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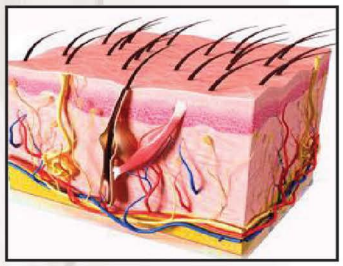
Thoroughly Revised and Updated Edition
Including all Recent Questions, Controversial Questions, Concept-based Questions, and Image-based Questions of 2017-18

SIXTH EDITION





Self Assessment & Review of
Short Subjects

Skin & STDs
Anaesthesia
Radiodiagnosis & Radiotherapy
Psychiatry *plus* Orthopaedics

6700+	700+	450+	430+	70+	50+
MCQs	Images	X-ray/CT/ USG/MRI	Image based MCQs	Instruments	Procedures/ Tests





Highlights

- **Topic and sub-topic wise** theory notes in simple language with integrated images based questions
- **Important points in bold** and marked[Q]
- **Wider coverage of MCQs** over 6700 MCQs with explained, referenced answers
- **'Recent Pattern' questions (2012-2018)** with explained, referenced answers
- **AIIMS/PGI/UPSC/State PG/MO Exams (1991-2018)** with explained, referenced answers
- **Image-based MCQs** over 430 given subject- & chapter-wise
- **New images added** over 700 images in theoretical concepts
- **Topper's edge** high yield theoretical concepts for scoring over competitors in examinations
- **Annexures** subject-wise for high yield topics
- **Golden point** based on recent MCQs
- **Tables and mnemonics** high yield text for easy memorization
- **Differential diagnosis** for tackling challenging clinical MCQs

Vivek Jain

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Chapter 3

Nutritional and Environmental Factors in Dermatology

THEORETICAL CONCEPTS

III A. SKIN MANIFESTATIONS OF PROTEIN ENERGY MALNUTRITION (PEM)

- *'Crazy pavement'* like skin (parchment)
- ***'Flag sign'*** in hair (alternate bands of light and dark colours)[Q]

Topper's Edge

Flag Sign

- Peculiar change in hair color
- Hair becomes discolored in a band perpendicular to its long axis
- **Seen in: Kwashiorkor**[Q]
- Indicates: Period of Severe malnutrition[Q]



Fig. Flag sign

III B. SKIN MANIFESTATIONS OF VITAMIN A DEFICIENCY

- *'Xerosis of skin'*[Q]
- ***'Phrynoderma'*** (Toad like skin)[Q]



Fig. Cheilitis

III C. SKIN MANIFESTATIONS OF VITAMIN B_1 (RIBOFLAVIN) DEFICIENCY

- **Angular stomatitis**[Q]
- Cheilitis[Q]
- Seborrheic dermatitis like rash

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III D. SKIN MANIFESTATIONS OF VITAMIN B_3 (NICOTINIC ACID) DEFICIENCY [PELLAGRA]

- *Dermatitis*[Q]
- **Casal's necklace**[Q]
- Erythema
- Dyssebacia



Fig. Casal's necklace

III E. SKIN MANIFESTATIONS OF VITAMIN C (ASCORBIC ACID) DEFICIENCY [SCURVY]

- Follicular hyperkeratosis
- ***Corkscrew hair***[Q]
- Perifollicular hemorrhages
- Ecchymosis on feet, ankles



Fig. Corkscrew hair

III F. SKIN MANIFESTATIONS OF ZINC DEFICIENCY [ACRODERMATITIS ENTEROPATHICA][Q]

- Scaly eczematous plaques in **periorificial regions**[Q], acral areas and bony prominences
- Pustular and hemorrhagic paronychia
- Non-scarring alopecia of scalp





Fig. Acrodermatitis enteropathica

III G. SKIN MANIFESTATIONS OF ESSENTIAL FATTY ACID DEFICIENCY

- Dry skin, eczematous dermatitis
- ***Phrynoderma***[Q]

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IMAGE-BASED QUESTION

1. Condition shown in photograph occurs due to deficiency of



a. Biotin
b. Niacin
c. Folic acid
d. Ascorbic acid

ANSWERS WITH EXPLANATIONS OF IBQ

1. Ans. (b) Niacin *[Ref. Neena Khanna, 4/e p392]*

- Casal collar/ Casal necklace: A clinical sign in which there is an erythematous pigmented skin rash in the distribution of a broad collar (dermatomes C3 and C4), Seen in patients with pellagra.

