



# National Forensic, Ethics and Calculations (NFEC) Examination Candidate's Guide

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# **National Forensic, Ethics and Calculations (NFEC)**

## **Examination**

### **1. Introduction**

The Australian Pharmacy Council (APC) is the national body representing the Australian state and territory pharmacy registering authorities. It was established in 2002 through an amalgamation of the Council of Pharmacy Registering Authorities (COPRA) and the Australian Pharmacy Examining Council Inc (APEC) to enable a national approach to pharmacy regulation and accreditation thus supporting the primary goal of the registering authorities to protect the public.

The APC works collaboratively with governments, other pharmacy professional organisations, other regulatory groups, and the community to identify issues and trends in pharmacy that require a collegiate approach.

Our functions are:

- leadership in developing and implementing nationally consistent policies, processes and approaches to pharmacy practice, regulation and registration,
- accrediting pharmacy schools and programs; and authorising agencies to accredit continuing professional development;
- conducting examinations towards eligibility for registration, and
- assessing the qualifications and skills of pharmacy graduates towards Australian registration and permanent residency.

The New Zealand Pharmacy Council is an associate member of the APC.

The National Forensic, Ethics and Calculations (NFEC) Examination forms part of the assessment of overseas trained pharmacists seeking registration in Australia and is a restricted open book examination. It was developed to provide a national assessment tool for use by pharmacy registering authorities (in conjunction with other assessment processes) to establish the suitability of an individual for registration as a pharmacist.

The NFEC Examination contains a combination of multiple choice questions (MCQs) on Australian pharmacy law and ethics, and questions involving calculations.

Questions are written by pharmacists with community, hospital, industry and academic backgrounds, to ensure the Examination reflects current Australian practice.

The Examination is not available at overseas locations and copies of previous examinations are unavailable.

## 2. Objectives of NFEC Examination

The object of the NFEC Examination is to assist in the assessment of a candidate's ability to apply his or her knowledge of Australian pharmacy law, ethics and pharmaceutical calculation to pharmacy practice.

## 3. Format of NFEC Examination

The NFEC Examination is offered 12 times a year, usually on the 3<sup>rd</sup> Tuesday of each month. Normally candidates may take the examinations after completing a certain period (25% for Stream A and all or most, and at least 75% for Stream B) of their supervised practice period. However, interns undertaking this Examination as part of the assessment process for another jurisdiction should contact the registering authority for further information in this regard. Examinations must be taken in the state or territory in which the majority of the supervised practice hours have been completed.

The NFEC Examination is of one hour duration and comprises two parts. Part A covers forensics and ethics and is based on MCQs. Each MCQ has four or five options (e.g. A - D or A - E), with each question having only one correct answer. Marks will not be deducted for incorrect answers. The potential answers do not contain 'None of the above' or 'All of the above' as options. Part B involves calculations and is not in a MCQ format.

### Sample material

A number of sample questions are attached.

### Permissible reference material

The only allowable texts to the NFEC Examination are:

- the *Standard for the Uniform Scheduling of Drugs and Poisons* (SUSDP)
- relevant state or territory drugs and poisons schedules
- relevant state or territory pharmacy Acts and Regulations
- information from the following website:  
[http:// www.pbs.gov.au](http://www.pbs.gov.au)

Candidates should bring these to the testing venue. Note: permissible reference material may NOT contain annotations, hand written notes, or loose additional notes. However, text may be highlighted or flagged prior to the examination. Candidates are urged to ensure they have current editions of reference books and copies of the legislation incorporating any amendments.

Candidates should not assume copies of permissible reference material will be available at testing venues; neither will candidates be able to share reference material.

For calculations, candidates may bring a non-programmable battery-operated calculator without an alphabet keyboard into the testing venue. Other types of calculators will not be permitted.

#### **4. Preparation for NFEC Examination**

The NFEC Examination has been developed with a view to assessing how well candidates can apply their knowledge of Australian pharmacy law and ethics thereby establishing whether they are competent to meet their responsibilities of pharmacy practice.

Preparation for NFEC Examination should be based on the knowledge and experience acquired during the supervised practice period.

#### **5. Examination Details**

##### Permitted references

- the *Standard for the Uniform Scheduling of Drugs and Poisons* (SUSDP)
- relevant state or territory drugs and poisons schedules
- relevant state or territory pharmacy Acts and Regulations
- information from the following website:  
[http:// www.pbs.gov.au](http://www.pbs.gov.au)

##### Length of and time allowed for NFEC Examination

The NFEC Examination will be conducted over a period of 1 hour.

