appointed day and transitional provisions) or of paragraph (*b*) of regulation 2 of these regulations, no payment of benefit can be made under the principal Act unless a claim therefor has been made after the passing of the Act of 1956, shall be excepted from the operation of subsection (1) of section 9 of the Act of 1952 (which relates to the effect of certain awards under the principal Act) by virtue of subsection (6) of the said section 7.

Sealed with the Official Seal of the Ministry of Labour and National Insurance for Northern Ireland this 21st day (L.S.) of August, nineteen hundred and fifty-six, in the presence of

H. Anderson,
Assistant Secretary to the Ministry of Labour and National Insurance for Northern Ireland.

PHARMACY AND POISONS

The Pharmaceutical Society, p. 468 | *Poisons, p.* 493

The Pharmaceutical Society of Northern Ireland

REGULATIONS DATED 15TH JUNE, 1956, MADE BY THE COUNCIL OF THE PHARMACEUTICAL SOCIETY OF NORTHERN IRELAND, WITH THE APPROVAL OF THE MINISTER OF HOME AFFAIRS, UNDER SECTION THREE OF THE PHARMACY AND POISONS ACT (NORTHERN IRELAND), 1925, AS AMENDED BY THE MEDICINES, PHARMACY AND POISONS ACT (NORTHERN IRELAND), 1945, AND THE PHARMACY AND POISONS ACT (NORTHERN IRELAND), 1955.

1956. No. 115. **[C]**

The Council of the Pharmaceutical Society of Northern Ireland, in pursuance of the provisions of Section Three of the Pharmacy and Poisons Act (Northern Ireland), 1925, as amended by the Medicines, Pharmacy and Poisons Act (Northern Ireland), 1945, and the Pharmacy and Poisons Act (Northern Ireland), 1955, hereby makes the following Regulations:—

Preliminary

1.—(1) These Regulations may be cited as the Pharmaceutical Society of Northern Ireland (General) Regulations, 1956, and shall come into operation on the 1st August, 1956.

(2) In these Regulations unless the context otherwise requires:—

Words importing the singular number shall include the plural number.

Words importing the plural number shall include the singular number, and words importing the masculine shall include the feminine.

"The Act" shall mean the Pharmacy and Poisons Act (Northern Ireland), 1925.
"The Act of 1945" shall mean The Medicines, Pharmacy and Poisons Act (Northern Ireland), 1945.
"The Act of 1955" shall mean the Pharmacy and Poisons Act, (Northern Ireland), 1955.
"The Council" shall mean the Council of the Society.
"The President" shall mean the President of the Society.
"The Secretary" shall mean the Secretary of the Society.
"The Society" shall mean the Pharmaceutical Society of Northern Ireland.
"The Statutory Committee" shall mean the Statutory Committee of the Pharmaceutical Society of Northern Ireland.
"The Treasurer" shall mean the Honorary Treasurer of the Society.
"The Vice-President" shall mean the Vice-President of the Society.

2. The Regulations made by the Council of the Pharmaceutical Society of Northern Ireland on the 15th day of February, 1946, on the 16th day of May, 1952, and on the 9th day of April, 1954 are hereby revoked provided however that the Regulations made on the 15th day of February, 1946, and the appendices thereto and the Regulations made on the 9th day of April, 1954, shall remain in force and apply to candidates registered as apprentices before the 1st day of January, 1956, who present themselves for examination before the 30th day of June, 1962, and provided also that the Regulations made on the 16th day of May, 1952, shall remain in force and apply to candidates making application to be registered as students of the Society before the 1st day of October, 1957.

Council

3. The Council shall meet on the third Friday of each month, except August, or on such other day as the Council may from time to time decide. Such further meetings of the Council shall be held as are notified by the Secretary upon direction of the President or any seven members of Council under his or their hands.

4. The Secretary shall send by post notice of each meeting to every member of the Council at least four days before the time of meeting. Every such notice shall contain an agenda, and the business shall be dealt with in the order in which it appears on the agenda. Questions shall be the last item on the agenda and shall be dealt with after all other business shall have been transacted.

5. If an amendment or amendments is or are proposed to any resolution such amendment or amendments shall first be put to the vote in the order in which they are proposed, if more than one, and if an amendment is carried it shall then be put as a substantive resolution. If the amendment or amendments is or are negatived the original resolution shall be put to the vote.

6. All resolutions passed at meetings of the Council shall take effect on such date or dates as the Council shall decide.

No resolution relating to the making altering or abrogating of any regulation shall be discussed by the Council until the expiration of one month after such notice shall have been given.

7. When a division has taken place, the Secretary shall on the request of any member enter on the minutes the names and numbers of the majority and minority, and of those declining to vote.

8. The proceedings of each meeting of the Council shall be entered by the Secretary in a book kept for that purpose.

9. A fair copy of the minutes of each meeting shall be entered in a separate book by the Secretary, and be compared by the Chairman with the original minutes, and, if correct, be confirmed by the signature of the Chairman.

10. The minutes of meetings shall contain such motions and amendments as have been proposed and adopted or negatived, with the names of proposers and seconders, but without any comments or protests annexed.

11. The election of the Secretary, Clerk, and other officers shall be by open voting, each member of the Council declaring the name of the person for whom he votes.

12. Members and associates of the Society may, when permitted by the Council, be present at its meetings, but shall not take part in the proceedings

13. If in the intervals between the meetings of the Council, a member of the Council sends a notice of motion, in writing, to the Secretary, such notice shall not appear upon the agenda without the sanction of the President, or, in his absence, of the Vice-President, and unless the notice shall have been received seven clear days before the time of meeting.

Seal

14. The seal of the Society shall consist of a hand in a circle divided into six parts elaborated, and with the legend, "The Seal of the Pharmaceutical Society of Northern Ireland, MCMXXV."

15. The seal shall be kept in a box which shall be locked with two different locks. The key of one lock shall be in the custody of the President or Vice-President, and the key of the other in the custody of the Secretary. The box shall be kept in a safe on the premises of the Society.

16. The seal shall not be affixed to any deed, instrument, or certificate, unless in pursuance of a resolution of the Council entered in the minute book. The affixing of the seal shall be attested by the signatures of the President or Vice-President and Secretary.

