

INI CET Dermatology

Sample Paper – 8

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

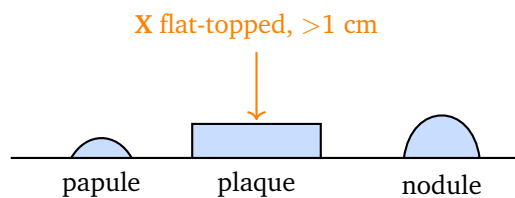
- Q1.** For a patient with mild, localised chronic plaque psoriasis, the accepted **first-line** treatment before moving up the ladder to phototherapy, methotrexate and biologics is:
- (A) Oral methotrexate
 - (B) A biologic (anti-TNF) agent
 - (C) A topical vitamin D analogue (calcipotriol) with a topical corticosteroid
 - (D) Narrow-band UVB phototherapy
- Q2.** On skin biopsy, **intercellular oedema of the epidermis** that separates



keratinocytes and forms small intra-epidermal vesicles (spongiosis) is the histological hallmark of:

- (A) Psoriasis
- (B) Lichen planus
- (C) Acute eczema (spongiotic dermatitis)
- (D) Pemphigus vulgaris

Q3. Among the primary skin lesions sketched below, a **flat-topped elevation wider than 1 cm** formed by the confluence of papules (marked X) is correctly termed a:



- (A) Papule
- (B) Plaque
- (C) Nodule
- (D) Macule

Cutaneous Infections

Q4. A child with scaly patches of hair loss and broken hairs on the scalp shows **bright green fluorescence** under a Wood lamp. The dermatophyte genus classically responsible for this green fluorescence in tinea capitis is:

- (A) Microsporum
- (B) Trichophyton rubrum
- (C) Epidermophyton floccosum
- (D) Malassezia

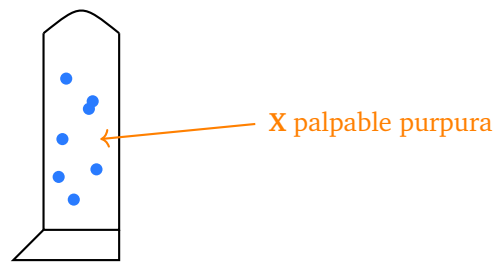


- Q5.** A child with fever develops an itchy rash where **macules, papules, vesicles and crusts are all present at the same time**, with the classic ‘dew-drop-on-a-rose-petal’ vesicle. This is:
- (A) Herpes zoster
 - (B) Chickenpox (varicella)
 - (C) Hand-foot-and-mouth disease
 - (D) Impetigo
- Q6.** A sheep farmer develops a solitary firm reddish nodule on the finger a week after handling lambs; it evolves through targetoid stages and heals on its own. This parapoxvirus infection (orf / milker’s nodule) is acquired from:
- (A) Sheep and goats
 - (B) Cats
 - (C) Freshwater fish
 - (D) Pigeons

Vesiculobullous and Autoimmune Disorders

- Q7.** A **Tzanck smear** is taken from the floor of a fresh blister. Rounded, detached **acantholytic keratinocytes** are the diagnostic finding in:
- (A) Bullous pemphigoid
 - (B) Dermatitis herpetiformis
 - (C) Pemphigus vulgaris
 - (D) Psoriasis
- Q8.** The eruption sketched on the lower leg below is a crop of **palpable purpuric papules** (marked X) that do not blanch on pressure, with biopsy showing neutrophilic (leukocytoclastic) small-vessel vasculitis. In a child following an upper respiratory infection, the likely diagnosis is:





- (A) Idiopathic thrombocytopenic purpura
- (B) Meningococcaemia
- (C) Henoch-Schonlein purpura (IgA vasculitis)
- (D) Senile purpura

