INI CET Dermatology

Sample Paper – 10

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. Which single feature best distinguishes scalp psoriasis from seborrhoeic dermatitis of the scalp?

(A) Greasy yellowish scale confined within the hairline with no nail changes

(B) Diffuse fine dandruff that always spares the nail folds

(C) Well-demarcated plaques with thick silvery scale extending past the hairline, together with nail pitting

(D) Ill-defined pink patches limited to the nasolabial folds

Q2. Chronic hand eczema is defined as hand dermatitis persisting for more than three months or relapsing at least twice within a year. The cornerstone of its first-line management is:

(A) Continuous long-term systemic corticosteroids as maintenance

(B) Complete avoidance of all hand washing

(C) Regular emollients, avoidance of irritants and allergens, and topical corticosteroids for flares

(D) Prophylactic oral antibiotics

Q3. On dermoscopy, a fine white reticular network (Wickham striae) overlying violaceous papules, together with lacy white streaks on the buccal mucosa, indicates:

(A) Lichen planus

(B) Discoid lupus erythematosus

(C) Oral candidiasis

(D) Leukoplakia

Cutaneous Infections

Q4. A scaly, itchy rash of the groin folds with an active advancing edge and central clearing, typically sparing the scrotum, is best classified as:

(A) Tinea cruris

(B) Tinea pedis

(C) Tinea capitis

(D) Tinea unguium

Q5. A hot, red, tender, swollen lower leg with a spreading border, fever and a preceding skin break is more likely to be cellulitis than deep vein thrombosis because:

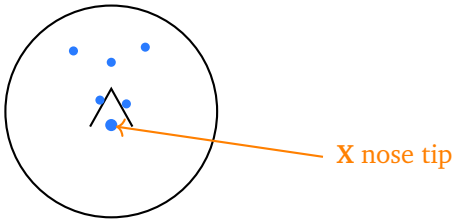
(A) Deep vein thrombosis typically causes fever and a well-defined spreading red border

(B) Cellulitis shows warmth, spreading erythema and systemic upset with a portal of entry, whereas deep vein thrombosis gives calf swelling and tenderness without a well-defined red border

(C) The two conditions are clinically identical and need no further assessment

(D) Cellulitis never causes fever

Q6. The eruption sketched below is a crop of vesicles on the forehead and the tip of the nose (marked **X**), the Hutchinson sign warning of ocular involvement in ophthalmic-division shingles. It is:



(A) Herpes simplex labialis

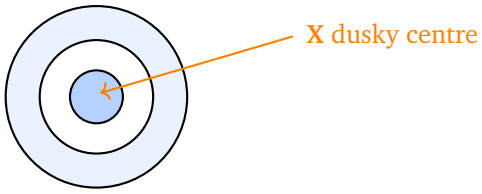
(B) Impetigo

(C) Allergic contact dermatitis

(D) Herpes zoster ophthalmicus

Vesiculobullous and Autoimmune Disorders

Q7. The concentric three-zone ‘target’ lesion sketched below (dusky centre marked **X**), most commonly triggered by herpes simplex virus, is characteristic of:



(A) Erythema multiforme

(B) Acute urticaria

(C) Tinea corporis

(D) Fixed drug eruption

Q8. A persistent net-like (reticulate) violaceous mottling of the skin (livedo reticularis) together with recurrent arterial or venous thromboses and recurrent pregnancy loss suggests:

(A) Erythema nodosum

(B) Antiphospholipid syndrome

(C) Henoch-Schonlein purpura

(D) Acute urticaria

Infestations, Sexually Transmitted Infections and Leprosy

Q9. The correct public-health approach to a patient with a confirmed sexually transmitted infection such as early syphilis includes:

(A) Treating only the index patient and ignoring sexual partners

(B) Publicly disclosing the diagnosis without any confidentiality

(C) Withholding treatment from the patient until every partner is traced

(D) Treating the patient, tracing and treating partners, screening for co-infections and maintaining confidentiality

Q10. A neonate with persistent nasal discharge (snuffles), a saddle-nose deformity and, later in childhood, notched incisors (Hutchinson teeth) has:

(A) Neonatal herpes simplex

(B) Congenital rubella

(C) Neonatal candidiasis

(D) Congenital syphilis

Q11. Firm, shiny, dome-shaped cutaneous nodules appearing in a previously treated lepromatous patient, packed with acid-fast bacilli and often signalling dapsone-resistant relapse, describe:

(A) Erythema nodosum leprosum

(B) Histoid leprosy

(C) Lucio phenomenon

(D) Indeterminate leprosy

Pigmentary, Hair and Drug Reactions

Q12. On the Fitzpatrick phototype scale sketched below, the phototype marked **X**, which always burns and never tans in the sun, is:

(A) Type III

(B) Type I

(C) Type V

(D) Type VI

Q13. A well-demarcated, round, dusky-red plaque that recurs at exactly the same site each time a drug is taken (a fixed drug eruption) is classically caused by:

(A) Sulfonamides, tetracyclines and NSAIDs

(B) Bland topical emollients

(C) Oral rehydration salts

(D) Inhaled bronchodilators

Skin Tumours and Dermatological Emergencies

Q14. The single most important modifiable risk factor for non-melanoma skin cancer, and the main target of prevention, is:

(A) Dietary fat intake

(B) Regular physical exercise

(C) Cumulative ultraviolet (sun) exposure, compounded by immunosuppression

(D) Iron deficiency anaemia

Q15. A rapidly spreading dusky skin discolouration with pain out of proportion to the visible signs, crepitus (gas in the tissues) and a high LRINEC score mandates urgent surgical exploration because the diagnosis is:

(A) Simple cellulitis

(B) Erysipelas

(C) Necrotising fasciitis

(D) Allergic contact dermatitis

Detailed Solutions

Q1.

Solution

Concept – scalp psoriasis versus seborrhoeic dermatitis: Both cause a scaly scalp, but their morphology and associated signs differ.

Step 1 – read the discriminators: Scalp **psoriasis** forms **well-demarcated plaques** with **thick silvery-white scale** that characteristically **extends past the hairline** onto the forehead.

Step 2 – the nail clue: Psoriasis is frequently accompanied by **nail pitting**, onycholysis and oil-drop signs; seborrhoeic dermatitis leaves the nails normal.

Why the other options are wrong:

- A, greasy scale within the hairline with normal nails: describes seborrhoeic dermatitis.
- B, fine dandruff sparing the nail folds: is again seborrhoeic dermatitis, not psoriasis.
- D, ill-defined patches in the nasolabial folds: is a classic seborrhoeic dermatitis site.

Final Answer: Well-demarcated silvery plaques past the hairline with nail pitting $\Rightarrow$ C

Answer: (C) Go Back to Q1

Q2.

Solution

Concept – chronic hand eczema: Chronic hand eczema is hand dermatitis lasting more than three months or relapsing twice or more in a year.

Step 1 – the definition: The chronicity criterion (over three months, or two or more relapses per year) separates it from a single acute flare.

Step 2 – first-line management: The cornerstone is **regular emollients**, strict **avoidance of irritants and allergens** (soaps, solvents, wet work, contact allergens) and **topical corticosteroids** for flares, with gloves and barrier protection.

Why the other options are wrong:

- A, continuous systemic steroids: are not used for maintenance because of their side effects.

- B, avoiding all hand washing: is impractical and does not treat the eczema.
- D, prophylactic oral antibiotics: are only for proven secondary infection, not routine care.

Final Answer: Emollients, irritant/allergen avoidance and topical corticosteroids $\Rightarrow$ C

Answer: (C) Go Back to Q2

Q3.

Solution

Concept – lichen planus on dermoscopy: Lichen planus is a papulosquamous disorder with a distinctive surface pattern.

Step 1 – read the dermoscopy: A **fine white reticular network** over violaceous papules is dermoscopic **Wickham striae**, the hallmark of lichen planus.

Step 2 – the mucosal clue: Lacy white streaks on the buccal mucosa are oral lichen planus, confirming the diagnosis.

Why the other options are wrong:

- B, discoid lupus: shows follicular plugging and scarring, not Wickham striae.
- C, oral candidiasis: gives wipeable white plaques, not fixed lacy streaks.
- D, leukoplakia: is a solitary adherent white plaque without violaceous skin papules.

Final Answer: Lichen planus $\Rightarrow$ A

Answer: (A) Go Back to Q3

Q4.

Solution

Concept – clinical types of tinea: Dermatophyte infection is named by the body site it involves.

Step 1 – read the site: A scaly plaque of the **groin folds** with an active edge and central clearing is **tinea cruris**.

Step 2 – the sparing clue: Tinea cruris typically spares the scrotum, which helps separate it from candidal intertrigo.

Why the other options are wrong:

- B, tinea pedis: involves the feet and toe webs, not the groin.
- C, tinea capitis: is scalp ringworm with hair loss.
- D, tinea unguium: is a nail-plate infection (onychomycosis).