Secretary

17. The Secretary shall attend at the office of the Society at such times as may be appointed by the Council. He shall attend,

and take a record of the proceedings, at all meetings of the Council and Committees, and at the annual meetings of the Society. He shall also attend examinations, elections, etc., conducted by the Society. He shall make a report of all matters that may come under his notice for the information of the Council and Committees. He shall be responsible for the safe custody of all the books, documents and other property of the Society. He shall consult, and act upon the instructions of the President or Vice-President, on any business requiring attention between the various meetings. He shall have authority over the clerks and all servants of the Society, whose wages he shall pay. He shall receive such a sum in advance as the Council may consider sufficient to pay the current expenses of his office.

Treasurer

18. The Treasurer shall be elected from among the members of the Council.

19. It shall be the duty of the Treasurer to maintain an account in the Ulster Bank Limited, and to lodge all moneys as soon as possible after he receives them. He shall keep an account of all moneys received, and shall pay all accounts as ordered by the Council. All cheques shall be signed by the President or Vice-President, the Treasurer and the Secretary.

20. The Treasurer shall submit his financial statement to the Council at its meeting in September in each year, and also to the annual meeting of the Society.

21. The accounts shall be audited before the annual meeting by the official auditors of the Society who shall affix their signatures to the financial statement.

Finance

22. The financial year shall commence on 1st September, and shall terminate on 31st August in the following year.

23. No sum of money exceeding ten pounds shall be voted or ordered for payment (except for recurring charges) before notice is given in the agenda of a meeting of the Council.

24. All sums of money received by the Treasurer in any year by way of penalties under the provisions of sub-section (5) of Section 35 of the Act of 1945 shall form part of the general funds of the Society.

Committees

25. The Council shall appoint from its members five Committees:—Ethical, Law, Education, Finance and House, three members to form a quorum. The composition of the Committees shall be in the following proportions:—Five Pharmaceutical Chemists, one Chemist and Druggist or Registered Druggist and one other member who is not a representative of pharmaceutical chemists. The President and Vice-President shall be ex-officio members of all Committees. The Council shall appoint annually the Chairman of each Committee; in his absence from a meeting an acting chairman shall be chosen by the members present.

Annual Meeting

26. The annual meeting of the Society shall be held on the first Monday in October, or any other date within five days, in such place as the Council shall determine.

27. No motion shall be moved at the annual meeting of the Society without twenty-one days' previous notice in writing having been given to the Secretary, which notice shall be inserted in the summonses convening such meeting.

28. In the case of an equality of votes, the President or Chairman of the annual meeting shall have a casting vote.

29. No member or associate of the Society shall be qualified either to stand for a seat on the Council or to propose or second any candidate for a seat on the Council unless he shall have paid his Retention Fee for the current year. Any candidature which does not fulfil the above conditions shall be null and void.

30. A new candidate for a seat on the Council shall be proposed and seconded by a member or associate of the Society; the nomination paper, together with a written undertaking by such candidate that he will act if elected, shall be lodged with the Secretary by noon at least twenty-one clear days before the first Monday in October.

31. A retiring member of the Council who desires to stand for re-election need not be proposed and seconded by a member or associate of the Society, but shall notify the Secretary in writing by noon at least twenty-eight clear days before the first Monday in October of his intention to stand for re-election.

32. Voting papers shall be sent by post to the registered address of every member and associate of the Society at least seven clear days before the first Monday in October. Every such voting paper shall contain the names of such retiring members as are standing for re-election, with a list of their attendances at the meetings of the Council and Committees since last elected or appointed, and the names and qualifications of all new candidates, together with the names of their proposers and seconders; provided that when the number of candidates is equal to the number of vacancies to be filled no voting papers shall be issued but the Chairman of the annual meeting shall declare the candidates duly elected.

33. If the number of members nominated and willing to accept office is less than the number of vacancies, the Council shall nominate as many as may be required to form a complete list of members willing to fill all the vacancies in the Council. The members named in the list so formed shall at the annual meeting be declared by the chairman to have been elected.

34. Each voter shall—

(*a*) erase from the voting paper the names of those for whom he does not intend to vote;

(*b*) leave no more names than are sufficient to fill the vacancies;

(*c*) sign his name and put his address on the outside of the envelope in which he returns his voting paper; and

(*d*) transmit his voting paper under cover as aforesaid to the Secretary so that it shall be received by him not later than noon on the day of the election.

The voting paper of every voter who fails to comply with any of the above requirements shall be void.

35. The scrutineers of the ballot shall be two members of the Council appointed for the purpose at the September meeting. They shall meet at noon on the first Monday in October to count the votes and to deliver to the Secretary a record of the voting. The proposer and seconder of each new candidate may be present if they so desire. Voting papers shall not be opened save by, or in the presence of, the scrutineers. The names of those elected shall be declared by the Chairman at the annual meeting.

Honorary Members

36. The election of honorary members of the Society shall be subject to the following provisions:

(*a*) No person, save a member of the Council, shall be entitled to propose or second a person for honorary membership.

(*b*) The Council shall not proceed to the election of an honorary member unless notice of motion shall have been given at a meeting of the Council prior to that on which the election takes place.

Registration and Retention

37. The fees payable for registration under Section 7 of the Act as a Pharmaceutical Chemist, Chemist and Druggist or Registered Druggist shall be two guineas and as a student four guineas.

38. Where the name of any registered person has been struck off the Register by a direction of the Minister of Home Affairs or the Statutory Committee, the fee payable for the restoration of such name to the Register shall be two guineas.

39. No recommendation for the erasure of a name from the Register shall be made by the Council unless a notice of the intention to bring forward such recommendation shall have appeared on the agenda.

40. The Retention Fee under Section 8 of the Act of 1945 payable annually by a member of the Society in respect of the retention of his name on the Register shall be two guineas; by an associate of the Society, two guineas, and by a student of the Society, five shillings. The Retention Fee shall be due and payable on the first day of September in each year. Provided that any member who became a Life member prior to the 24th of May, 1945, shall not be required to pay a Retention Fee.

41. The Secretary shall send to any member, associate or student who has not paid his Retention Fee before the 1st day

of September in each year in respect of which such fee is payable, a reminder that payment is due, addressed to his address on the Register.