Infestations, Sexually Transmitted Infections and Leprosy

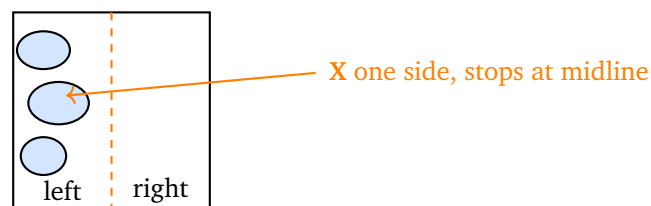
- Q9.** A patient from an endemic area has a slowly enlarging painless ulcer with a raised edge on an exposed part (an 'oriental sore'). Cutaneous leishmaniasis is transmitted by the bite of the:
- (A) Female sandfly (Phlebotomus)
 - (B) Anopheles mosquito
 - (C) Tsetse fly
 - (D) Ixodid tick
- Q10.** When a very high-titre serum from secondary syphilis is tested by VDRL, the test may read **falsely negative at low dilution** because antibody excess blocks lattice formation, turning positive only when the serum is diluted. This is the:
- (A) Jarisch-Herxheimer reaction
 - (B) Biological false-positive
 - (C) Window period
 - (D) Prozone phenomenon
- Q11.** In a **slit-skin smear** for leprosy, acid-fast bacilli are counted on a logarithmic scale from 0 to 6+ that estimates the density of *Mycobacterium leprae*. This graded score is the:



- (A) Morphological index
- (B) Bacterial index
- (C) Mitotic index
- (D) Breslow index

Pigmentary, Hair and Drug Reactions

Q12. The depigmented macules sketched below (marked X) are confined to **one side of the body in a band-like pattern that stops sharply at the midline**, appear early and are often stable. This classifies the vitiligo as:



- (A) Non-segmental (generalised) vitiligo
 - (B) Acrofacial vitiligo
 - (C) Universal vitiligo
 - (D) Segmental vitiligo
- Q13.** A woman has excess **terminal hair in a male pattern** (upper lip, chin, chest) together with irregular periods and acne, driven by raised androgens from polycystic ovary syndrome. This androgen-dependent pattern is correctly termed:
- (A) Hypertrichosis
 - (B) Hirsutism
 - (C) Alopecia areata
 - (D) Telogen effluvium

Skin Tumours and Dermatological Emergencies

Q14. On dermoscopy, a **benign melanocytic naevus** is distinguished from melanoma by which reassuring feature?



- (A) A symmetrical, regular pigment network with uniform colour
- (B) An irregular blue-white veil with atypical streaks
- (C) An asymmetrical, chaotic pigment pattern with multiple colours
- (D) Irregularly branched (arborising) vessels

Q15. Minutes after a drug injection a patient develops urticaria, wheeze, stridor and hypotension. The single most important **immediate** drug in this anaphylactic shock is:

- (A) Intravenous hydrocortisone
- (B) Intravenous chlorphenamine (antihistamine)
- (C) Nebulised salbutamol alone
- (D) Intramuscular adrenaline (epinephrine)



Detailed Solutions**Q1.****Solution**

Concept – the psoriasis treatment ladder: Psoriasis is treated in a stepwise fashion, escalating only if milder measures fail.

Step 1 – start at the bottom rung: For mild, localised plaque disease the first-line is **topical** therapy, typically a **vitamin D analogue (calcipotriol)** combined with a topical corticosteroid.

Step 2 – climb only if needed: If topical treatment fails or the disease is extensive, move up to **phototherapy (narrow-band UVB)**, then systemic **methotrexate**, and finally **biologics** for resistant cases.

Why the other options are wrong:

- A, methotrexate: is a systemic agent kept for moderate to severe disease.
- B, a biologic: sits at the top of the ladder for refractory disease.
- D, phototherapy: is the next step above topicals, not the first-line for mild localised disease.

Final Answer: A topical vitamin D analogue with a topical corticosteroid ⇒ **C**

Answer: (C) [Go Back to Q1](#)

Q2.**Solution**

Concept – histology of eczema: Eczema (dermatitis) has a characteristic microscopic appearance that changes with chronicity.

Step 1 – name the hallmark: **Spongiosis**, intercellular oedema that pushes keratinocytes apart and forms small intra-epidermal vesicles, is the defining feature of **acute eczema**.

Step 2 – acute versus chronic: Acute eczema shows marked spongiosis with vesicles; **chronic** eczema shows acanthosis, hyperkeratosis and lichenification from prolonged rubbing, with less spongiosis.

