) Go Back to Q14

Q15.

Solution

Concept – acute generalised exanthematous pustulosis (AGEP): AGEP is an acute pustular drug reaction that must be told apart from pustular psoriasis and infection.

Step 1 – read the clues: Numerous small sterile non-follicular pustules on an **oedematous erythematous** background, with **fever and neutrophilia**, starting within a day or two of a drug and clearing with desquamation, define AGEP.

Step 2 – management: The commonest triggers are beta-lactam and macrolide antibiotics; stopping the culprit drug leads to rapid recovery, and topical steroids ease the skin.

Why the other options are wrong:

- A, generalised pustular psoriasis: has a psoriatic history and a more prolonged relapsing course, without a clear single-drug trigger.
- B, bullous impetigo: gives localised flaccid bullae with honey crusts, not widespread sterile pustules.
- D, toxic epidermal necrolysis: causes epidermal detachment and mucosal erosions, not crops of small pustules.

Final Answer: Acute generalised exanthematous pustulosis (AGEP) $\Rightarrow$ C

Answer: (C) Go Back to Q15

Answer Key

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