42. The penalty under sub-section (4) of Section 8 of the Act of 1945 (for default in payment of the Retention Fee), shall be:

(*a*) in respect of a member or associate, the sum of One Guinea; and

(*b*) in respect of a student five shillings.

43. The fee to be paid in respect of the issue of a Certificate of Registration, under the proviso to sub-section (1) of Section 9 of the Act of 1945, by a person who has satisfied the Secretary that the original Certificate has been lost or destroyed shall be ten shillings.

Students

44. A candidate applying to be registered as a student of the Society shall furnish the Council with documentary evidence of either

(*a*) having passed either the Matriculation Examination of any University in the United Kingdom or the Grammar School Senior Certificate Examination of the Ministry of Education for Northern Ireland, having passed, at one and the same examination in the following subjects at either ordinary or advanced level:—
English or English Language, a Mathematical subject, Physics, Chemistry and one subject of the following:—
English Literature (where this is a separate subject), a Foreign Language, Domestic Science, Modern or Ancient History, Geography, Botany or Biology or Zoology; or

(*b*) having obtained the General Certificate of Education of the University of London and having passed, on one and the same occasion, in the following subjects at either ordinary or advanced level:—
English Language, Pure or Applied Mathematics, Physics, Chemistry and one of the following:—
English Literature, a Foreign Language, Domestic subjects, History or Ancient History, Geography, Botany or Biology or Zoology.

45. Upon acceptance of a candidate the Council shall require him to forward to the Secretary:

(*a*) a fee of four guineas as prescribed in Regulation 37;

(*b*) a copy of his certificate of date of birth;

and on receipt of same a certificate that he has been registered as a student will be sent to him.

46. A student who has passed the Final Part I Examination shall enter into Articles of Pupilage with an employer for the period of apprenticeship and the Articles of Pupilage shall contain the provisions of the Draft Articles of Pupilage set out in Appendix C hereof or provisions to the like effect.

Regulations for the Final Part I Qualifying Examination

47. The examination shall be held twice yearly commencing in or about the third week in June and in or about the second week in December.

48. The subjects of the examination shall be Chemistry, Physics and Biology. The examination shall be conducted in accordance with the syllabuses set out in Appendix A to these Regulations.

49. A candidate will not be permitted to enter for the examination unless he:

(1) is registered as a student;

(2) attends, subsequent to his registration as a student, at an Institution approved by the Council for giving instruction for the examination an approved course of instruction of a session of three terms in Biology, Chemistry and Physics and submits a certificate on the official form that he has carried out the work of the course to the satisfaction of the Principal or other person duly authorised to sign the certificate.

50. A student who satisfies the Board of Examiners in the subjects of the examination and otherwise complies with the provisions of these Regulations shall have passed the examination.

51. The fee to be paid for entry to the examination shall be:—

(*a*) for the first time of entry ... ... Six guineas;

(*b*) for any subsequent entry ... ... Four guineas;

and shall be paid when applying to enter for the examination.

Regulations for the Final Part II Qualifying Examination

52. The examination shall be held twice yearly commencing in or about the third week in June and in or about the second week in December.

53. The subjects of the examination shall be Pharmaceutical Chemistry, Pharmaceutics, Pharmacognosy, Physiology and Pharmacology, and Forensic Pharmacy. The examination shall be conducted in accordance with the syllabuses set out in Appendix B of these Regulations.

54. A student shall not be permitted to enter for the examination unless he:—

(*a*) has passed the Final Part I Qualifying Examination;

(*b*) submits a declaration made and signed by a pharmaceutical chemist who in the opinion of the Secretary is able to verify from personal knowledge the facts set out in the declaration that he has undergone a course of practical training of not less than two years in accordance with the Regulations appended to the draft Articles of Pupilage in Appendix C of these

Regulations. The declaration shall state the address of the place at which the course has been undergone and shall be valid only if the course was undergone by the candidate subsequent to his passing the Final Part I Qualifying Examination and while serving under Articles of Pupilage in accordance with Regulation 46 and except for a reason satisfactory to the Council only if the course was subsequent to the Articles of Pupilage having been endorsed by the Secretary and a copy having been lodged with him;

(*c*) submits a certificate on the official form signed by the Principal or other duly authorised person of an Institution approved by the Council for giving instruction for the examination, that the student has regularly attended at the Institution an approved course of instruction of two sessions of three terms each in Pharmaceutical Chemistry, Pharmacognosy, Pharmaceutics, Physiology and Pharmacology, and Forensic Pharmacy and that he has carried out the work of the course to the satisfaction of the Principal or other duly authorised person.

55. A student who satisfies the Board of Examiners in the subjects of the examination and complies with the provisions of the Pharmacy and Poisons Acts (Northern Ireland), 1925 to 1955 shall be granted a certificate entitling him to be registered thereunder.

56. A student who submits to the Council documentary evidence that he has passed the final examination for the degree of pharmaceutics of the Queen's University, Belfast, obtained under conditions approved by the Council shall be deemed to have satisfied the examiners in such subjects as the Council may from time to time determine and shall be permitted to present himself for examination in any remaining subject or subjects.

On satisfying the examiners in the remaining subjects, if any, the candidate on producing a certificate of birth showing that his age is not less than 21 years, and a statement signed by an employer that he has served an apprenticeship of not less than two years, shall be granted a certificate entitling him to be registered as a Pharmaceutical Chemist under the Pharmacy and Poisons Acts (Northern Ireland), 1925 to 1955.

For the acceptance of evidence under this Regulation a fee of twelve guineas shall be paid and such fee shall be deemed to include the fee payable for entry to the examination in any remaining subject or subjects for the first time.

57. The fee to be paid for entry to the examination shall be:

for the first time of entry	Twelve guineas;
for any subsequent entry in all the subjects	Ten guineas;
for any subsequent entry in not more than two subjects	Six guineas.

General

58. Application to enter for either Part I or Part II of the Final Qualifying Examination shall be made to the Secretary on or before the 10th May and the 1st November for the examination commencing in the month following, accompanied by the prescribed fee. Students will receive due notice of the dates and times on which they will be required to present themselves for examination.