Why the other options are wrong:

- A, psoriasis: shows parakeratosis, Munro microabscesses and elongated rete ridges, not spongiosis.
- B, lichen planus: shows a band-like (lichenoid) dermal infiltrate and basal



degeneration.

- D, pemphigus vulgaris: shows intra-epidermal acantholysis, not intercellular oedema.

Final Answer: Acute eczema (spongiotic dermatitis) ⇒

Answer: (C) [Go Back to Q2](#)

Q3.

Solution

Concept – primary skin lesion terminology: Primary lesions are defined by their size and whether they are flat, raised or deep.

Step 1 – apply the size rule: A **papule** is a solid raised lesion *under* 1 cm; a **plaque** is a flat-topped raised lesion *over* 1 cm (often from confluent papules); a **nodule** is a solid deep lesion over 1 cm that involves the dermis.

Step 2 – match the picture: The broad, flat-topped elevation wider than 1 cm marked X fits a **plaque**.

Why the other options are wrong:

- A, papule: is a small raised lesion under 1 cm, not a broad plateau.
- C, nodule: is a deep, dome-shaped lesion, not flat-topped.
- D, macule: is a flat, non-palpable colour change, not raised at all.

Final Answer: Plaque ⇒

Answer: (B) [Go Back to Q3](#)

Q4.

Solution

Concept – Wood lamp fluorescence in tinea capitis: A Wood lamp emits ultra-violet light that makes certain organisms fluoresce.

Step 1 – recall the colour: **Microsporum** species (for example *M. canis*, *M. audouinii*) fluoresce **bright green** on the scalp in tinea capitis.

Step 2 – clinical use: The green glow helps screen infected hairs and select samples for KOH and culture; not all dermatophytes fluoresce.

Why the other options are wrong:

- B, Trichophyton (most species): do *not* fluoresce under a Wood lamp.



- C, Epidermophyton floccosum: infects skin and nails, not scalp hair, and does not fluoresce green.
- D, Malassezia: causes pityriasis versicolor with a coppery-orange (not green) glow.

Final Answer: Microsporum ⇒ A

Answer: (A) [Go Back to Q4](#)

Q5.

Solution

Concept – chickenpox (varicella): Varicella is the primary infection with varicella-zoster virus.

Step 1 – read the rash: Lesions appearing in **crops** so that macules, papules, vesicles and crusts coexist (**lesions in different stages**), with the classic ‘**dew-drop-on-a-rose-petal**’ vesicle, indicate chickenpox.

Step 2 – the spread: The rash is centripetal (trunk more than limbs) and mucosae may be involved; it is highly contagious by droplets.

Why the other options are wrong:

- A, herpes zoster: is a reactivation confined to one dermatome, not a widespread multi-stage rash.
- C, hand-foot-and-mouth disease: gives oval vesicles on hands, feet and mouth, not diffuse crops in all stages.
- D, impetigo: gives honey-coloured crusts, not ‘dew-drop’ vesicles.

Final Answer: Chickenpox (varicella) ⇒ B

Answer: (B) [Go Back to Q5](#)

Q6.

Solution

Concept – orf (milker’s nodule): Orf is a zoonotic skin infection caused by a parapoxvirus.

Step 1 – trace the source: Orf is caught from **sheep and goats**; a similar parapoxvirus lesion caught from cattle udders is called milker’s nodule.

Step 2 – the course: A solitary nodule on the hand passes through targetoid stages over weeks and **heals spontaneously**, so reassurance is usually all that is



needed.

Why the other options are wrong:

- B, cats: transmit cat-scratch disease and dermatophytosis, not orf.
- C, freshwater fish: transmit fish-tank granuloma (*Mycobacterium marinum*), not a parapoxvirus.
- D, pigeons: are linked to cryptococcosis, not orf.

Final Answer: Sheep and goats ⇒

Answer: (A) [Go Back to Q6](#)

Q7.

Solution

Concept – the Tzanck smear: The Tzanck smear is a rapid cytology test taken by scraping the base of a fresh blister.

Step 1 – interpret the cells: Rounded, detached **acantholytic keratinocytes** (Tzanck cells) indicate **pemphigus vulgaris**, where loss of desmosomal adhesion frees individual cells.

