

*Guide to the*  
**Singapore Pharmacy  
Council Competency  
Examination**

**Singapore Pharmacy Council**

August 2009

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# **A. Information on the Competency Examination**

## **A.1 Introduction**

In the Singapore healthcare environment, the pharmacist plays a key role as:

- a) a gatekeeper to ensure the provision and use of safe, effective, high quality health products, and,
- b) an expert in drug knowledge, to be not only a healthcare professional but also a health educator and promoter.

As a pre-registration pharmacist, you are undergoing training both in theory and in practice in an approved training centre registered with the Singapore Pharmacy Council (SPC). Your training covers the competency standards stipulated by the SPC and prepares you for entry to practise as a pharmacist.

## **A.2 Objective of the Competency Examination**

The common competency examination is an assessment of your knowledge and understanding of topics that form the core knowledge needed by a newly registered pharmacist for effective professional practice.

The results of this examination will be taken into consideration by the training centres in the overall assessment of the candidate for completion of training.

## **A.3 Format of the Competency Examination**

This is a closed book examination. No reference material will be allowed to be carried into the examination. The paper consists of all multiple-choice questions. Candidates are encouraged to attempt all questions. For each question, candidates will be required to pick the most appropriate answer out of the given choices. No marks will be deducted for incorrect or unanswered questions (i.e. no negative marking).

There will be a total of 100 questions and the time allowed is 1 hour 40 minutes. The passing mark is 60%.

The weightage for questions are approximately: 80% Clinical Pharmacy & Pharmaceutical Practice, 10% Pharmacy Ethics, and 10% Pharmacy System and Procedures.

You are advised to familiarise yourself with the syllabus listed in Section B of this guide.

## **A.4 Examination Structure**

The syllabus lists all the topics of knowledge and understanding identified by the Board of Examiners that would be needed by newly registered pharmacists to practise competently.

While the examination syllabus lists the topics to be covered by the examination, it cannot provide comprehensive detail of all items of knowledge that might be tested.

You will not need in-depth knowledge of all topics in the syllabus since a pharmacist in practice would refer to information references for such in-depth knowledge. However, you will need to have a good working knowledge of the basic and generally common aspects of pharmacy that would be encountered in practice.

## **A.5 Preparation for the Competency Examination**

It is important that you are familiar with the examination syllabus so that you can better prepare for the examination.

The examination syllabus is based on the competency standards set out by the SPC for pre-registration training. It specifies the broad topics to be covered by the examination that pharmacists entering/re-entering the profession are expected to be competent in. For further details, please refer to section B for the examination syllabus.

The Board of Examiners advises candidates to be well-versed with the syllabus, and to read as widely as possible, to enable them to do well in the examination.

## **A.6 Eligibility for the Competency Examination**

This competency examination is for:

- a) National University of Singapore (NUS) pharmacy graduates applying for registration ;
- b) Foreign pharmacists applying for registration; and
- c) De-registered pharmacists (both local/foreign) who have not held a practising certificate for more than 5 years and who wish to restore their name in the register.

NUS pharmacy graduates undergoing pre-registration training must have completed at least 42 weeks of training, including the in-course preceptorship (at SPC-approved training centres) during the semester breaks before sitting for the examination.

The competency examination will be held four times a year, in February, May, August and November. Please check the SPC website for the exact date of the Competency Examination.

Candidates who do not pass the first attempt are permitted to have 2 re-sit attempts.

## **A.7 Fees and deadline for registration for examination**

With reference to A.6, candidates from categories (a) and (b) must register for the examination through their respective training centre. Category (c) candidates should register directly with the Singapore Pharmacy Council. All registrants should register with the SPC office at least one month before the date of the examination. The examination fee is S\$300 per candidate per exam.

## **A.8 Examination centre**

The examination is held at one central location that will be announced to all the candidates upon registration.

## **A.9 On the examination day**

Candidates are required to bring their identity card / company's identification badge (with photograph) to facilitate the authentication of the candidate's identity. As calculations may be required in some questions, candidates are permitted to bring in their calculator.

Candidates will be permitted into the examination room during the 30 minutes after commencement. After the first half-hour, candidates will not be admitted.

## **A.10 The Board of Examiners**

The examiners are drawn from hospital practice, community practice, academia and regulatory.