59. A student who has entered for either the Part I or Part II of the Final Qualifying Examination but fails to present himself and submits proof satisfactory to the Council that his absence was due to illness or other unavoidable cause shall have the fee refunded.

60. A student who has failed to satisfy the Board of Examiners in one subject only of the Final Part I Examination may present himself for examination in that subject only, if permitted by the Board so to do.

61. A student who has failed to satisfy the Board of Examiners in not more than two subjects of the Final Part II Qualifying Examination, not being both Pharmaceutics and Pharmaceutical Chemistry, may present himself for examination in such subject or subjects only, if permitted by the Board so to do.

62. The Council on the advice of the Board of Examiners, are hereby empowered to require a student who has failed to pass Part I of the Final Qualifying Examination on the first or any other occasion to undertake an approved course of study in one or more subjects before being permitted to enter for the said examination on any future occasion.

If a student shall have failed on three occasions to pass Part I of the Final Qualifying Examination he shall not be entitled to enter for the said examination on any future occasion, provided always that the Board of Examiners may recommend to the Council that any such student should be allowed to enter for the said examination on one more occasion only, and in this matter the Board may be guided by that student's standard of answering at any previous examination or examinations.

63. The Council on the advice of the Board of Examiners, are hereby empowered to direct that any student who has failed to pass Part II of the Final Qualifying Examination on any occasion shall undertake an approved course of study to be prescribed by them in such one or more subjects as they shall prescribe before being permitted to enter for the said examination on any future occasion and in considering this matter the Council and the Board of Examiners shall have regard to the standard of answering of the particular candidate at any previous examination or examinations.

64. When any examiner appointed by the Council is unable to conduct the examination at the proper time, the President, or in his absence the Vice-President, shall have power to appoint a substitute who shall for that examination only discharge the duties of the examiner originally appointed, provided that such appointment shall be subject to the approval of the Minister of Home Affairs.

65. The Council may by resolution enter into reciprocal agreements with a pharmaceutical authority empowered to grant certificates of qualification to practise pharmacy in any place outside the United Kingdom, for registration as a pharmaceutical chemist under the Pharmacy and Poisons Acts (Northern Ireland), 1925 to 1955, without examination, of any person who satisfies the following conditions, that is to say—

(1) is resident in Northern Ireland;

(2) produces evidence to the satisfaction of the Council—

(*a*) of identity;

(*b*) that he has passed a qualifying examination specified in a reciprocal agreement;

(*c*) that he is registered as a pharmacist in the place in which he passed his examination;

(3) produces a declaration made in accordance with the Statutory Declarations Act, 1835, that he is the person referred to in the documents produced by him and that they are his property.

Sealed with the Common Seal of the Pharmaceutical Society of Northern Ireland this 15th day of June, One thousand nine hundred and fifty-six, in the presence of

(L.S.)

C. A. Quinn,
Vice-President.

W. Gorman,
Secretary.

I, THE RIGHT HONOURABLE TERENCE O'NEILL, D.L., M.P., MINISTER OF HOME AFFAIRS FOR NORTHERN IRELAND, in pursuance of the powers vested in me by sub-section (2) of Section three of the Pharmacy and Poisons Act (Northern Ireland), 1925, and having consulted the Minister of Education for Northern Ireland in pursuance of the said sub-section, hereby approve of the foregoing Regulations.

Dated this 24th day of July, 1956.

Terence O'Neill.
Minister of Home Affairs.

APPENDIX A

SYLLABUS FOR THE FINAL PART I QUALIFYING EXAMINATION

BIOLOGY

(Examination in this subject comprises one written session of three hours' duration, covering Parts I and II and two practical sessions (the one for Part I, the other for Part II), each of three hours' duration. The examiners are not precluded from asking candidates oral questions during the practical sessions.)

PART I—BOTANY

1. The distinction between living and non-living matter and the general differences between plants and animals. The morphology of Dicotyledons and Monocotyledons with special reference to food storage and vegetable reproduction.

2. Cell-structure; nuclear and cell division in broad outline. The anatomy and histology of roots, stems and leaves of Angiosperms. Meristems and secondary growth, including the origin and characters of periderm. (N.B. This section is of special importance).

3. Flower structure. The commoner variations in floral structure, with special reference to their use in classification. Pollination; fertilisation, its significance and consequences. The general characters of fruits and seeds.

4. The elements of plant physiology: the relation of the plant to the soil; the nitrogen cycle; absorption of water and mineral salts; transpiration and conduction of water; photosynthesis; translocation and storage of foods; enzymes and enzymeaction; respiration and fermentation; energy relations; germination; growth and response, the latter illustrated by geotropism and phototropism. Saprophytism and parasitism.

5. A knowledge of seedless plants as exemplified by the following:—Spirogyra, structure and life-history, Fucus, general habit and life-history, but excluding details of vegetative structure. Structure, nutrition, reproduction (excluding sexual processes) and economic importance of Bacteria, Yeast, Mucor, Penicillium. Life-history of Dryopteris (including details of reproduction, but a knowledge of the vegetative anatomy is not required). Selaginella, life-history, including detailed knowledge of reproduction.

6. The elementary facts of heredity (simple Mendelian segregation and independent assortment). Evolution: natural selection and mutations.

Practical Examination

The candidate must be prepared:—

(1) To dissect, and to describe with labelled drawings, any plant or part of a plant, subject to the limitations prescribed in the syllabus above.

(2) To make microscopical preparations, using simple staining methods only, and to prepare accurate drawings from these preparations. Special importance is attached to accurate drawing and identification of tissues under a high power.

(3) To describe with labelled drawings and to identify preparation provided.

(4) To conduct, or comment on, experiments illustrating the elements of plant physiology.

The candidate will be required to bring to the practical examination 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 examination.

PART I—ZOOLOGY

1. The structure and physiology of the animal cell. Cell division. The differences between plants and animals.

2. The general structure, physiology and life-history of the following—Amoeba and Paramecium—non-cellular (unicellular) organisations; Hydra and Earthworm—diploblastic and triploblastic types respectively; Cockroach—an insect type; Dogfish, Frog and Rabbit—vertebrate types. The elementary morphology and physiology of these animals to be considered comparatively. A knowledge of vertebrate musculature and details of the skeleton of the frog and dogfish will not be required.