Step 2 – the other classic finding: **Multinucleate giant cells** on a Tzanck smear instead indicate a herpes virus infection (herpes simplex or varicella-zoster), so the same test screens two very different diseases.

Why the other options are wrong:

- A, bullous pemphigoid: is subepidermal without acantholysis, so no Tzanck cells.
- B, dermatitis herpetiformis: shows granular IgA on immunofluorescence, not acantholytic cells.
- D, psoriasis: is a scaly plaque disease with no blister to smear.

Final Answer: Pemphigus vulgaris ⇒

Answer: (C) [Go Back to Q7](#)



Q8.

Solution

Concept – cutaneous small-vessel vasculitis: **Palpable purpura** that does not blanch is the clinical signature of leukocytoclastic (small-vessel) vasculitis.

Step 1 – read the picture and history: Crops of palpable purpuric papules on the lower legs and buttocks of a child after an upper respiratory infection point to **Henoch-Schonlein purpura (IgA vasculitis)**.

Step 2 – the wider picture: IgA immune complexes deposit in small vessels; besides the skin, joints (arthralgia), gut (colicky pain) and kidneys (IgA nephritis) may be affected.

Why the other options are wrong:

- A, ITP: causes flat, non-palpable purpura from low platelets, not a palpable vasculitic rash.
- B, meningococcaemia: gives a rapidly spreading purpuric rash in an acutely septic, unwell child.
- D, senile purpura: is flat bruising on sun-damaged skin of the elderly, not palpable purpura in a child.

Final Answer: Henoch-Schonlein purpura (IgA vasculitis) ⇒ C

Answer: (C) [Go Back to Q8](#)

Q9.

Solution

Concept – cutaneous leishmaniasis: Cutaneous leishmaniasis is a protozoal infection presenting as a chronic ulcer on exposed skin.

Step 1 – name the vector: It is transmitted by the bite of the **female sandfly (Phlebotomus)**, which inoculates *Leishmania* promastigotes into the skin.

Step 2 – the lesion: A papule at the bite site slowly enlarges into a painless ulcer with a raised edge (the 'oriental sore'); the diagnosis is confirmed by finding amastigotes on a slit-skin smear or biopsy.

Why the other options are wrong:

- B, *Anopheles* mosquito: transmits malaria, not leishmaniasis.
- C, tsetse fly: transmits African trypanosomiasis (sleeping sickness).
- D, Ixodid tick: transmits Lyme disease and rickettsial infections.



Final Answer: The female sandfly (Phlebotomus) $\Rightarrow$ A

Answer: (A) [Go Back to Q9](#)

Q10.

Solution

Concept – pitfalls in syphilis serology: Non-treponemal tests (VDRL/RPR) are quantitative but can mislead at extremes of antibody titre.

Step 1 – name the phenomenon: A falsely negative VDRL at low dilution caused by **antibody excess** blocking antigen-antibody lattice formation, which becomes positive only on diluting the serum, is the **prozone phenomenon**.

Step 2 – confirmation of the diagnosis: Dark-ground microscopy shows motile spirochaetes in a primary chancre, and specific treponemal tests (TPHA, FTA-ABS) confirm exposure; always ask the lab to dilute the serum if the clinical picture strongly suggests syphilis.

Why the other options are wrong:

- A, Jarisch-Herxheimer reaction: is a febrile flare a few hours *after* treatment, not a serology artefact.
- B, biological false-positive: is a *positive* non-treponemal test with negative treponemal tests, the opposite situation.
- C, window period: is early infection before antibodies appear, not antibody excess.

Final Answer: Prozone phenomenon $\Rightarrow$ D

Answer: (D) [Go Back to Q10](#)

Q11.

Solution

Concept – slit-skin smear in leprosy: The slit-skin smear samples dermal fluid to look for acid-fast Mycobacterium leprae.

Step 1 – name the score: The density of bacilli graded on a **logarithmic 0 to 6+ scale** is the **bacterial index (BI)**, which reflects the total (live plus dead) bacillary load.

Step 2 – contrast with the morphological index: The **morphological index** counts only the uniformly stained *viable* bacilli as a percentage and is used to



judge response to treatment; a high BI indicates multibacillary disease.