##### Examination paper

Candidates must write their name and sign the front cover of the examination paper.

##### Answer sheet

A generalised answer sheet is used for Part A of the Examination. The candidates must write their family name, initials, and any other relevant data on the answer sheet (a sample copy is attached).

Answers should be clearly marked by blocking in the appropriate oval to each question with a 2B pencil. If you change your mind rub out the first mark completely then make a new mark. Do not leave smudges or stray marks that may be misinterpreted. Do not use a ball point or ink pen.

Pencils, pencil sharpeners and erasers are provided by the examining authority.

##### Other general instructions

All brief cases, bags including hand-bags and pencil cases are to be left at the front of side of the room. Wallets or purses may be kept beside the candidate or on the candidate's person.

Candidates must bring photo-identification or other positive proof of identity to the examination venue. Candidates that are not able to be positively identified will be refused permission to take the examination.

Should a defect in the paper be noted, the nature of the defect will be taken into consideration when the paper is marked and no candidate will be disadvantaged. Note: supervisors are not authorised to correct any error or defect in the paper. This is to ensure all candidates do the examination under the same conditions at all venues.

Full examination rules are found on the back of the examination form that is sent to candidates.

#### Collusion, malpractice or unsatisfactory behaviour

Examinations are conducted under strict supervision. The APC reserves the right to expel any candidate during an examination if it can be reasonably concluded the candidate is guilty of unsatisfactory behaviour or the APC is not satisfied with the candidate's performance in any other way.

In the event of suspicion of collusion candidates will be separated.

In the event of clear evidence of malpractice (e.g. the use of concealed notes) the candidate will be asked to leave the room immediately. In such cases the examination paper and the generalised answer sheet will be marked null and void and returned to the APC together with a report of the incident. This will be done with as little disruption to other candidates as possible.

### **6. Results of NFEC Examination**

Candidates are required to achieve an overall pass in the NFEC Examination with a pass in both Part A and Part B. The APC does not provide information on the mark achieved by candidates. Results will be provided on a 'pass/fail' basis only.

Results of the NFEC Examination will be forwarded to candidates by mail, generally within two weeks of the candidate sitting the examination. Results will NOT be available verbally or by fax or email.

Where the NFEC Examination is part of the assessment of interns by a registration authority, the release of results will be determined by the relevant registration authority.

### **7. Appeal against the examination process**

Information about the Appeals Process can be found on the APC website. Candidates can check the Appeals Process at any time by visiting the APC website [www.pharmacycouncil.org.au](http://www.pharmacycouncil.org.au)

Candidates, other than APC candidates, who are sitting the NFEC Examination should contact the relevant registration authority for information on their appeals process.

## 8. Sample NFEC Examination Forensic Questions

*The correct answer is indicated below the question*

1. Oxycodone is included in which of the following schedules?

- A Schedule 2
- B Schedule 3
- C Schedule 4
- D Schedule 7
- E Schedule 8

**Correct answer: E**

2. A medical practitioner (unless authorised) must **NOT** prescribe or supply which of the following drugs

- A temazepam
- B acitretin
- C morphine
- D diclofenac
- E amoxicillin

**Correct answer: B**

3. From its date of writing, a prescription for a Schedule 4 poison has a validity of (*space*)

- A 1 month
- B 3 months
- C 6 months
- D 12 months
- E an indefinite period

**Correct answer: D**

4. Which of the following statements is **INCORRECT**?

Oxycodone tablets

- A cannot be dispensed if the prescription on which they are ordered is more than six months old
- B must be stored in the drug safe of the pharmacy
- C must be accounted for in a drug register in the pharmacy
- D can be supplied in an emergency on a pharmacist's authority for up to three days supply
- E a record of transactions must be retained for three years

**Correct answer: D**

5. Which of the following should appear on the manufacturer's package of thyroxine?
- A Pharmacy Only Medicine
  - B Pharmacist Only Medicine
  - C Prescription Only Medicine
  - D Controlled Medicine

**Correct answer: C**

6. What is the correct storage requirement in a pharmacy for morphine ampoules?
- A in the dispensary on the shelves
  - B in a locked cupboard
  - C in a safe in which the pharmacy takings are kept
  - D on the person of the pharmacist
  - E in controlled medicines safe