3. An elementary knowledge of the general characters, histology and function of tissues and organs as illustrated by epithelia, blood, blood and lymph, nervous, muscular, and areolar connective tissues, cartilage and bone, the intestine of the frog, the liver and kidney of the mammal, the skin of the frog and mammal, spinal cord of mammal.

4. Parasitism as illustrated by the life-histories of Monocystis Malarial Parasite, Tapeworm and Ascaris.

5. The general phenomena of sexual and asexual reproduction as shown in the life-histories of the animals named above. The history and characters of the germ cells. An outline of the development of the frog up to the formation of the three primary germ layers and a general account of its metamorphosis.

6. The elementary facts of heredity (simple Mendelian segregation and independent assortment), evolution (morphological evidences and the principle of natural selection), variation (fluctuation and mutations).

Practical Examination

The practical work will be based on the above syllabus and include:—

(1) The making of dissections.

(2) The identification and description of microscopical preparations of Amoeba, Paramecium, Monocystis, Hydra, Obella, Tapeworm, Ascaris, Earthworm, the mouth parts and tracheae of the Cockroach, blood, cartilage, bone, muscle, spinal cord, intestine of frog, the liver and kidney of the mammal and skin of frog and mammal.

(3) The general external features and internal anatomy as shown in special dissections of the following types:—

(*a*) Earthworm: general dissection—and, in more detail, the alimentary canal and nervous system.

(*b*) Cockroach: general dissection—and, in more detail, the alimentary canal and nervous system.

(*c*) Dogfish: alimentary canal; heart, afferent and efferent branchial vessels; brain and cranial nerves; urogenital system; examination of thick cross-sections of the pharynx and tail.

(*d*) Frog: alimentary canal; heart and principal vessels of the arterial and venous systems; central nervous system and spinal and sympathetic nerves; urogenital system.

(*e*) Rabbit: alimentary canal; lungs and principal vessels of the arterial and venous systems; urogenital system.

(*f*) Rabbit's heart.

(4) The rabbit skeleton (excluding the salient features of the skull).

(5) The salient features of the dog skull.

(6) The preparation of simple permanent stained mounts.

(7) The examination of whole mounts and representative sections through the frog from the early stages of development to the time of the first appearance of the external gills.

The candidate will be required to bring to the practical examination 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 examination.

CHEMISTRY

(Examination in this subject comprises one written session and one practical session each of three hours' duration. The examiners are not precluded from asking candidates oral questions during the practical session.)

Note.—the candidate is expected to solve simple problems relating to the weight and volume, under different conditions of

temperature and pressure, of elements and compounds concerned in chemical reactions. The whole of the syllabus in chemistry to be treated in an elementary manner and as far as possible experimentally.

The chief characteristics of chemical action, the distinction between elements and compounds; the laws of chemical combination by weight and volume; the hypothesis of Avogadro; the kinetic theory of gases; the theory of dilute solutions; the phenomena of ionisation; conductivity; strength of acids and bases; solubility product; osmotic pressure; Raoult's Law; chemical equilibrium and the law of mass action; endothermic and exothermic reactions; equivalent weight; atomic weight and molecular weight; chemical formulae and nomenclature; valency; the distinction between metals and non-metals, and the periodic classification of the elements.

The general characters of the non-metals; the chief methods of preparation and the typical reactions of the following non-metallic elements and compounds; hydrogen, oxygen, ozone, water, hydrogen peroxide chlorine, bromine and iodine and their compounds with hydrogen and oxygen; fluorine, hydrofluoric acid; nitrogen, ammonia, and ammomium compounds, the oxides of nitrogen, nitrous acid, nitric acid; sulphur, hydrogen sulphide, sulphurous and sulphuric anhydrides and acids, thiosulphuric acid; phosphorus, phosphine, the oxides and oxy-acids of phosphorus, the chlorides of phosphorus; carbon, its oxides; silicon, silica; boron, boric acid.

The general characters and classification of the metals, and the general methods of forming oxides and salts; the sources, the general methods of extracting, and the chief properties of the undermentioned metals, also the modes of preparation and properties of their principal compounds:—potassium, sodium, lithium, barium, strontium, calcium, magnesium, zinc, aluminium, iron, chromium, manganese, nickel, cobalt, arsenic, antimony, tin, copper, cadmium, bismuth, lead, silver, mercury, gold and platinum.

Practical Examination

The candidate must be prepared:—

To identify by chemical tests the more important non-metallic elements and their compounds, as well as the metals and salts indicated in the foregoing list.

To analyse a mixture containing not more than two basic and two inorganic acid radicals.

To be able to weigh accurately on a standard analytical balance involving the use of a rider.

To show a knowledge of the principles of volumetric analysis and to prepare, standardise, and use volumetric solutions of inorganic acid, alkalies, potassium permanganate, and silver nitrate.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire.

PHYSICS

(Examination in this subject comprises one written session and one practical session each of three hours' duration. The examiners are not precluded from asking candidates oral questions during the practical session.)

Velocity, acceleration, mass, momentum, force, work, energy, friction; gravitation, centre of gravity; simple machines; pressure in liquids, the siphon, water pumps; principle of Archimedes. Boyle's Law, compression and exhaust pumps; atmosphere pressure; surface tension; diffusion, osmosis.

Temperature; thermometry; changes in volume of solids, liquids, and gases with alterations of temperature; quantity of heat, specific heat; change of state, latent heat, melting and boiling points; vapour pressure, hygrometry; conduction, convection and radiation; laws of cooling; relation between heat and work.

Photometry; laws of reflection and refraction; formation of images by plane and spherical mirrors and lenses; the eye as an optical instrument; action of prisms on light; dispersion, colour; the nature and properties of ultra-violet radiation.

Simple phenomena of magnetism; magnetic field, lines of force; law of force; terrestrial magnetism.

Simple phenomena of static electricity; potential; influence machines; capacity; parallel plate condensers.

Electric currents; magnetic, chemical and heating effects; primary and secondary cells; current strength; electromotive force; Ohm's Law; resistance, specific resistance; galvanometers, ammeters and voltmeters; metre bridge; potentiometer; induced currents.

