



**RANZCO Advanced Pathology Examination**  
**Semester 1/2009 Written Examination DOE: 27/02/08.**  
**Duration: 2.5 hrs. Total 12 questions**

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**Question 1:** You are asked to assess a baby whose mother was had fever and a rash in the second trimester.

- a) List the congenital infections can affect the embryological development of the eye
- b) Describe the ophthalmological and pathological features of cytomegaloviral (CMV).

**Question 2:** For Ocular Superficial Spreading Neoplasia (OSSN)/Conjunctival Intraepithelial Neoplasia (CIN) describe the pathogenesis, macroscopic and microscopic appearances.

**Question 3:** A corneal disc (8 mm diameter) was described as opaque on macroscopic examination. On histological examination, a PAS stain revealed small circular cyst like structures, somewhat larger than any intrinsic cells.

- a) What is the likely diagnosis and what pertinent questions should be asked of the patient?
- b) Describe the pathogenesis.

**Question 4:** A patient presents with a painful, rapidly growing lacrimal gland mass. A CT scan shows an unencapsulated mass eroding the adjacent bone.

- a) What laboratory investigations would you perform?
- b) The diagnosis comes back as adenoid cystic carcinoma. Describe the microscopic appearance and natural history of this tumour.

**Question 5:** In an eye that has central retinal vein occlusion:

- a) Describe the macroscopic and microscopic pathological changes you would see at the acute stage.
- b) What changes might you see if the globe is enucleated two years after the initial event?

**Question 6:** Discuss the pathogenesis and histological features of choroidal melanoma. Relate these to how choroidal melanomas present symptomatically.

**Question 7:** "Phthisical eye" is a commonly the only history provided in the pathology request form following an enucleation for this condition.

- a) Why is the histological examination and investigation for the aetiology often difficult for the pathologist?
- b) What are the common macroscopic and microscopic findings in such an eye?

**Question 8:** In a vitrectomy specimen in a case of endophthalmitis, the pathologist reported inflammatory cells and hyphae with budding yeasts.

- a) Describe the aetiology and pathogenesis.
- b) What are the social and general medical implications?

**Question 9:** On macroscopic examination, the enucleated eye of a child contained an ovoid white tumour in the retina in the region of the disc and macula.

- a) Why would this child have presented to an ophthalmologist?
- b) Give three possible diagnoses. Describe the histopathological appearance of one these conditions.

**Question 10:** A patient receives high dose radiotherapy as treatment for nasopharyngeal carcinoma. What are the common ophthalmic changes?

**Question 11:**

- a) Briefly describe the technique of impression cytology.
- b) What are the limitations?
- c) Give two examples of ocular conditions where this technique may be used.

**Question 12:**

- a) Describe the aetiology and histological appearance of sarcoidosis.
  - b) How does sarcoidosis affect ophthalmic structures?
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