**Correct answer: E**

7. Regulation 24 is a regulation for the provision of medications under the Pharmaceutical Benefits Scheme. The equivalent regulation under the Repatriation Pharmaceutical Benefits Scheme is referred to as
- A emergency provisions
  - B prior approval provisions
  - C equity of access
  - D hardship conditions apply
  - E physical impairment provisions

**Correct answer: D**

8. Safety Net/Concession Card entitlements, once issued, are valid
- A for any medicine
  - B for a period of two years
  - C only when issued after 1 April each year
  - D for those individuals present when the card was issued
  - E for the period of time remaining in the calendar year in which it was issued

**Correct answer: E**

9. You start your first day as a locum pharmacist and receive a phone call from a lawyer claiming to represent one of your customers. The lawyer requests information regarding the medication that has been prescribed by a particular medical practitioner for their client. What information are you able to hand over to the lawyer

- A no information at any stage
- B any information required after written consent has been given by the patient
- C any information that the lawyer requests
- D any information the lawyer requests, after you can confirm the individual is a lawyer
- E any information required, upon the receipt of a court order for the information

**Correct answer: B**

10. You have purchased a quantity of generic paracetamol and codeine tablets, which have now exceeded their expiry date. The proprietor states that you are to repackage them out of their foil and counter-prescribe them to avoid losing any money. Which of the following actions should you take?

- A repackage them, as directed by the proprietor
- B refuse, advising that this is contrary to good pharmaceutical practice and unethical
- C leave them in their foil packs, but cut off the expiry date and batch number
- D put them into a specials bin, with a sign advising that they are out of date
- E offer them for sale as a "buy one get one free" to sell them quickly

**Correct answer: B**

## 9. Sample NFEC Examination Calculations

1. You have dispensed 300 mL of 2% w/v potassium permanganate solution. The physician wants the patient to soak his feet in a 1:1000 solution. How would you instruct the patient to make one litre of this solution? (Assume that you will supply a 50 mL measure with the preparation.)

**Correct answer: take 50 mL and add enough water to make 1 litre of solution**

2. How much of a 10% injection of a drug is required to make 100 mL of a mixture containing 7.5 mg in 2.5 mL?

**Correct answer: 3 mL**

3. A 10 mL ampoule of potassium chloride injection contains 1.49 grams of potassium chloride. What is the concentration of potassium ion in this solution, expressed in mmol/mL? - (molecular weight of potassium chloride = 74.5)

**Correct answer: 2mmol/mL**

4. How many mL of alcohol 90% v/v must be added to 200 mL of alcohol 20% v/v, to produce alcohol 70% v/v?

**Correct answer: 500 mL**

5. Which of the following represents the highest concentration?

- 10 mg/mL
- 100 parts per million
- 1 in 20,000
- 0.01mg/mL
- 1mg/litre

**Correct answer: 10 mg/mL**

6. A solution with a concentration of 0.05 per cent may also be described as containing

**Correct answer: 1 part in 2000 parts or 0.05g in 100ml = 50mg in 100ml = 0.5mg/ml**

7. Iodine Solution Aqueous – iodine 5%, potassium iodide 10% in water - (*Lugol's Solution*). With a dose of the solution at 0.3 mL three times a day, the amount of iodine contained in this daily dose of the solution is

**Correct answer: 45 mg**

8.

<b>Zinc sulphate</b>	<b>10 g</b>
<b>Sulphurated potash</b>	<b>10 g</b>
<b>Glycerin</b>	<b>10 g</b>
<b>Purified water to</b>	<b>100 mL</b>

The weight/mL of glycerin is 1.26g. The volume of glycerin required to make 400mL of the above lotion is

**Correct answer: 32 mL**

9.

**SULPHACETAMIDE EYE-DROPS**

<b>Sulphacetamide sodium</b>	<b>10 g</b>
<b>Sodium metabisulphite</b>	<b>0.1 g</b>
<b>Disodium edetate</b>	<b>0.05 g</b>
<b>Phenylmercuric nitrate</b>	<b>0.002 g</b>
<b>Water for injections to</b>	<b>100 mL</b>

The phenylmercuric nitrate is available as a sterile aqueous solution containing 3 mg in 10 mL. The volume of this solution required to prepare 15 mL of the above formula is

**Correct answer: 1.0 mL**

10. Dopamine 200 mg in 500 mL of normal saline at 5 µg/kg/min is ordered for a 70Kg patient. What is the final concentration of solution in µg/mL?

**Correct answer: 400 µg/mL**

