

Published on the 21st day of December, 1968

No. 4 of 1968.

GUYANA

## RULES

MADE UNDER

THE PHARMACY AND POISONS ORDINANCE, 1956

(No. 36 of 1956)

UNDER SECTION 9(2) OF THE PHARMACY AND POISONS ORDINANCE, 1956, THE FOLLOWING RULES HAVE BEEN MADE BY THE PHARMACY AND POISONS BOARD WITH THE APPROVAL OF THE GOVERNOR-GENERAL ACTING BY VIRTUE AND IN EXERCISE OF ALL POWERS ENABLING HIM IN THAT BEHALF:—

1. These Rules may be cited as the Pharmacy and Poisons Short title.  
(Pharmacists) (Training and Examination) Rules, 1968.
2. In these Rules — Interpretation.  
 “the Examinations” mean collectively the examinations provided for under rule 9 of these Rules;  
 “the Final Examination” means the Final Examination for the Certificate of Competency as a Pharmacist.

### TRAINING

3. (1) A person desirous of obtaining registration as a student Registration as a student.  
in pharmacy shall deliver to the Registrar a certificate of having passed the General Certificate of Education Examination of any of the examining bodies set out in the first schedule to these Rules at Ordinary First Schedule.  
Level in the following subjects:—

- (a) English Language;
- (b) Elementary Mathematics (Arithmetic, Algebra, Geometry);
- (c) Elementary Chemistry; and
- (d) Biology (or Botany and Zoology).

(2) The Board may accept certificates of having passed other examinations which in the opinion of the Board are of a standard equivalent to those mentioned in paragraph (1) of this rule.

4. (1) The Registrar shall issue to every person approved by the Board for registration as a student in pharmacy a certificate in the form set out in the second schedule to these Rules. Certificate of studentship.

(2) Each certificate of studentship shall be signed by the Chairman and the Registrar of the Board and the fee for registration shall be ten dollars. Second Schedule.

Lectures.

5. The Board shall have power to appoint suitable persons to lecture on the subjects prescribed for the Examinations by these Rules and may arrange courses of lectures and class work.

Fees to Lecturers.

6. Fees shall be paid by the Board to the lecturers at the rate of ten dollars for each lecture of one hour's duration.

Attendance at lectures

7. Attendance at courses of lectures shall be compulsory for all students in pharmacy and lecturers shall submit reports to the Board on the attendance of each student at lectures and on his class work:

Provided that the Board may excuse any student from attendance at lectures or class work in any particular subject where the Board is satisfied that the qualifications or experience of that student warrants such a dispensation.

Fees for lectures.

8. The fee for attendance at a course of lectures in each subject as set out in either Part I or Part II of Rule 10 (1) shall be thirty dollars.

### EXAMINATIONS

Examinations.

9. The Board shall hold the following examinations in pharmacy:—

- (a) First Professional Examination Part I
- (b) Final Examination for the Certificate of Competency as a Pharmacist Part II

Subjects of the examinations.

10. (1) The following shall be the subjects for the respective examinations:—

#### PART I

- (a) **First Professional Examination**
  - (i) Pharmaceutics I
  - (ii) Pharmaceutical Chemistry I
  - (iii) Pharmacognosy I
  - (iv) Physiology

#### PART II

- (b) **Final Examination**
  - (i) Pharmaceutics II
  - (ii) Pharmaceutical Chemistry II
  - (iii) Pharmacognosy II
  - (iv) Pharmacology

Fourth and Fifth Schedules

(2) The syllabus for each subject of the Examinations shall be as set out respectively in the fourth and fifth schedules to these Rules.

11. (1) The Board shall at a meeting held in or around January of each year appoint such competent persons as the Board thinks fit to be examiners for that year to conduct the respective examinations and the persons so appointed shall for the time being constitute and be called the Board of Examiners. Appointment of examiners.

(2) The Board of Examiners shall make reports to the Board giving the marks obtained by each candidate in the respective subjects of each examination along with their recommendations.

12. (1) Fees shall be payable to the examiners by the Board at the following rates:— Fees payable to examiners.

### PART I

(a) For the First Professional Examination —

Five Dollars for each candidate sitting each section of each subject of the examination up to and including the first twelve candidates and thereafter Three Dollars for each candidate.