Practical Examination

The candidate must be prepared to conduct simple exercises illustrating the above, including the following:—

The use of vernier, screw-gauge, balance, hydrometer; simple pendulum. The determination of volumes by weighing in air and water, specific gravities of solids and liquids; the verification of Boyle's Law.

The determination of coefficients of expansion, melting points, boiling points, specific heats, latent heats, dew point.

Tracing paths of rays of light; the determination of refractive indices by slab and prism; focal lengths of mirrors and lenses.

Tracing lines of magnetic force. The period of oscillation of a magnet; comparisons of magnetic moments and of field strengths.

The comparison of electromotive forces and of resistances. The use of galvanometer, ammeters and voltmeters. Electrochemical equivalents.

The candidate will be required to bring to the practical examination his original laboratory notebooks, duly signed by the teacher, for inspection should the examiners so desire.

APPENDIX B

SYLLABUS FOR THE FINAL PART II QUALIFYING EXAMINATION

PHARMACEUTICAL CHEMISTRY

(The examination in this subject comprises two written sessions, each of three hours' duration, and one practical session of six hours' duration. The examiners are not precluded from asking candidates oral questions during the practical sessions.)

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 application.

The general principles of inorganic chemistry, based upon the characteristics of the elements and compounds shown by their periodic relationships.

An elementary treatment of valency, the electronic structure of atoms, isotopes, nuclear chemistry, natural and induced radioactivity.

A general knowledge of organic chemistry, with particular reference to substances in frequent use in pharmacy. This includes knowledge of the main types of aliphatic compounds, the simpler aromatic compounds containing a single benzene ring, and the topics listed in the following paragraphs.

A knowledge of the structure, nomenclature, and chemical properties of pharmaceutical importance of the following and of such of their derivatives as are in the British Pharmacopoeia:—diphenylethane, triphenylmethane, naphthalene, anthracene, furan, pyrrole, thiazole, pyrazole, imidazole, pyridine, phenanthrene, quinoline, isoquinoline, acridine.

A knowledge of the chemistry of the following groups of medicinal organic compounds:—sulphonamides, barbiturates, arsenical compounds, local anaesthetics.

The general constitution and properties of the fixed oils, fats and waxes of the British Pharmacopoeia.

The principles involved in the estimation of the oxygenated constituents of essential oils. A knowledge of the structure and simple chemical properties of terpineol, limonene, carvone, menthol, camphor.

The general methods employed for the extraction of alkaloids and the methods employed for the elucidation of their structure.

The preparation and structure of uric acid, caffeine, theobromine, theophylline.

A knowledge of the properties of pharmaceutical importance of vitamins and hormones of the British Pharmacopoeia.

The general chemistry of the carbohydrates, with a knowledge of the structure, excluding stereochemical considerations, of glucose and methylglucosides, fructose, sucrose, lactose, salicin.

An elementary knowledge of the classification and general characteristics of the proteins and of essential aminoacids, and their relationship to proteins.

Synthesis of organic compounds by means of the more important reagents.

The principles of analysis as exemplified by the determinations and processes indicated in the practical syllabus.

Practical Examination

Volumetric analysis.

Gravimetric analysis.

The quantitative determination of an alkaloid in acid or alcoholic solution.

The determination of the acid, saponification and iodine values of fixed oils and fats.

The determination of aldehydes in volatile oils.

The general methods for the detection and determination of chloride, sulphate, iron, arsenic and lead as impurities.

The determination of the melting point of solids readily reducible to a powder and of the boiling point, density, refractive index and optical rotation of liquids.

The identification of the functional groups and the preparation of simple crystalline derivatives of organic compounds.

The identification or reference to class of organic chemicals of the British Pharmacopoeia.

The qualitative analysis of mixtures of inorganic substances and organic acids and their salts commonly used in medicine.

The preparation of simple organic compounds illustrative of the general processes involved in preparing substances included in the theoretical syllabus.

The candidate will be required to bring to the practical examination 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 examination.

PHARMACEUTICS

(The examination in this subject comprises two written sessions and two practical sessions each of three hours' duration. The examiners are not precluded from asking candidates oral questions during the practical session.)

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

The historical development of pharmacy.

The application of physical phenomena to pharmaceutical operations—change of state; systems of two or more components—solutions, dispersion.

Pharmaceutical processes and products—preparation of material; solvents; extraction; assay and standardisation; clarification and filtration, including removal of fat, proteins, gums, pectins, tannins; ultrafiltration; stabilisation—maintenance of stability during storage; enzymes.

The products of the British Pharmacopoeia and the British Pharmaceutical Codex to be used to illustrate the above.

The nature and properties of materials used in the construction of pharmaceutical apparatus.

Microbiology in so far as it affects the content of this syllabus.

Sterilisation and the preparation of sterile medicaments and materials.

Disinfectants and antiseptics—methods for evaluation of disinfectants.

Bacteriostatics and fungistatics.

Asepsis in the preparation of sterile products—sources of contamination; aseptic precautions.

The preparation, properties and storage conditions or immunological and diagnostic agents of the British Pharmacopoeia; the general principles underlying their standardisation.

Dispensing practice—ethical codes; the prescription—purpose, property rights; the doses of medicaments of the British Pharmacopoeia; dispensing and compounding of medicines; containers medical gases—containers and apparatus required and its use; equipment and organisation of the pharmacy.

The candidate will be required to have such a knowledge of French or German as will enable him, with the aid of technical dictionaries, to translate into English passages from pharmacopoeias published in that language.

Practical Examination

The student must be prepared to carry out ordinary pharmaceutical operations, including the making of preparations included in the British Pharmacopoeia and the British Pharmaceutical Codex, the dispensing of prescriptions, the preparation and dispensing of sterile medicaments and materials, the detection of unusual doses and the completion of preparations in a proper manner. The preparation of sterile medicaments and materials includes the preparation of culture media, methods of evaluating antibiotics, sensitivity tests and tests for sterility.

The candidate will be required to bring to the practical examination 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 examination.

PHARMACOGNOSY

(Examination in this subject comprises one written session of three hours' duration and one practical session of two hours' duration. The examiners are not precluded from asking candidates oral questions during the practical session.)

