

Sample Written Exam – Dermatology

Question 1

In a patient with neurofibromatosis 1, the presence of multiple juvenile xanthogranulomas is a risk factor for which malignancy?

MODEL ANSWER: 1 mark total

- Juvenile chronic myeloid leukemia (CML) (leukemia, ½ mark)

Question 2

Name the nutrient deficiency that is MOST strongly associated with each of the following diseases or physical findings:

- a. Casal necklace (photosensitive dermatitis)

MODEL ANSWER: 1 mark

- niacin/vitamin B3

- b. Gingivitis

MODEL ANSWER: 1 mark

- vitamin C

- c. Keratomalacia

MODEL ANSWER: 1 mark

- vitamin A

- d. Koilonychia

MODEL ANSWER: 1 mark

- Iron

- e. Oro-oculo-genital syndrome

MODEL ANSWER: 1 mark

- riboflavin/vitamin B2

- f. Phrynoderma

MODEL ANSWER: 1 mark

- vitamin A



Question 3

What is the classic hair shaft abnormality in Menkes syndrome?

MODEL ANSWER: 1 mark total

- Pili torti

Question 4

a. Name **TWO** Health Canada-approved indications for topical 5-fluorouracil.

MODEL ANSWER: 1 mark each, 2 marks total

- actinic keratoses
 - superficial basal cell carcinoma
 - verrucae
- b. State the mechanism of action of 5-fluorouracil.

MODEL ANSWER: 1 mark total

- A thymidine analogue that blocks DNA synthesis by inhibiting thymidylate synthetase.

Question 5

Name **SIX** bacteria that can cause a sporotrichoid pattern of lesions.

MODEL ANSWER: 1 mark each, 6 marks total

Eight possible answers are included here; candidates should only include 6 of these possible answers:

- Mycobacteria
- Nocardia
- Pyogenic bacteria (*S. aureus* and *S. pyogenes*)
- *F. tularensis*
- Koch bacillus (TB)
- Bartonella (cat-scratch accepted)
- Anthrax
- *Mycobacterium marinum*

Unacceptable answers:

- Sporothrix not accepted since it is a fungus
- Cowpox not accepted since it is a virus
- Leishmania not accepted since it is a parasite