### PART II

(b) For the Final Examination —

Eight Dollars for each candidate sitting each section of each subject of the examination up to and including the first ten candidates and thereafter Five Dollars for each candidate.

(2) Payment shall be made to an examiner on the basis of the number of candidates sitting for examination in the subject or subjects which such examiner conducts:

13. (1) The examinations shall take place twice yearly in March and October or at such other time or times as the Board may appoint. Time of examinations.

(2) The Registrar shall insert in the Official Gazette and in the daily newspapers circulating in Guyana at least twenty-one days before each examination a notice giving the place and date of such examination, stating therein the time for the sending in of certificates and for the payment of fees.

14. (1) Before examination each candidate shall pay to the Registrar the appropriate fee at the following rates:— Fees payable by candidates for examination.

For each subject in the First Professional Examination —  
Part I — \$15.00

For each subject in the Final Examination — Part II —  
\$30.00

(2) A candidate who fails to present himself for examination after payment of the fee shall forfeit half the fee unless the Board is satisfied that his absence was unavoidable.

15. (1) Candidates for the First Professional Examination — Part I shall forward to the Registrar at the time appointed under paragraph (2) of rule 13 of these Rules the following:— Certificates to be forwarded.



- (a) a certificate of having been registered as a student in pharmacy for at least two years prior to the date of application;
  - (b) a certificate of birth showing that he has attained the age of 18 years;
  - (c) a testimonial of being of good character, to the satisfaction of the Board;
  - (d) a certificate by a lecturer appointed by the Board of regular attendance at a course of lectures in the subjects of the examination and of having satisfactorily performed the class work in connection therewith;
  - (e) a certificate of having been engaged and instructed in compounding and dispensing for at least two years in a Government Hospital or in a pharmacy recognised by the Board.
- (2) Candidates for the Final Examination — Part II shall forward to the Registrar at the time appointed under paragraph (2) of rule 13 of these Rules the following —
- (a) evidence of having passed the First Professional Examination at least two years before the date of application;
  - (b) a certificate of birth showing that he has attained the age of 21 years;
  - (c) a testimonial of being of good character, to the satisfaction of the Board;
  - (d) a certificate by a lecturer appointed by the Board of regular attendance at a course of lectures in the subjects of the examination and of having satisfactorily performed the classwork in connection therewith;
  - (e) a certificate of having been engaged and instructed in compounding and dispensing in a Government Hospital or in a pharmacy recognised by the Board for at least two years after passing the First professional examination;
  - (f) a certificate of having served for a period of at least six months in a drug manufacturing establishment recognised by the Board.
- (3) Candidates presenting themselves for re-examination shall produce certificates to the satisfaction of the Board of having been engaged in the study of the subjects of the respective examinations during the time that has elapsed since their last examination.

16. For the purpose of examination the subjects shall be divided into three sections — written, practical and oral.

Minimum pass percentage.

17. Candidates will be required to obtain the following minimum pass percentage in the subjects set for the respective examinations —

- (a) First Professional Examination —  
Part I —50 per centum in each subject;
- (b) Final Examination — Part II — 65 per centum in each subject.

18. The Board may in its discretion, award a pass to a candidate whose general information and intelligence appear to justify such a course though he may not in some one subject have attained the minimum standard laid down in rule 17 of these Rules. Discretion to vary pass percentage

19. (1) The Board shall have power to admit to or to exempt from the examinations or any subject of the examinations — Power to exempt

- (a) any person holding a certificate from an authority in a country of the Commonwealth empowered by statute to grant certificates of qualification to practice pharmacy where there exists a reciprocal arrangement between the government of such country and the government of Guyana;
- (b) a person holding a certificate from a country other than a country of the Commonwealth where the Board is satisfied that the holder of such certificate has received adequate instruction and training in the relevant subjects of the examinations.

(2) Any person making application to the Board under this rule for admission to or exemption from the examination or subjects of the examination shall submit proof of his identity to the satisfaction of the Board.

20. The Board shall on the application of any person who has passed the Final Examination issue to such person a certificate in the form set out in the Third Schedule to these Rules. Issue of certificate  
Third Schedule

21. The Chemists and Druggists (Training and Examinations) Regulations shall cease to have effect. Revocation Cap 141.

FIRST SCHEDULE

- University of Bristol
  - University of Durham
  - University of London
  - Oxford and Cambridge Schools Examination Board
  - The Associated Examination Board for the General Certificate of Education
- Rule 3 (1).