The main functions of the Board of Examiners are to:

- set the syllabus and information guide for the examination
- propose to the Singapore Pharmacy Council the dates and location of the examination
- determine the conduct, condition and marking of the examination
- approve the examination paper for each examination
- disseminate the results of the examination
- determine information to be provided to prospective candidates and unsuccessful candidates
- determine checks to perform to confirm the marks of unsuccessful candidates
- consider requests and special considerations from candidates
- consider appeals against results

## **A.11 Notification of results**

Candidates will be notified of their results (pass or failure) through the mail according to the mailing address given at the time of registration for the examination. The training centre will also be notified the results of their candidates.

## **A.12 Withdrawal before or on the day of the examination**

If you decide for any reason that you are unable or do not want to attempt the examination, you can withdraw in writing at any time up to the start of the examination. Your letter, addressed to the Chief Examiner, Board of Examiners, Singapore Pharmacy Council, must reach SPC no later than the 5th day after the day of the examination. You will then be treated as having not attempted at the examination and your examination fee will then be forfeited.

## **A.13 Sitting for the examination in the event of illness or adverse circumstances**

If you believe that your performance at the examination has been adversely affected by illness, or some other problems which occurred before the examination in the days/weeks leading up to it, but you decide nevertheless to sit for the examination (i.e. you do not withdraw), you can report the circumstance to the chief invigilator at the examination centre. You will be given a Special Consideration Form (see Annex B) to fill up. You will then send the completed form to the Chief Examiner, Board of Examiners, Singapore Pharmacy Council, reaching SPC no later than the 5th day after the day of the examination, for consideration. You must also send appropriate corroborating evidence with your request for circumstances stated under A.13.1 and A.13.2.

### **A.13.1 Request to be granted a pass**

In filling up the Special Consideration Form, you can request for your illness or adverse circumstances to be taken into consideration and request to be granted a pass.

In exceptional cases, the Board of Examiners may take the illness or adverse circumstance and grant the candidate a pass, but **ONLY** if his or her marks narrowly miss the passing mark.

#### **A.13.2 Request for an examination attempt to be nullified**

In filling up the Special Consideration Form, a candidate can request for his examination attempt to be nullified.

When considering such a request for a candidate's examination attempt to be nullified, the Board of Examiners will do so BEFORE undertaking the process of awarding results.

The candidate will be required to pay a new fee at the next examination attempt.

#### **A.14 Appeals System**

A candidate can ask for a re-consideration of his or her result if he or she failed, based on procedure grounds i.e. where some aspects of the examination procedures have not been applied correctly in his or her case.

The candidate must set out the grounds of the appeal in writing to the Registrar, Singapore Pharmacy Council, no later than 21 days after the date of issue of the examination results. The appeal will be referred to the Board of Examiners which will consider the appeal within 60 working days upon receipt by the Pharmacy Council office.

## B. Examination Syllabus

### B.1 Main Syllabus

The syllabus is divided into 5 sections (A to E) encompassing the common practice areas that pharmacists entering the profession are expected to be competent in:

SYLLABUS	LEARNING OUTCOMES
<b>A) Clinical Pharmacy / Pharmaceutical Practice</b>	
<ul style="list-style-type: none"><li>• Drug (clinical pharmacokinetics and clinical pharmacodynamics)</li></ul>	You must be able to demonstrate an understanding of: <ul style="list-style-type: none"><li>• the mechanism of action, administration, absorption, distribution, metabolism and excretion of commonly used medicines</li><li>• the rationale of medication usage</li><li>• correct dosages and dose adjustments for patients with particular needs because of their age and/or disease condition</li><li>• the normal ranges for therapeutic blood levels of drugs with narrow therapeutic index</li></ul>
<ul style="list-style-type: none"><li>• Pathophysiology and clinical biochemistry</li></ul>	You must be able to demonstrate an understanding of and be able to interpret: <ul style="list-style-type: none"><li>• the basic pathophysiology of the various disease states</li><li>• the normal ranges for blood pressure and key biochemistry</li><li>• the normal ranges for key parameters of bodily functions</li><li>• the disease treatment outcome</li><li>• the implications of figures outside these ranges</li></ul>