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NEET/NBE PATTERN MCQs

1. Flag sign in hair is characteristic of *[NBE FMGE September 2007]*

a. Zinc deficiency b. Vitamin C deficiency
c. Xerophthalmia d. PEM

2. Acrodermatitis enteropathica is due to deficiency of *[NBE FMGE September 2012, Recent Questions 2012, 2017]*

a. Molybdenum b. Copper
c. Zinc d. Calcium

3. Phrynoderma is NOT due to deficiency of *[Recent Questions 2012, 2013]*

a. EFA b. Vitamin A
c. Vitamin C d. Vitamin D

4. Vitamin playing a role in preventing miliaria rubra *[NBE DNB 1992]*

a. A
b. B
c. C
d. E

5. Raynaud's phenomenon has typical progression of Colour change as follows *[NBE FMGE March 2012]*

a. Red, Blue, White
b. Red, White, Blue
c. Blue, Red, White
d. White, Blue, Red

HIGH YIELD MCQs

1. Gluten free diet is beneficial in *[Kerala PGMEE 1996]*

a. Psoriasis
b. Exfoliative dermatitis
c. Dermatitis herpetiformis
d. Pemphigoid

2. What can patient with gluten sensitive hypersensitivity consume as food? *[PGI 2006]*

a. Rice b. Barley
c. Oat d. Corn
e. Rye

3. Dermatitis and alopecia are due to deficiency of *[SGPGI 2001]*

a. Zinc b. Molybodenum
c. Magnesium d. Calcium

4. Casal's paint necklace is caused by *[Recent Question 2017, PGI 1997]*

a. Lichen planus b. Pellagra
c. Pernicious anemia d. SLE

5. All are true about Acrodermatitisenteropathica except *[AIIMS PGMEE 2008]*

a. Decreased Zinc level
b. Reverse with Zn supplement
c. Triad of acral dermatitis, dementia & diarrhea
d. Autosomal recessive

6. Phrynoderma is a cutaneous manifestation of severe deficiency of vitamin *[DPG 1999, AMU PGMEE 1998]*

a. A b. B
c. C d. D

7. Acrodermatitis enteropathica is due to deficiency of *[AIIMS PGMEE 1993, TN PGMEE 1997]*

a. Zn b. Se
c. Cu d. Cr

8. Flaky pain appearance of skin is seen in *[All India PGMEE 1995]*

a. Dermatitis b. Pellagra
c. Marasmus d. Kwashiorkor

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NEET/NBE PATTERN MCQs ANSWERS WITH EXPLANATIONS

1. Ans. (d) PEM
[Ref. Neena Khanna, 4/e p389]

Skin Manifestations of Protein Energy Malnutrition (PEM)
- *'Crazy pavement'* like skin (parchment)
- *'Flag sign'* in hair (alternate bands of light and dark colours)

2. Ans. (c) Zinc
[Ref. Neena Khanna, 5/e p 422]
- **Acrodermatitis enteropathica**: Autosomal recessive trait with to deficient zinc transporter protein

3. Ans. (d) Vitamin D
[Ref. Neena Khanna, 5/e p 422; Ragunatha S, Kumar VJ, Murugesh SB. A Clinical Study of 125 Patients with Phrynoderma. IJD, 2011;56(4): 389-392]



Fig. Phrynoderma

Phrynoderma
- Phrynoderma (toad skin) characterized by spiny hyperkeratotic follicular papules
- Distribution of lesions is bilateral and symmetrical in 70% of patients
- Disease is localized elbows, knees, extensor extremities, and/or buttocks
- Deficiencies of vitamins A and E, B complex vitamins, and essential fatty acids have all been implicated in the etiology of follicular hyperkeratosis
- Phrynoderma is associated with nutritional deficiencies
- It is endemic to poor populations but is rare in developed countries
- In developed countries, phrynoderma most often occurs as a result of malabsorption due to surgical or medical causes, such as small-bowel bypass surgery, colectomy and pancreatic insufficiency.