SECOND SCHEDULE

"No. Rule 4 (1)  
GUYANA

This is to certify that

.....  
is duly qualified to become a student in Pharmacy and is registered as such under the Pharmacy and Poisons (Pharmacists) (Training and Examination) Rules, 1968."

Date.....

..... Chairman of the Pharmacy and Poisons Board

.....Registrar

## THIRD SCHEDULE

Rule 20.

"No.

## PHARMACY &amp; POISONS BOARD

of

## GUYANA

This is to certify that the examiners appointed under the provisions of the Pharmacy and Poisons Ordinance, 1956 having examined ..... are satisfied that he has sufficient skill and knowledge to be registered as a

## PHARMACIST

under the Pharmacy and Poisons Ordinance, 1956,  
Georgetown, ..... 1968.

.....Chairman of the Pharmacy and Poisons Board

.....Registrar

## FOURTH SCHEDULE

Rule 10

## SYLLABUSES

## PART I

## PHARMACEUTICS I

(The Examination in Pharmaceutics I comprises one three-hour written session and one three-hour practical session based upon a knowledge of the matter set out below together with the relevant practical work. The Examiners are not precluded from asking the Candidate oral questions during the practical session.)

The Candidate will be required to have a knowledge of the following:

The application of physical phenomena to pharmaceutical operations and practice. An introduction to microbiology; microbiological techniques and their application to pharmaceutical products and processes; sterilisation; asepsis and aseptic techniques

**Practical Examination**

Aseptic technique in the distribution of sterile solids and liquids into containers. Tests for sterility; evaluation of bacteriostatic bactericidal and fungistatic power. Exercises involving microbiological techniques.

Note. — The Candidate will be allowed to bring to the practical session any book or books he wishes. He will be required to bring to the practical session his original laboratory notebooks duly signed by the teacher for inspection should the Examiners so desire. The books must be taken away by the Candidate at the close of the session.

**PHARMACEUTICAL CHEMISTRY I**

(The Examination in Pharmaceutical Chemistry I comprises one three-hour written session based upon a knowledge of the matter set out below):—

The Candidate will be required to have a knowledge of the following:—

The principles of physical chemistry treated in an elementary manner mainly with reference to their pharmaceutical applications.

The general principles of inorganic chemistry based upon the characteristics of the elements and compounds shown by periodic relationships and an elementary treatment of valency and electronic structure.

An elementary treatment of atomic structure, isotopes, nuclear chemistry and natural and induced radioactivity.

An introduction to organic chemistry, including simpler aliphatic compounds



## PHARMACOLOGY

(The Examination in Pharmacology will be based upon that set out below together with the relevant physiology. It will comprise one three-hour written session and an oral session.)

The Candidate will be required to have knowledge of the actions and uses of drugs in common use, the general principles of pharmacology, chemotherapy, toxicology and of biological assay. He should be prepared to show his acquaintance with the methods employed for the investigation of fundamental physiological processes and the actions thereon of drugs and his own experience of simple estimations and experiments in physiology and pharmacology, including their chemical aspects.

### APPENDIX I

#### COURSE OF INSTRUCTION

##### PART I

###### Pharmaceutics I

A course of sixty (60) lectures of one hour duration and two hundred and forty (240) hours of practical work extending over a period of two years.

###### Pharmaceutical Chemistry I

A course of seventy-two (72) lectures of one hour duration and two hundred and eighty-eight (288) hours practical work extending over a period of two years.

###### Pharmacognosy I

A course of thirty-six (36) lectures of one hour duration extending over a period of two years.

###### Physiology

A course of thirty-six (36) lectures of one hour duration extending over a period of two years.

##### PART II

###### Pharmaceutics II

A course of thirty-six (36) lectures of one hour duration and forty-eight (48) hours of practical work extending over a period of two years.

###### Pharmaceutical Chemistry II

A course of thirty-six (36) lectures of one hour duration and one hundred and forty-four (144) hours of practical work extending over a period of two years.