Final Answer: Tinea cruris ⇒ A

Answer: (A) Go Back to Q4

Q5.

Solution

Concept – cellulitis versus deep vein thrombosis: Both give a swollen tender leg, but the pattern differs.

Step 1 – read cellulitis: Cellulitis shows **warmth, spreading erythema** with a defined advancing border, **fever** and a **portal of entry** (a skin break or ulcer).

Step 2 – read deep vein thrombosis: Deep vein thrombosis gives **calf swelling and tenderness** without a well-defined red border and usually without a spreading erythema, and needs a Wells score and Doppler assessment.

Why the other options are wrong:

- A, reverses the features: fever and a spreading red border favour cellulitis, not thrombosis.
- C, saying they are identical: is wrong; the border, fever and portal of entry distinguish them.
- D, cellulitis never causing fever: is false; systemic upset is common.

Final Answer: Cellulitis has spreading erythema and a portal of entry, unlike deep vein thrombosis ⇒ B

Answer: (B) Go Back to Q5

Q6.

Solution

Concept – herpes zoster ophthalmicus: Zoster of the ophthalmic division of the trigeminal nerve threatens the eye.

Step 1 – read the sign: Vesicles on the **tip of the nose** (marked **X**), the **Hutchinson sign**, indicate involvement of the nasociliary nerve and a high risk of ocular disease.

Step 2 – management: Start prompt oral (or intravenous) antivirals and arrange

urgent ophthalmology review to prevent keratitis and uveitis.

Why the other options are wrong:

- A, herpes simplex labialis: recurs on the lip, not in a trigeminal dermatome with a nose-tip sign.
- B, impetigo: gives honey-coloured crusts, not dermatomal vesicles.
- C, contact dermatitis: follows the contact area and is itchy, not dermatomal and painful.

Final Answer: Herpes zoster ophthalmicus $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q6

Q7.

Solution

Concept – erythema multiforme: Erythema multiforme is an acute, self-limiting hypersensitivity reaction.

Step 1 – read the lesion: The **three-zone target lesion** (a dusky or blistered centre marked **X**, a pale oedematous ring and an erythematous outer rim) is the hallmark of erythema multiforme.

Step 2 – the commonest trigger: Herpes simplex virus is the most frequent precipitant; treatment addresses the trigger and gives supportive care.

Why the other options are wrong:

- B, urticaria: gives transient wheals, not fixed three-zone targets.
- C, tinea corporis: is an annular scaly KOH-positive plaque, not a target lesion.
- D, fixed drug eruption: is a single recurring dusky plaque at the same site, not crops of targets.

Final Answer: Erythema multiforme $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q7

Q8.

Solution

Concept – antiphospholipid syndrome: Antiphospholipid syndrome is an acquired thrombophilia with cutaneous signs.

Step 1 – read the skin sign: A persistent **net-like violaceous mottling** (livedo reticularis) is a classic cutaneous marker of antiphospholipid syndrome.

Step 2 – the systemic clues: Recurrent thromboses (arterial or venous) and **recurrent pregnancy loss**, with antiphospholipid antibodies, complete the picture.

Why the other options are wrong:

- A, erythema nodosum: gives tender red shin nodules, not livedo with thrombosis.
- C, Henoch-Schonlein purpura: gives palpable purpura on the legs and buttocks, not livedo.
- D, urticaria: gives transient itchy wheals without thrombosis or fetal loss.

Final Answer: Antiphospholipid syndrome $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q8

Q9.

Solution

Concept – public-health management of a sexually transmitted infection: Managing a sexually transmitted infection extends beyond the index patient.

Step 1 – treat the patient: Give appropriate treatment (for example, benzathine penicillin for early syphilis) to the index case.

Step 2 – the public-health package: Add **partner tracing and treatment**, **screening for co-infections** (HIV, hepatitis B, other sexually transmitted infections), health education and **confidentiality**; syphilis and several other infections are also notifiable.

Why the other options are wrong:

- A, ignoring partners: allows continued transmission and reinfection.
- B, public disclosure: breaches confidentiality and deters people from seeking care.
- C, withholding treatment from the patient: harms the patient and is never appropriate.

Final Answer: Treat, trace and treat partners, screen for co-infections and keep confidentiality ⇒ D

Answer: (D) Go Back to Q9

Q10.

Solution

Concept – congenital syphilis: Congenital syphilis follows transplacental spread of Treponema pallidum.

Step 1 – read the early sign: Persistent **snuffles** (an infectious nasal discharge) and a **saddle-nose deformity** are early features of congenital syphilis.