<b>SYLLABUS</b>	<b>LEARNING OUTCOMES</b>
<ul style="list-style-type: none"> <li>• Optimisation of patient's drug therapy</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• the relevant patient's medication history and/or current medication treatment record</li> <li>• the relevant clinical and medication-related information from patients and/or caregiver and/or healthcare professionals</li> <li>• the purpose and principles of medicines management and pharmaceutical care</li> <li>• the appropriateness of dosages and methods of administration</li> <li>• the effectiveness of total drug therapy, taking patient factors in consideration</li> <li>• the recognised adverse effects and toxicities of prescribed and over-the-counter medicines</li> <li>• the circumstances in which prescribed and over-the-counter medicines are contra-indicated</li> <li>• the major interactions that can occur between medicines, foods and herbs</li> </ul>
<ul style="list-style-type: none"> <li>• Management of minor ailments</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• differentiating minor illnesses from more serious diseases</li> <li>• the symptoms of conditions that require referral to a medical or other healthcare practitioner</li> <li>• the actions and indications of over-the-counter medicines available that are commonly used to treat minor ailments</li> </ul>

SYLLABUS	LEARNING OUTCOMES
<ul style="list-style-type: none"> <li>• Health promotion and disease prevention</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• the concepts of health promotion and health education</li> <li>• recommendations for key health parameters</li> <li>• the basis for health improvement programmes</li> <li>• the social, environmental, lifestyle and dietary factors that influence health</li> <li>• how awareness of the stages of behavioural change can help pharmacists make interventions appropriate to the individual</li> <li>• actions which pharmacists and pharmacy support staff can take to promote health and prevent disease see reference 1.</li> </ul>
<ul style="list-style-type: none"> <li>• Pharmaceutical calculations (where applicable)</li> </ul>	<p>You must be able to perform and demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• performing accurately all types of calculations</li> <li>• the correct procedures for the dilution of solid, semi-solid and liquid dosage forms, including selection of the correct diluents</li> <li>• the factors affecting the stability of medicines (including those dispensed extemporaneously) and the impact of these factors on storage and labelling</li> <li>• the additional precautions necessary when preparing and dispensing cytotoxic and other products requiring health and safety precautions</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence-based practice</li> </ul>	<p>You must be able to:</p> <ul style="list-style-type: none"> <li>• interpret scientific papers and the relevance of biostatistics</li> <li>• understand the principles of obtaining and applying evidence in practice</li> </ul>

SYLLABUS	LEARNING OUTCOMES
<ul style="list-style-type: none"> <li>• Medication Safety</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• the principles of safe medication use and risk assessment in relation to the key elements: Patient information; Drug information; Communication of drug orders and other drug information evaluation; Drug labelling, packaging and nomenclature; Drug standardisation, storage and redistribution; Medication delivery device acquisition, use and monitoring; Environmental factors; Patient education; Quality process and risk management (see reference 2)</li> </ul>
<b>B) Pharmacy Ethics</b>	
<ul style="list-style-type: none"> <li>• Pharmacy Ethics</li> </ul>	<p>You must be able to demonstrate an understanding of and be able to interpret:</p> <ul style="list-style-type: none"> <li>• Singapore Pharmacy Council Code of Ethics for Pharmacists</li> <li>• Pharmacy Practice Standards (see reference 3)</li> <li>• Guidelines governing pharmacy practice</li> </ul>
<b>C) Pharmacy System and Procedures</b>	
<ul style="list-style-type: none"> <li>• Prescribing guidelines and formularies</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• the purpose of hospital formularies, usage data and evaluation</li> </ul>
<ul style="list-style-type: none"> <li>• Adverse drug reaction reporting</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• the correct actions to take in response to any report of an adverse drug reaction by patients, public or healthcare professionals</li> <li>• the national adverse drug reaction reporting programme and pharmacovigilance</li> </ul>
<ul style="list-style-type: none"> <li>• Drug Recall</li> </ul>	<p>You must be able to demonstrate an understanding of:</p> <ul style="list-style-type: none"> <li>• the correct actions to be taken in the activation of product recall under the following circumstances: product withdrawal from pharmacy (e.g. wrong issuance of drug, contamination), HSA or supplier</li> </ul>
<b>D) Pharmacoeconomics</b>	Omitted currently
<b>E) Pharmacogenomics</b>	Omitted currently