###### Pharmacognosy II

A course of twenty-four (24) lectures of one hour duration and thirty-six (36) hours of practical work extending over a period of two years.

###### Pharmacology

A course of twenty-four (24) lectures of one hour duration and twenty-four (24) hours of practical work extending over a period of two years.

### APPENDIX II

#### RULES FOR COURSE OF PRACTICAL TRAINING

1. The employer shall make an application upon a form obtainable from the Registrar for approval of the condition in the set of premises registered under Section 23 of the Pharmacy and Poisons Ordinance 1956, the Pharmaceutical Department of a hospital or other institution or a manufacturing Pharmaceutical Laboratory as the case may be for the purpose of accepting a pupil wishing to undergo a course of practical training as required by the examination regulations of the Board. A separate application shall be made in respect of each pupil and except for a reason satisfactory to the Board shall be made before the commencement of the practical course of study of the pupil concerned.
2. The employer shall from time to time, if requested, furnish such information as may be required by the Board about the staff, accommodation, equipment and work of the premises, hospital or other institutions, Pharmaceutical Department or manufacturing

The Candidate will be required to have a knowledge of the following;—

The principles and methods of compounding and dispensing of medicines.

The principles underlying the preparation, standardisation, labelling and storage of pharmaceutical products. Pharmaceutical plant and unit operations.

The chemical, physical, pharmacological and therapeutic factors involved in the presentation, formulation and stabilisation of pharmaceutical preparations.

Radioactive isotopes, their preparation, properties and uses. Detection and measurement of radio activity. Health hazards, handling, storing, dispensing, dosage and waste disposal.

#### Practical Examination

The compounding and dispensing of medicines and the preparation of other pharmaceutical products; the handling and dispensing of preparations packed by pharmaceutical manufacturers, and the completion of the appropriate records.

Note:— The Candidate will be allowed to bring to the practical sessions any book or books he wishes. He will be required to bring to the practical sessions his original laboratory notebooks, duly signed by the teacher, for inspection should the Examiners so desire. The books must be taken away by the candidate at the close of each session.

The Candidates will be required to have a knowledge of the following:—

An outline of the history of pharmacy.

The development, administration and organisation of the general practice of pharmacy, the hospital service and the pharmaceutical industry; posology; prescription reading.

A knowledge of the enactments and subordinate legislation made under them which are applicable to the practice of pharmacy in Guyana. Professional conduct, relationships, and liabilities.

Medical gases, inhalation equipment; surgical dressings and medical appliances.

#### PHARMACOGNOSY II

(The Examination in Pharmacognosy II comprises one three-hour written session and one three-hour practical session, based primarily upon a knowledge of the matter set out below, but questions involving a knowledge of Pharmacognosy I (Part I) are not excluded; the Examiners are not precluded from asking the Candidates oral questions during the practical session.)

The Candidate will be required to have a knowledge of the following:—

A knowledge of the sources, macroscopical, sensory and microscopical characters, varieties and constituents of crude drugs. The chemical and physical properties of plant constituents and their isolation and recognition.

Methods used for the identification of crude drugs, and the detection of adulteration.

The types of standards applied to crude drugs and unmedicated surgical dressings.

The changes which occur during drying comminution and storage of crude drugs, including the factors responsible for deterioration during storage.

A knowledge of the more common indigenous poisonous plants; the antidotes used in cases of poisoning by the same.

Note:— In the practical session the Candidate may use the British Pharmacopoeia, the British Pharmaceutical Codex and his own practical notebooks, except for the answering of those questions involving the identification and/or objective description of crude drugs. He will be required to bring to the practical session his original laboratory notebooks, duly signed by the teacher, for inspection should the Examiners so desire. These notebooks must be taken away by the Candidate at the close of the session.



**PHARMACOGNOSY I**

(The Examination in Pharmacognosy I comprises one two-hour written session based upon a knowledge of the matter set out below.)

The candidate will be required to have a knowledge of the following:—

The classification of crude drugs.

The cultivation, collection and preparation for the market of and commerce in crude drugs, including an elementary study of the pharmaceutical aspects of plant protection.

Macroscopical and microscopical methods used for the examination of crude drugs.

The sources, preparation and properties of the fibres used in the manufacture of surgical dressings.

**PHYSIOLOGY**

(The Examination in Physiology comprises one three-hour written session.)