Step 2 – the late stigmata: Later come **Hutchinson (notched) teeth**, interstitial keratitis and eighth-nerve deafness (the Hutchinson triad).

Why the other options are wrong:

- A, neonatal herpes: causes vesicles, encephalitis or disseminated disease, not snuffles.
- B, congenital rubella: causes cataracts, deafness and cardiac defects, not a saddle nose.
- C, neonatal candidiasis: causes oral thrush and a nappy rash, not these stigmata.

Final Answer: Congenital syphilis ⇒ D

Answer: (D) Go Back to Q10

Q11.

Solution

Concept – histoid leprosy: Histoid leprosy is a distinctive form of lepromatous leprosy.

Step 1 – read the lesion: Firm, shiny, dome-shaped nodules arising on apparently normal skin, **teeming with acid-fast bacilli**, define histoid leprosy.

Step 2 – the clinical significance: It classically appears in inadequately treated or **dapsone-resistant relapse**, and the bacilli-rich nodules make the patient highly infectious.

Why the other options are wrong:

- A, erythema nodosum leprosum: is a type 2 reaction with crops of tender

red nodules, not shiny bacilli-packed nodules.
- C, Lucio phenomenon: is a necrotising vasculopathy with ragged ulcers, not nodules.
- D, indeterminate leprosy: is an early, ill-defined hypopigmented macule, not nodular disease.

Final Answer: Histoid leprosy $\Rightarrow$ B

Answer: (B) Go Back to Q11

Q12.

Solution

Concept – Fitzpatrick skin phototypes: The Fitzpatrick scale grades constitutional skin colour by sun response, from type I to type VI.

Step 1 – read the extreme: The type that **always burns and never tans** is **type I** (very fair skin), marked **X** at the lightest end of the scale.

Step 2 – the gradient: Higher numbers tan more readily and burn less; type VI (darkest) never burns. Lower phototypes carry the greatest skin-cancer risk from ultraviolet light.

Why the other options are wrong:

- A, type III: burns moderately then tans, so it does not always burn.
- C, type V: rarely burns and tans easily.
- D, type VI: never burns and is deeply pigmented.

Final Answer: Type I $\Rightarrow$ B

Answer: (B) Go Back to Q12

Q13.

Solution

Concept – fixed drug eruption: A fixed drug eruption recurs at the same site each time the culprit drug is taken.

Step 1 – read the lesion: A **well-demarcated, round, dusky-red plaque** that reappears at exactly the same site on re-exposure is a fixed drug eruption, which heals with residual pigmentation.

Step 2 – the usual culprits: Sulfonamides, tetracyclines and NSAIDs (and paracetamol) are the classic causes; identifying and stopping the drug is the key

management step.

Why the other options are wrong:

- B, bland emollients: are soothing agents, not a cause of drug eruptions.
- C, oral rehydration salts: do not cause fixed drug eruptions.
- D, inhaled bronchodilators: are not classic triggers of a fixed drug eruption.

Final Answer: Sulfonamides, tetracyclines and NSAIDs $\Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept – non-melanoma skin cancer risk and prevention: Basal cell and squamous cell carcinomas are driven mainly by ultraviolet light.

Step 1 – the key risk factor: Cumulative ultraviolet (sun) exposure is the single most important modifiable risk factor, and it is amplified by **immunosuppression** (for example, in organ-transplant recipients).

Step 2 – prevention: Sun avoidance at peak hours, protective clothing, broad-spectrum sunscreen and avoiding sunbeds are the mainstays of prevention.

Why the other options are wrong:

- A, dietary fat: is not an established driver of non-melanoma skin cancer.
- B, physical exercise: is not a risk factor for these tumours.
- D, iron deficiency: is unrelated to non-melanoma skin cancer risk.

Final Answer: Cumulative ultraviolet exposure, compounded by immunosuppression $\Rightarrow$ C

Answer: (C) Go Back to Q14

Q15.

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 visible signs, rapidly spreading dusky skin, **crepitus** (gas) and a **high LRINEC score** point to necrotising fasciitis.

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

Why the other options are wrong:

- A, simple cellulitis: is superficial and lacks disproportionate pain, gas or a high LRINEC score.
- B, erysipelas: is a sharply demarcated superficial dermal infection, not a deep necrotising one.
- D, contact dermatitis: is an itchy eczematous reaction, not a surgical emergency.

Final Answer: Necrotising fasciitis $\Rightarrow$ C

Answer: (C) Go Back to Q15

Answer Key

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