Why the other options are wrong:

- A, morphological index: measures the proportion of *live* bacilli, not the total density.
- C, mitotic index: is a measure of cell proliferation in tumours, unrelated to leprosy.
- D, Breslow index: measures melanoma thickness, not bacillary load.

Final Answer: Bacterial index $\Rightarrow$ B

Answer: (B) [Go Back to Q11](#)

Q12.

Solution

Concept – classifying vitiligo: Vitiligo is divided by the distribution of the depigmented macules.

Step 1 – read the pattern: Macules confined to **one side of the body in a band-like segment that stops at the midline** (marked X), appearing early and often stable, define **segmental vitiligo**.

Step 2 – contrast with non-segmental: **Non-segmental (generalised)** vitiligo is bilateral and symmetrical, tends to progress, and is more strongly linked to autoimmune disease; segmental disease is usually unilateral and more limited.

Why the other options are wrong:

- A, non-segmental: is symmetrical and bilateral, not a one-sided band.
- B, acrofacial: involves the digits and face symmetrically, a subtype of non-segmental disease.
- C, universal: is near-complete depigmentation of the whole skin, not a single segment.

Final Answer: Segmental vitiligo $\Rightarrow$ D

Answer: (D) [Go Back to Q12](#)



Q13.

Solution

Concept – hirsutism versus hypertrichosis: Both mean excess hair, but they differ in pattern and cause.

Step 1 – define hirsutism: Hirsutism is excess **terminal** hair in a **male (androgen-dependent) pattern** in a woman (upper lip, chin, chest), driven by androgens, most often from **polycystic ovary syndrome**.

Step 2 – contrast with hypertrichosis: Hypertrichosis is excess hair in a **non-sexual, generalised or localised** distribution that is *not* androgen-dependent, seen with drugs (for example minoxidil, ciclosporin, phenytoin), so it is not confined to a male pattern.

Why the other options are wrong:

- A, hypertrichosis: is androgen-independent and not in a male pattern, so it does not fit the history.
- C, alopecia areata: is patchy hair *loss*, the opposite of excess hair.
- D, telogen effluvium: is diffuse hair shedding, not excess hair growth.

Final Answer: Hirsutism $\Rightarrow$ **B**

Answer: (B) [Go Back to Q13](#)

Q14.

Solution

Concept – dermoscopy of a naevus versus melanoma: Dermoscopy magnifies pigment patterns to separate benign from malignant lesions.

Step 1 – recognise the benign pattern: A **benign melanocytic naevus** shows a **symmetrical, regular pigment network with uniform colour**, reassuring the examiner.

Step 2 – contrast with melanoma: Melanoma shows asymmetry, an atypical or broadened network, multiple colours, a blue-white veil and irregular streaks or dots, echoing the ABCDE clinical rule.

Why the other options are wrong:

- B, a blue-white veil with atypical streaks: is a melanoma feature, not a naevus.
- C, a chaotic pattern with multiple colours: indicates melanoma.



- D, arborising vessels: are typical of basal cell carcinoma, not a benign naevus.

Final Answer: A symmetrical, regular network with uniform colour ⇒ A

Answer: (A) [Go Back to Q14](#)

Q15.

Solution

Concept – anaphylaxis to a drug: Anaphylaxis is a life-threatening IgE-mediated reaction with airway, breathing and circulatory collapse.

Step 1 – give the key drug first: The single most important immediate treatment is **intramuscular adrenaline (epinephrine)** into the anterolateral thigh, repeated every 5 minutes if needed.

Step 2 – the rest of the ABC approach: Stop the trigger, secure the **airway** and give high-flow oxygen, lay the patient flat with legs raised, and give a rapid intravenous **fluid** bolus; antihistamines and steroids are second-line adjuncts, not the life-saving step.

Why the other options are wrong:

- A, hydrocortisone: acts too slowly to reverse acute airway and circulatory collapse.
- B, chlorphenamine: relieves urticaria and itch but does not treat shock or airway obstruction.
- C, salbutamol alone: may ease bronchospasm but does not correct hypotension or laryngeal oedema.

Final Answer: Intramuscular adrenaline (epinephrine) ⇒ D

Answer: (D) [Go Back to Q15](#)



Answer Key

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