The cultivation, collection, preparation for the market, the commerce in and the storage of crude drugs as illustrated by the drugs named in the List of Drugs below.

The microscopical characters, the biological and geographical sources, the commercial varieties and adulterants, and the constituents of the following drugs:—

Acacia
Aconitum
Adeps
Adeps Lanae
Agar
Aloe
Amylum
Anethum
Anthemis
Asafoetida
Aurantii Cortex
Balsamum Peruvianum
Balsamum Tolutanum
Belladonnae Folium
Belladonnae Radix
Benzoinum
Buchu
Calumba
Cannabis
Cantharis
Capsicum
Cardamomum
Carum
Caryophyllum
Cascara Sagrada
Catechu
Cera Flava
Cinchona
Cinnamomum
Coca
Coccus
Colchici Cormus
Colchici Semen
Colocynthis
Colophonium
Copaiba
Coriandrum
Creta
Digitalis Folium
Ergota
Filix Mas
Foeniculum
Gelatinum
Gentiana
Glycyrrhiza
Hamamelis
Hyoscyamus
Ipecacuanha
Ipomoea
Jalapa
Krameria
Limonis Cortex
Linum
Lobelia
Mel
Myristica
Myrrha
Nux Vomica
Opium
Podophyllum
Podophyllum Indicum
Prunus Serotina
Quassia
Quillaia
Rheum
Sabina
Scilla
Senega
Sennae Folium
Sennae Fructus
Serpentaria
Stramonium
Strophanthus
Styrax
Tamarindus
Tragacantha
Valeriana
Zingiber

The types and significance of standards included in the British Pharmacopoeia and the British Pharmaceutical Codex for drugs named in the above list. The diagnostic qualitative chemical

tests included in the British Pharmacopoeia and the British Pharmaceutical Codex for drugs named in the above list.

The biological and geographical sources, methods of extraction and constituents of, the following oils:—

Oleum Caryophylli	Oleum Olivae
Oleum Limonis	Oleum Ricini
Oleum Morrhuae	

The microscopy of the starches of maize, rice, potato and wheat.

The microscopy of the calcium oxalate in the following drugs:—

Belladonnae Folium	Quillaia
Belladonnae Radix	Rheum
Cascara Sagrada	Scilla
Hyoscyamus	Sennae Folium
Quassia	Stramonium

The microscopy of the epidermal trichomes in the following drugs:—

Belladonnae Folium	Lobelia
Cannabis	Nux Vomica
Digitalis Folium	Sennae Folium
Hamamelis	Stramonium
Hyoscyamus	Strophanthus

The microchemical tests for cellulose and lignin.

The nature, biological and geographical sources of, and the microchemical tests for the fibres used for surgical dressings.

Practical Examination

The candidate must be prepared:—

To examine (excluding quantitative determinations), dissect, and describe, in the entire or broken conditions, drugs of good commercial quality, named in the List of Drugs above, and to identify them by means of microscopical characters and by qualitative chemical tests, and to state their biological and geographical sources.

To investigate the microscopy of calcium oxalate and epidermal trichomes in so far as it is included in the foregoing syllabus.

To examine, identify and report on the fibres used for the following unmedicated surgical dressings; bandages, gauzes, lints, tissues, tows and wools.

To identify microscopically the starches of maize, rice, potato and wheat, mixed and unmixed, and to detect starch in drugs by microscopical and microchemical tests.

The candidate will be required to bring to the practical examination 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 examination.

PHYSIOLOGY AND PHARMACOLOGY

(The examination in this subject comprises one written session of three hours' duration and one practical session during the latter of which the candidate will be required to carry out a practical exercise (occupying possibly about 40 minutes) and undergo an oral examination in which the examiner may ask questions on both the theoretical and practical work of the syllabus.)

The candidate will be expected to possess an elementary knowledge of the basic facts in the branches of Physiology and Pharmacology listed below, and of the main methods by which these facts were established.

Physiology

General

The properties and control of skeletal, visceral and cardiac muscle.

The formation, properties, functions and circulation of the blood and lymph.

The mechanism and control of pulmonary ventilation; gaseous interchange at the lungs and tissues. Artificial respiration.

The alimentary tract.

Basal metabolism and body heat.

The principles involved in constructing a balanced diet; vitamins.

The kidneys and urinary tract.

The central and peripheral nervous systems, including the autonomic nerves.

The special senses of sight, taste and smell.

The structure and functions of the glands of internal secretion, including (*a*) pituitary body, (*b*) thyroid and parathyroids, (*c*) pancreas, (*d*) suprarenals, (*e*) testes and ovaries.

The elements of reproduction in man.

Histology

The candidate must possess an elementary knowledge of the microscopical structure of the following:—muscle and nerve; the heart, blood vessels and blood; lungs; the digestive glands; stomach and intestines; liver; kidneys; skin; the endocrine glands and the reproductive organs, including the mammary gland and the placenta.

Biochemistry

The biochemistry and metabolism of carbohydrates, fats and proteins.

The composition and functions of the salivary, gastric, biliary, pancreatic and intestinal secretions

The composition and nutritional value of common food stuffs.

The chemistry of muscular contraction.

The composition of blood, lymph and cerebrospinal fluid. Normal and abnormal constituents of urine.

PHARMACOLOGY

Scope of pharmacology. Theories of and factors affecting drug action.

Quantitative methods in pharmacology. Dose-response curves.

The general principles and methods underlying the biological assays of the British Pharmacopoeia, excluding the assays of sera, vaccines and bacterial derivatives. Special attention should be given to the determination of toxicity and LD50. An elementary study of the statistical principles involved in the assessment of the error of these quantitative tests.

Drugs affecting structures innervated by the autonomic nervous system and the somatic motor nerves.

Drugs used as central nervous depressants and stimulants. Antipyretics. Local anaesthetics.

Emetics; antacids; purgatives; astringents; diuretics.

Disinfectants, bactericides and bacteriostatics including antibiotics.

The application of pharmacological principles in treatment of poisoning.

Practical Examination

The candidate must be prepared:—

To show his acquaintance with the methods employed for the demonstration of fundamental physiological and pharmacological processes as laid down in the foregoing syllabus, and to carry out such chemical manipulations or simple experiments as are comprised therein.