The Candidate will be required to have an elementary knowledge of the physiology), including chemical physiology, and histology of the following system of the body and of the main methods by which their functions have been established.

The cardiovascular system; the blood and lymph; the respiratory system; the nervous system; the locomotor system; the digestive system; the urinary system; the endocrine organs and the reproductive system.

**FIFTH SCHEDULE**

Rule 10

**SYLLABUSES****PART II****PHARMACEUTICAL CHEMISTRY II**

(The Examination in pharmaceutical Chemistry II comprises one three-hour written session and one six-hour practical session based primarily upon a knowledge of the matter set out below together with the relevant practical work, although questions involving a knowledge of the work of Pharmaceutical Chemistry I (Part I) are not excluded. The Examiners are not precluded from asking the Candidate oral questions during the practical session.)

The Candidate will be required to have a knowledge of the following:—

Electronic interpretations of organic chemistry. Isomerism. Nomenclature.

The chemistry of aliphatic and aromatic organic substances including that of heterocyclic compounds with special reference to pharmaceutical applications.

Chemical synthesis by means of the more important reagents.

General methods for the extraction of alkaloids and methods employed for the elucidation of structure.

The general chemistry of the carbohydrates, proteins and of fixed and volatile oils.

**Practical Examination**

Volumetric analysis; gravimetric analysis; organic and inorganic qualitative analysis; the preparation of organic compounds. The pharmaceutical applications of the above.

Note:— The Candidate will be allowed to bring to the practical session any book or books he wishes. He will be required to bring to the practical session his original laboratory notebooks, duly signed by the teacher, for inspection should the Examiners so desire. The books must be taken away by the Candidate at the close of the session.

**PHARMACEUTICS II**

(The Examination in Pharmaceutics II comprises one three-hour written session and two three-hour practical sessions based primarily upon a knowledge of the matter set out below together with the relevant practical work' although questions involving a knowledge of the work of Pharmaceutics I (Part I) are not excluded. The Examiners are not precluded from asking the Candidate oral questions during the practical session.)

Pharmaceutical laboratory where the pupil is working and shall permit one or more members of the Board to inspect the premises at any reasonable time while work is proceeding therein.

3. If the employer is not a registered Pharmacist or does not undertake personally the training of the pupil, he shall appoint some registered pharmacist, member of the staff, who shall be responsible to the employer thereof.
4. (i) The course of practical training which the pupil must undergo shall include experience in:—
  - (a) The manipulation of pharmaceutical apparatus in common use.
  - (b) The recognition by sensory characters of the chief crude drugs and chemical substances used in medicine.
  - (c) The preparation of galenical illustrating the principles involved in the commoner pharmaceutical operations.
  - (d) The reading and translation and copying of prescriptions, including the checking of doses.
  - (e) The dispensing of prescriptions illustrating the commoner methods of administering medicaments.
  - (f) The storage of drugs and medicinal preparations.
- (ii) A knowledge of the keeping of the records required by the various ordinances affecting pharmaceutical practice.
5. The pupil shall keep a record of his work. One or more members of the Board shall be permitted to inspect the record at any reasonable time.
6. The Board shall be satisfied that the pupil will be provided with such opportunity, accommodation, apparatus, materials and books of reference as shall be required to enable him to undergo the courses of practical training prescribed in rule 4.
7. The maximum number of pupils that may be trained in any premises, hospital or other institution, pharmaceutical department of manufacturing laboratory shall be determined by the Board.
8. The employer shall grant the pupil such facilities as may be necessary for study and to attend such classes as may be required for his training.
9. The Board may revoke the approval of the conditions referred to under paragraph 1 at any time.
10. For the purpose of these rules, the term employer shall mean and intend either a Pharmacist or

A person, firm or body corporate, who is an authorised seller of poison under the Pharmacy and Poisons Ordinance, 1956. A Pharmacist jointly with either (1) the Administrator of a hospital or other institution or (2) the owner of a manufacturing pharmaceutical laboratory.

Made by the Pharmacy and Poisons Board this 27th day of September, 1968.

G .E. CARTER  
Registrar,  
Pharmacy & Poisons Board.

Approved by the Governor-General this 4th day of December, 1968.

D. J. G. ROSE  
Governor-General.