4. Ans. (c) C
[Ref. Illustrated Textbook of Dermatology by JS Pasricha, 4/e p142]
- Vitamin C in a dose of 500 mg twice daily helps to prevent miliaria rubra

5. Ans. (d) White, Blue, Red
[Ref. Neena Khanna, 4/e p162]

Triphasic/ Colour Changes in Raynaud's Phenomenon
[Mnemonic: PCR]
- **P**allor/White: Skin turns pale upon exposure to cold due to markedly reduced blood supply
- **C**yanosis/Blue: Depletion of oxygen supply
- **R**ubor/Red: If episode subsides or skin is warmed, skin becomes red then returns to normal due to return of blood flow



Fig. Raynaud's phenomenon

HIGH YIELD MCQs ANSWERS WITH EXPLANATIONS

1. Ans. (c) Dermatitis herpetiformis
[Ref. Neena Khanna, 5/e p 91]
- Gluten-free diet is slow to act on the skin lesion (several months) of Dermatitis herpetiformis though the bowel changes revert to normal quickly

2. Ans. (a) Rice; (d) Corn
[Ref. Neena Khanna, 5/e p 91]
- **Gluten** is found in grains such as wheat, barley, rye, and a cross between wheat and rye called triticale
- A gluten-free diet is a diet that excludes the protein gluten
- Intake of oat is controversial

3. Ans. (a) Zinc
[Ref. Nutrition for Healthy Skin by Krutmann, 1/e p8]
- Zinc deficiency is known for the Classic Triad of,
  - Dermatitis
  - Alopecia
  - Diarrhoea

4. Ans. (b) Pellagra
[Ref. API Textbook of Medicine by Y P Munjal, 9/e p533]
- Deficiency of Niacin leads to Pellagra
- Sharply outlined brownish plaques around the neck leads to the typical **"Casal's necklace"**

5. Ans. (c) Triad of Acral dermatitis, dementia & diarrhea
[Ref. Neena Khanna, 5/e p 422]

6. Ans. (a) A
[Ref. Neena Khanna, 5/e p 422; Ragunatha S, Kumar VJ, Murugesh SB. A Clinical Study of 125 Patients with Phrynoderma. IJD, 2011;56(4):389-392]
- Deficiencies of vitamins A and E, B complex vitamins, and essential fatty acids have all been implicated in the etiology of **follicular hyperkeratosis**
- Most characteristic is EFA deficiency and Vitamin A deficiency

7. Ans. (a) Zinc
[Ref. Neena Khanna, 5/e p 422]

8. Ans. (d) Kwashiorkor
[Ref. Therapeutic Pediatric Nutrition by Sharma Madhu, 1/e p5]
- Children with Kwashiorkor have characteristic skin lesions, with alternating zones of hyperpigmentation, areas of desquamation, and hypopigmentation, giving a ***"flaky paint" appearance***.

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Self Assessment & Review of

Short Subjects

Salient Features

- **Largest collection of MCQs/Images/Image based questions/Radiology images/Instruments/Procedures**
- Brief, concise yet comprehensive **Theory in simple language** specifically arranged topic and sub-topic wise
- **Important points marked** bold and as^{Q} for easy filtering (previous NBE MCQs and potential MCQs)
- **Images integrated with theory & answers** for comprehensive understanding
- **Image based questions:** Based on recent examinations
- **NEET/NBE Pattern MCQs 1991–2018** topic-wise and sub-topic wise with solved, explanatory, referenced answers
- **High yield MCQs: Last 27 years (1991-2018) PGMEE MCQs** AIPGMEE, AIIMS, Karnataka PG, Kerala PG, PGI (Multiple response), DPG, Rajasthan PG, Andhra Pradesh PG, Bihar PG, JIPMER PG, State PGMEE/UPSC/MO Exam
- **Annexures** for quick review, high yield topics based on recent questions given in tabular form
- **Golden points for last minute quick revision** based on prior most frequently asked MCQs

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ISBN 978-93-5270-523-8