To recognise and describe with diagrams, histological preparations of any tissue or organs mentioned in the foregoing syllabus.

The candidate will be required to bring to the practical examination 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 examination.

FORENSIC PHARMACY

The candidate will be required to possess such information concerning the following enactments and the regulations made under them as is applicable to the practice of pharmacy in shop and hospital:—The Dangerous Drugs Act, 1951, The Venereal Disease Act, The Therapeutics Substances Act, The Therapeutic Substances (Prevention of Misuse) Acts, 1947 to 1953, The Radioactive Substances Act, The Methylated Spirits and Ether Regulations and Restrictions, the sale of abortafacients, The Pharmacy and Poisons Acts (Northern Ireland), 1925 to 1955, Acts relating to National Health Insurance, The Shops Act, The Food and Drugs Act, Protection of Animal Acts, The Cancer Act.

APPENDIX C

DRAFT ARTICLES OF PUPILAGE

It is Agreed between ..... of ..... (hereinafter called "the Employer") of the first part ..... of ..... (hereinafter called "the Pupil"), son or ward of ..... of the second part, and the said ..... of ..... (hereinafter called "the Parent or Guardian") of the third part, as follows:—

1. The Pupil for himself and the Parent or Guardian as surety for him jointly and severally bind themselves that the Pupil shall honestly, faithfully and diligently serve the Employer in his business of Dispensing Chemist for a period of Two years from the ..... day of ..... Nineteen hundred and ....., which day is declared to be the commencement of the pupilage of the Pupil that the Pupil always shall keep the Employer's secrets and shall obey his lawful commands, and shall not without authority make copies of any papers or books belonging to the Employer; that the Pupil shall not absent himself from the Employer's service without leave, shall behave himself civilly and respectfully to the Employer and his customers, shall observe the Regulations appended to these Articles, shall attend such classes as may be determined by the Council of the Pharmaceutical Society and that the Pupil shall both during and outside of business hours abstain from all illegal practices.

2. And the Employer binds himself to instruct the Pupil in his business of Dispensing Chemist; to afford the Pupil such reasonable opportunities and work as may be required to enable him to learn the same; to observe the Regulations appended to these Articles; to grant the Pupil such facilities as may be necessary for the Pupil to attend such classes as may be determined as aforesaid; on their due completion to discharge these Articles in the form provided and if in his opinion correct, to verify the facts set out in the declaration regarding the practical course of study required by the Regulations to be made by the Pupil when entering for either of the Qualifying Examinations.

3. And the Employer further binds his executors and administrators in the event of the death of the Employer before the expiration of these Articles, to make provision for the completion by the Pupil of the remainder of the pupilage under conditions acceptable under the aforementioned Regulations.

4. In Witness Whereof the parties to these Articles have set their hand and seals this ..... day of ..... Nineteen hundred and .....

Signed, Sealed and Delivered by the said Employer in presence of

..... (Witness)

Occupation .....

Address .....

.....

..... (Employer)

Signed, Sealed and Delivered by the said Pupil in presence of

..... (Witness)

Occupation .....

Address .....

.....

..... (Pupil)

Signed, Sealed and Delivered by the said Parent or Guardian in presence of

..... (Witness)

Occupation .....

Address .....

.....

..... (Parent or Guardian)

In the foregoing Articles words importing the singular number shall include the plural and vice versa, words importing the masculine gender the feminine, and words importing persons shall include Firms and Corporations, unless there be anything in the context repugnant to such construction.

DISCHARGE

I, ..., in respect that ..... has served me in terms of the foregoing Articles during the whole period therein stipulated, do hereby discharge him and also ....., of all obligations under the said Articles.

In Witness Whereof I have set my hand this ..... day of ..... Nineteen hundred and .....

.....

APPENDIX TO DRAFT ARTICLES OF PUPILAGE

REGULATIONS FOR PRACTICAL COURSE OF STUDY

1. The Employer shall from time to time, if requested, furnish such information as may be required by the Society about the staff, accommodation, equipment and work of the premises at any reasonable time while work is proceeding therein.

2. If the Employer is not a registered pharmacist, or does not undertake personally the practical course of study of the Pupil, he shall appoint some registered pharmacist member of his staff who shall be responsible to the Employer therefor.

3. The practical course of study which the Pupil must undergo shall include:—

(1) 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 galenicals illustrating the principles involved in the commoner pharmaceutical operations;

(*d*) the reading, 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.

(2) a knowledge of the keeping of the records required by the various Acts of Parliament affecting pharmaceutical practice.

4. The Employer shall provide such opportunity, accommodation, apparatus, materials and books of reference as shall be required to enable the Pupil to undergo the practical course of study prescribed in Regulation 3

5. The number of pupils that may be employed in any shop shall not exceed two where there is one registered pharmacist engaged in the work in which the Pupil is undergoing the aforesaid course, and where there is more than one registered pharmacist similarly engaged, the number shall not exceed one for each additional such registered pharmacist.

6. For the purpose of Regulation 6, the description "pupil" shall mean and intend any person, other than a bona fide medical student, undergoing a practical course of study, including the compounding and dispensing of medicines whether or not for one of the qualifications of the Society and whether or not under an apprenticeship agreement.

7. In the event of any questions arising as to the interpretation or observance of these regulations the decision of the Council shall be final.

POISONS

ORDER IN COUNCIL, DATED 13TH FEBRUARY, 1956, APPROVING A RESOLUTION PASSED BY THE COUNCIL OF THE PHARMACEUTICAL SOCIETY OF NORTHERN IRELAND AND THE MEDICAL FACULTY OF THE QUEEN'S UNIVERSITY OF BELFAST, AMENDING THE THIRD SCHEDULE TO THE MEDICINES, PHARMACY AND POISONS ACT (NORTHERN IRELAND), 1945.

1956. No. 19 **[NC]**

BY THE GOVERNOR IN THE PRIVY COUNCIL OF NORTHERN IRELAND

WAKEHURST

WHEREAS by sub-section (2) of section twenty-six of the Medicines, Pharmacy and Poisons Act (Northern Ireland), 1945, it is provided that the Council of the Pharmaceutical Society of Northern Ireland and the Medical Faculty of the Queen's