

THE ROYAL AUSTRALIAN AND NEW ZEALAND COLLEGE OF  
OPHTHALMOLOGISTS

RANZCO ADVANCED CLINICAL EXAMINATION

OPHTHALMIC PATHOLOGY

20 July 2005

All questions are to be attempted. Time allowed 2 ½ hours. All questions are of equal value

**Question 1**

Describe the genetics, pathogenesis, pathology and complications of x-linked, juvenile retinoschisis.

**Question 2**

Discuss the mucosal defense mechanisms of the external eye against pathogens.

**Question 3**

- a) Describe the pathological findings in an eye with the acute retinal necrosis syndrome (ARN).
- b) What is known about the aetiology of this disorder?
- c) What tests would you perform to confirm the clinical diagnosis of ARN?

**Question 4**

A six month old child presents with a white pupil. Construct a detailed list of those conditions relevant to the differential diagnosis and provide a **brief** description (preferably not more than one or two lines) of the relevant overall clinicopathological findings, for those conditions where you consider that such description is appropriate. Do **not** discuss retinoblastoma at all. Please note that detailed descriptions are **not** required.

### Question 5

There are a number of ocular complications which can ensue following the successful application of a radioactive plaque for a patient with posterior uveal melanoma. List these complications and describe their pathogenesis and histopathology.

### Question 6

A thirty year old Indian male presents with bilateral serous retinal detachments, headache and hearing impairment. What is the most likely diagnosis? What is the presumed pathogenesis of this condition? What are the clinical findings that might be seen by the ophthalmologist? Describe the histopathological changes that accompany these findings.

### Question 7

A contact lens wearing patient presents with a unilateral very painful red eye. She has travelled overseas recently to Indonesia where she purchased saline for lens cleaning. You suspect that she may have acanthamoebic keratitis.

- a) Describe the pathogenesis of Acanthamoeba keratitis.
- b) What specimens would you send to the laboratory?
- c) Describe how the laboratory would confirm the diagnosis.

### Question 8

Discuss the pathology of metastases to the globe with regard to

- a) sites of origin
- b) sites of secondary deposition
- c) mechanism of secondary spread
- d) microscopic pathological changes in breast cancer metastatic to the choroid.

### Question 9.

- a. Describe the acute and chronic microscopic appearances of a dendritic ulcer
- b. Describe the microscopic appearances of an iris melanoma

## Question 10

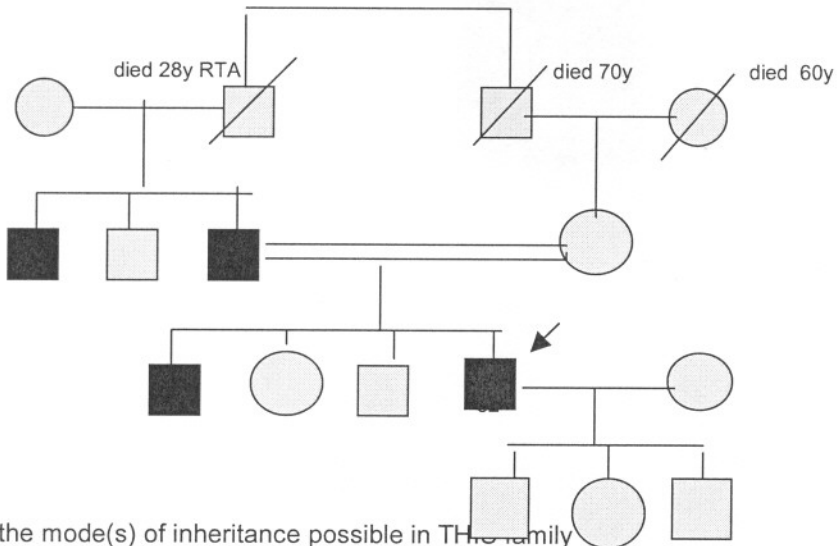
Discuss the pathology of neurotrophic keratitis

## Question 11

A 15 year old girl with Trisomy 21 presents for an eye examination. Describe the range of pathological changes you might observe during your examination.

## Question 12

A 32 year old man presents with Stargardt's disease. His family history is taken and results in the pedigree below. The proband is marked with an arrow. Other ages given are ages of onset.



- Discuss the mode(s) of inheritance possible in the family.
- At what risk are the proband's children?
- Discuss the gene defect where known.