

University Examinations.

The following are the papers submitted at the recent examinations at Toronto University for the degree of Bachelor of Pharmacy:

*DEPARTMENT OF PHARMACY.

PRACTICAL DISPENSING.

Examiner: CHAS. F. HERBNER, PH.G., PHM.B.

NOTE.—Candidates will dispense the following preparations with neatness, accuracy, and dispatch, labelling and finishing the medicines, as if designed for patients. The order and cleanliness in which each dispensing desk with its stock of utensils is left, will be rated.

DANIEL GEDDES.

R. Hydrargyri oxidi rubri ℥j.
Glycerini ℥iv.
Amyli ℥i.
Aquae m.lx.

Misce secundum artem ft. ung.

Sig. Applica cum frictio ad genam dextram.

MASTER GRAHAM SCOTT, GLENSIDE.

R O'ei jecoris aselli ℥iss.
Olei menthae p.p. gtt.v.
Pulveris acaciae q.s.
Aquam ad ℥iv.

M. ft. mist.

S'g, Capiat coch. med. ex. cyatho lactis post prandium et coenam quotidie, et mitte Emp. Epispastic. q. s. extende in emp. adhes. et pone post aurem sinistrem hor. somni.

JAMES KEMPTHORNE.

R Pulv. opii o.065.
Acidi tannici. o.098.

Fac pil. et mitte tales undecim.

Sig. Una hora decima matutina et hora septima vespertina sumenda.

MISS IRENE RUTLEY.

R Camphoræ gr. xvi.
Pulv. rhei gr. xxiv.
Pulv. opii gr. ij.

Misceantur bene ft. pulvis et mitte in chartas octo.

Sig. Exhibe unam omn. hor. quadrante donec leniatur dolor.

PRACTICAL CHEMISTRY.

Examiner: GRAHAM CHAMBERS, B.A., M.B.

1. Detect the acid in substance marked "A."

2. Detect the base in substance marked "B."

3. Detect the acid and base in substance marked "C."

4. Detect the acids and the bases in substance marked "D."

INORGANIC AND ORGANIC CHEMISTRY.

Examiner: GRAHAM CHAMBERS, B.A., M.B.

1. Explain the meaning of the following terms: (a) basic salt; (b) carbohydrate; (c) ester; (d) tertiary alcohol; (e) phenol; (f) amide. Give an example of each.

2. What is meant by Mendeleeff's classification of the elements? Illustrate your answer by reference to lithium, sodium, potassium, rubidium and caesium.

3. Write an account of the chemistry of lead and its medicinal compounds.

4. Illustrate by chemical equations the following reactions:

(a) Ammonium nitrate heated.

(b) Hot strong sulphuric acid on mercury.

(c) Nitric acid on silver.

(d) Ferric chloride treated with hydrogen sulphide.

(e) Solution of potassium hydroxide treated with chlorine.

5. Describe one method of preparation for each of the following compounds: Ethyl nitrite, ferric sulphate, mercuric chloride, hydrogen sulphate, red phosphorus.

6. Write the structural formulæ of the following organic compounds. Ethyl acetate, aniline, phenol, resorcin, phenyl acetamide, glycerine.

7. Give a short account of the chemistry of the paraffins.

MATERIA MEDICA, ETC.

Examiner: J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.

1. Expand into full Latin and translate into English, the following abbreviations: S.A.R., ph. pr. conc., vas. vitr., cyath, vinar., hor. viii. a vespert.

2. Give the maximum doses of the following preparations: acet. scillæ, extr. bellad. inf. digitalis, mist. sennæ co., sp. camphoræ, ol. phosphoratum, tr. nuc.vom. tr.rhei, tr. hyoscyami, tr. calumbæ, ac. mur. dil., ac. carbol., vin. ipecac., pulv. ipecac. co., syr. chloral.

3. Write notes on the *Glucosides* and *Chlorophyll* as common plant-constituents.

4. Give source, habitat, active

principle, and therapeutic action of croton bean, strophanthus seed, valerian root, assafoetida, and spanish fly.

5. Write full *Materia Medica* notes on *Cinchona*.

6. Describe a normal sample of *cubeb berries*, distinguishing it from three other drugs with which it might possibly be confounded.

PHARMACOGNOSY.

Examiner: J. T. FOTHERINGHAM, B.A., M.B., M.D., C.M.

1. Name the gross specimens submitted, giving their numbers.

2. Name the microscopic specimens submitted, with their numbers.

3. Oral, in both.

PRACTICAL PHARMACY.

Examiner: FRANKLIN T. HARRISON, PHAR.D.

1. LIQUOR AMMONII ACETATIS.

Ammonium carbonate 50 grammes.
Acetic acid } of each a sufficient
Distilled water } quantity.

Dissolve the ammonium carbonate in ten times its weight of distilled water; neutralize with acetic acid; add sufficient distilled water to produce one thousand cubic centimeters of the solution.

Test.—A little of the solution, heated in a test tube to expel carbonic anhydride, should be neutral or only slightly acid to test papers.

Prepare 100 " of solution of ammonium acetate by the above B. P. formula.

2. Determine the strength of the tincture of iodine submitted, using $\frac{N}{10}$ volumetric solution of sodium thiosulphate.

Make the report as follows:

Tincture of iodine taken

$\frac{N}{10}$ solution of sodium thiosulphate used

Grammes of iodine in 1000 " of tincture

3. Find the specific gravity of substance submitted.

PHARMACY AND PHARMACEUTICAL CHEMISTRY.

Examiner: FRANKLIN T. HARRISON, PHAR.D.

1. Give critical notes on the preparation of the following: Syrup of phosphate of iron with quinine and strychnine, solu-