



The Royal Australian and New Zealand College of Ophthalmologists

A.C.N. 000 644 404

94 – 98 Chalmers Street,
SURRY HILLS NSW 2010 AUSTRALIA
Telephone 61 2 9690 1001 Facsimile 61 2 9690 1321

E-mail: ranzco@ranzco.edu
<http://www.ranzco.edu>

OPHTHALMIC BASIC SCIENCE EXAMINATIONS OCULAR PHARMACOLOGY 25 September 2007

Duration of paper:	1 hour	Total Marks: 60
Total No. of questions:	23	

- ◆ 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 measures can a patient take to maximize ocular absorption of drops, especially if he or she is using more than one topical medication? (3 marks)

Question 2

What is a prodrug? Give an example. (2 marks: 1 mark for definition, 1 for example)

Question 3

What are the characteristics of a drug that make it suitable for use as a solution rather than a suspension? (1 mark)

Question 4

What advice would you give to a patient for whom you are prescribing a drop in suspension form to ensure reproducible drug delivery? (1 mark)

Question 5

List the cardiovascular side effects of 10% phenylephrine drops (3 marks)

Question 6

Give an outline of the information you would give to consent a patient prior to fluorescein angiography. (5 marks)



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Question 7

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

- a) cyclopentolate
- b) homatropine
- c) tropicamide
- d) atropine
- e) phenylephrine

(5 marks)

Question 8

Name the classes of drugs used in the treatment of allergic eye diseases.

(4 marks)

Question 9

You are prescribing a course of oral doxycycline in a patient with rosacea-associated blepharitis. What instructions would you give to ensure maximum absorption of the drug and to reduce gastrointestinal side effects?

(2 marks)

Question 10

- a) Name two hyperosmotic agents used for treating elevated intraocular pressure. (1 mark)
- b) What is their mechanism of action? (2 marks)

Question 11

List the mechanism of action of the following ocular hypotensives:

- a) Latanoprost
- b) Timolol
- c) Dorzolamide
- d) Brimonidine

(4 marks)

Question 12

List the contraindications for topical beta-blocker use.

(2 marks)

Question 13

List the side effects of oral cyclosporine.

(4 marks)

Question 14

What relative contraindications would you take into consideration when prescribing oral corticosteroids?

(4 marks)

Question 15

What is the mechanism of action of mycophenolate mofetil (used to treat uveitis)?

(1 mark)



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Question 16

What supplement is given to patients on oral methotrexate to minimize side effects?
(1 mark)

Question 17

- a) When prescribing topical atropine for a child, what possible side effects suggesting toxicity would you warn the parent to look for? (2 marks)
- b) If these side effects occurred, what advice would you give the parent? (1 mark)

Question 18

List 2 manifestations of lignocaine toxicity. (2 marks)

Question 19

What factors would you consider when assessing a patient for suitability for cataract surgery under topical anaesthetic? (4 marks)

Question 20

What is the duration of action of the following local anaesthetics when injected with adrenaline?

- a) Lignocaine
 - b) Bupivacaine
- (2 marks)

Question 21

What is the mechanism of action of lignocaine when it is used as a local anaesthetic?
(1 mark)

Question 22

What are the ocular side-effects of chloroquine? (3 marks)

Question 23

What is the main route of excretion of intravenous fluorescein? (1 mark)

END OF PAPER