



The Royal Australian and New Zealand College of Ophthalmologists

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OPHTHALMIC BASIC SCIENCE EXAMINATIONS OCULAR PHARMACOLOGY 27 April 2007

| | | |
|--------------------------------|---------------|------------------------|
| Duration of paper: | 1 hour | Total Marks: 60 |
| Total No. of questions: | 25 | |

- ◆ **Candidates must attempt all questions**
- ◆ **Write your answers in the answer pad using CLEAR and LEGIBLE writing, use diagrams and point form where appropriate**
- ◆ **Start a new page for each question, do not write on the reverse of any answer page. Make sure to put your candidate number on each page**
- ◆ **If you cross out an area of your own writing, it will not be considered by the examiners**

Question 1

What is the mechanism of effect of acetazolamide on the eye? (1 mark)

Question 2

List the side-effects of tetracyclines. (3 marks)

Question 3

What is the mechanism of action of 5-fluorouracil? (2 marks)

Question 4

What is the reason preservatives are used in drops? Name three.
(2 Marks: 1 for definition, 1 for examples)

Question 5

What steps would you take to address discomfort in an A&E patient with an extensive corneal abrasion? (2 marks)

Question 6

What factors would influence your choice of route of administration of steroids in the treatment of uveitis? (5marks)

Question 7

What is an appropriate regime for cycloplegic refraction in a 3 month old infant? (1 mark)
What side-effect can occur with administration of cyclopentolate in neonates? (1 mark)



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Question 8

What agent is used to reverse atropine toxicity? (1 mark)
What is its mechanism of action? (2 marks)

Question 9

List side effects of pilocarpine. (3 marks)

Question 10

Describe briefly the treatment of anaphylaxis. (3 marks)

Question 11

Name contraindications to mannitol therapy. (2 marks)

Question 12

What is the duration of action of each of the following drops used to dilate the pupil?

- Tropicamide
- Atropine
- Homatropine
- Phenylephrine
- Cyclopentolate (5 marks)

Question 13

You are performing an examination of a child under anaesthesia and you need to measure intraocular pressure. Which induction agent would you prefer the anaesthetist to use and why? (2 marks)

Question 14

You have a patient with a possible past history of asthma and you wish to prescribe a topical beta blocker to treat his glaucoma. Which beta blocker would you choose and why? (2 marks)

Question 15

What is the spectrum of action of vancomycin? (3 marks)

Question 16

What points of advice would you give to obtain informed consent to a patient prior to intraocular steroid injection in the treatment of posterior segment uveitis? (3 marks)

Question 17

What is the mechanism of action of lignocaine? Name 2 factors that may influence its duration of action. (3 marks)



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Question 18

What ocular side-effects occur with chloroquine? (2 marks)

Question 19

What is the action of topical acyclovir in treating acute corneal herpes simplex keratitis, and what side effect can occur to the cornea with prolonged usage? (3 marks)

Question 20

What is a prodrug? Give an example. (3 marks)

Question 21

Why is latanoprost a relative contraindication in patients post-cataract surgery? (1 mark)

Question 22

What side-effect occurs with alpha-adrenergic drugs in children? (1 mark)

Question 23

What ocular side-effect may occur with the drug rifabutin? (1 mark)

Question 24

What is the action of ranibizumab (Lucentis)? (1 mark)

Question 25

Why is fluorescein suitable for retinal angiography? (2 marks)

END OF PAPER