## B.2 Core Topics for Clinical Pharmacy and Pharmaceutical Practice

1. Cardiovascular
  - Arrhythmias
  - Coronary heart disease
  - Congestive heart failure
  - Hyperlipidaemia
  - Hypertension
2. Gastrointestinal
  - Colitis
  - Constipation and diarrhoea
  - Gastro-oesophageal reflux disease (GERD)
  - Nausea and vomiting
  - Non-ulcer dyspepsia
  - Peptic and duodenal ulcer disease
3. Renal
  - Chronic renal failure
  - End stage renal failure
4. Endocrine
  - Diabetes mellitus
  - Thyroid disease – hypothyroidism, hyperthyroidism
  - Oestrogen deficiency state
  - Osteoporosis
5. Respiratory
  - Asthma
  - Chronic obstructive pulmonary disease (COPD)
  - Ear, Nose & Throat / Allergy
  - Cough and cold
  - Rhinitis
  - Motion sickness
6. Dermatological
  - Acne
  - Drug induced eruption
  - Dry skin
  - Eczema / dermatitis
  - Hair loss
  - Insect bites
  - Psoriasis
  - Sun care
7. Neurological
  - Epilepsy
  - Parkinson's disease
  - Stroke
8. Infectious Diseases
  - Respiratory tract
  - Bronchitis, otitis, pharyngitis, pneumonia, sinusitis, tuberculosis
  - Urinary tract (complicated and uncomplicated infections)
  - Parasitology
  - Protozoal disease, malaria, lice, scabies
  - Mycology
  - Systemic and superficial fungal infections
9. Vaccination and Immunoprophylaxis
  - Childhood
  - Flu
  - Hepatitis
  - Pneumococcus
  - Rabies
  - Tetanus
  - Travel
  - Varicella
10. Sterilisation and Disinfection
  - Infection Control
  - Chemical disinfectants, disinfection and sterilisation procedures
11. Pain Management (Neuropathic, Visceral)
  - Acute pain
    - Headaches
    - Menstrual
    - Migraine
    - Musculoskeletal (e.g. osteoarthritis, rheumatoid arthritis)
  - Chronic pain

12. Eye / Ear Care

- Allergy
- Conjunctivitis
- Contact lens related problems
- Dry eyes
- Ear wax removal
- Swimmers' ear

13. Health Promotion and Education

- Weight management
- Smoking cessation - nicotine replacement therapy
- Vitamin supplements:
  - recommended daily allowance (RDA)
  - treatment of deficiency states and maintenance of health
- See Health Promotion Board website for other health promotion and education programme (See reference 1)

14. Drugs used in pregnancy and breast-feeding

- Safe use and contraindications

15. Drugs used in children < 18 years

- Cough, cold, fever, allergy management
- Nausea, vomiting, constipation, diarrhoea management

16. Drugs used in the elderly ( > 65 years old) patients

- Polypharmacy

17. Wound management

- Wound care products for various types of wounds
- Systemic treatment of wounds

## **Annex A          Recommended References**

1. Health Promotion Board (<http://www.hpb.gov.sg>)
2. MOH Medication Safety Practice Guidelines and Tools
3. Pharmacy Practice Standards for Healthcare Institutions and Pharmacies in Singapore
4. American Hospital Formulary Service (AHFS) Drug Information
5. Applied Therapeutics
6. British National Formulary
7. Drug Information Handbook (Lexicomp)
8. Drugs In Pregnancy and Lactation (Gerald G Briggs)
9. Handbook of Non-prescription Drugs
10. Health Professionals Portal (<http://www.hpp.moh.gov.sg>)
11. Pharmacotherapy – A Pathophysiologic Approach

## Annex B Special Consideration Form

Date: \_\_\_\_\_

To: Chief Examiner  
Board of Examiners  
Singapore Pharmacy Council

I would like to request to have my performance considered at the SPC Competency Examination, taken on this date \_\_\_\_\_ for:

- Examination attempt to be granted a PASS
- Examination attempt to be NULLIFIED

The reason(s) for my request is (are):

Should space be insufficient, you may use an additional blank piece of paper.

**NOTE: *Original*** documents that corroborate your reason(s) **must** be submitted along with the Special Consideration Form. Failure to do so may result in your application being rejected.

\_\_\_\_\_  
Name of Candidate

\_\_\_\_\_  
Signature of Candidate

\_\_\_\_\_  
Date

\_\_\_\_\_  
NRIC of Candidate

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