

PRACTICAL CHEMISTRY.

Examiner:—GRAHAM CHAMBERS, B.A., M.B.

Time allowed, two and a half hours.

1. Detect Acid in substance marked "A."
2. Detect Metal in Substance marked "B."
3. Detect Acid in substance marked "C."
4. Detect Acid in substance marked "D."
5. Blow a bulb on end of straight glass tube.
6. Write equations illustrating the action of heat upon :
 - (a) Ammonium Nitrate.
 - (b) Hydrogen Peroxide.
7. What compounds are formed by the action of hot concentrated Sulphuric Acid upon the following substances :
 - (a) Sulphur.
 - (b) Hydriodic Acid.
 - (c) Oxalic Acid.
 - (d) Hydrogen.
8. Write equations, showing the action of Chlorine on :
 - (a) Hydrogen Sulphide.
 - (b) Hot Potassium Hydrate.
 - (c) Potassium Bromide.
9. How would you detect the presence of a Bromide in an Iodide?

SENIOR EXAMINATIONS, DECEMBER, 1894.

DISPENSING.

Examiner:—O. F. BOTSFORD.

Time allowed, three hours.

MISS GRACIE COPLAND.

1. R.—

Magnesii Sulph.....	℥iiss.
Sodii Bicarb.....	℥iii.
Tinct. Card. Co.....	℥ii.
Aque.....ad.	℥vi.

 Misce et fiat mistura.
 Sig. : Cochleare mag. : ex cyatho aq. ter in die ante cibos.

J. H. HEWITT, Fsq.

2. R.—

Sodii Hyposulphitis.....	℥iv.
Acid. Sulph. Dil.....	℥i.
Aq. Destillata.....ad.	℥iv.

 Misce, fiat Lotio.
 Sig. : Adhibendum caputi et carpo semel die.

MRS. FEATHERSTONHAUGH.

3. R.—

Plumbi Acetatis.....	gr. x.
Acidi Tannici.....	gr. v.
Ext. Belladonnæ.....	gr. iii.
Olei Theobromæ.....	q.s. ℥ii.

 Fiat Suppositorium, mitte tales. . . iii.
 Sig. : Uno stare quaque nocte more dicto.

SYRNEY D. DURHAM.

4. R.—

Sulphuris Sublimati.....	gr. xxvi.
Sodii Bicarb.....	gr. xxiv.

 Misce et fiat massa et in capsulas octo divide.
 Sig. : Duo ante jentaculum omne mane.

R. JOLLIFFE, Esq.

5. R.—

Acetanilidi.....	gr. xxiv.
Quininæ Sulph.....	gr. xvi.

 Misce et fiat massa et in capsulas octo divide.
 Sig. : Unam quaque hora donec dolor in capite mitescat.

PRESCRIPTIONS.

Examiner: W. MURCHISON.

Time allowed, two hours.

1. Name the three cases, and give a list of ten imperative verbs most frequently used in prescription writing.
2. Give the equivalent, expressed in grains, scruples, half-drachms, and drachms (using symbols), of the Metric weights from one to ten grams.
3. Give two or three simple rules for expressing quantity by weight of the Apothecaries system in Metric terms.
4. Give full Latin word and meaning of the following abbreviations. Ad 2 vic. : De d. in d. : Ejusd. : F.L.A. : Gr. vj. pond. : O.O.O. : P.C. : P.M. : P. rat. : Sesunc. : St. : Temp. dext. : Tra. : Pocul. : Feb. dur. : Decub. : T.O.C. : S.V. : M.P.
4. Give the maximum doses of the following substances: Amyl Nitris, Cocaina, Cantharis, Cerii Oxalas, Codeina, Cupri Sulphas, Elaterinum, Ferri Arsenias, Hydrargyri Perchloridum and Oleum Crotonis.
6. Convert fully into English :
 - R.—

Scillæ Radicis recens exsiccatae et contritæ, drachmam,
Zingiberis Radicis contritæ,
Saponis duri, singulorum, drachmas tres,
Ammoniaci contriti, drachmas duas ;

 Misce inter se pulveres ; deinde cum Sapone contunde, et adice syrupi simplicis quantum satis sit, ut idonea fiat crassitudo.
 - 7 to 10. Oral.

BOTANY.

Examiner:—CHAS. R. SNEATH.

Time allowed, two hours.

1. What do you understand by the following terms, viz. : Cambium layer, primordial utricle, primary meristem, leaf cycle, adventitious roots, plumule, parietal placentation.
2. (a) What are the Pteridophyta?
- (b) What classes are included in the series?
- (c) Describe the general plan of reproduction.
3. Explain the various forms of Venation, referring them to classes of plants in which found. Explain the example given.
4. (a) Name and describe the parts of a typical flower.
- (b) Describe fully the functions of the gynoecium.
- (c) Name and explain its modifications.
5. Chlorophyll—
 - Explain fully its uses and properties.
6. What are the functions of the leaf? Explain its minute structure.
- 7, 8, 9, and 10. Oral.

PHARMACY.

Examiner:—F. T. HARRISON.

Time allowed, two hours.

1. A drug contains:—Chlorophyll, Fixed Oil, Gum, Sugar, Tannin Albuminoids,

Starch and an alkaloid. I extract it with the following solvents successively : 1st, Ether ; 2nd, Rectified Spirits ; 3rd, Cold Water ; 4th, Hot Water. In which of the solvents would you expect to find the various constituents?

2. What is an Infusion? Why is cold water used in preparing infusions of Calumba and Quassia, and why is Sulphuric Acid used in Acid Infusion of Cinchona? State strength of each of the above named infusions.

3. What is a Crystal, and what qualities of crystals are expressed by the following terms. Anhydrous, Efflorescent, Deliquescent?

4. What ingredients are used in preparing Yellow Mercurial Lotion and Black Mercurial Lotion, and what Salts do the finished preparations contain?

5. Give practical notes on the preparation and preservation of three of the following : Lead Plaster, Ointment of Nitrate of Mercury, Solution of Subacetate of Lead, Compound Mixture of Iron, Strong Solution of Acetate of Ammonium.

6. Name the ingredients in the following :—Simple Ointment, Compound Tincture of Camphor, Wine of Ipecacuanha, Liniment of Belladonna, Compound Pill of Soap, Compound Powder of Kino.

7. Add together 14 Millegrammes, 300 Kilogrammes, 80 Grammes, 1240 Centigrammes, and give the equivalent of the total in grains.

8. (a) How is Spirit of Nitrous Ether prepared, and (b) How is its strength estimated?

9 and 10. Oral, and recognition of specimens.

MATERIA MEDICA.

Examiner:—J. TOLBERT PEPPER.

Time allowed, two hours.

1. Point out the difference in the physical characteristics of the following :—Conium Fruit and Caraway Seeds. Short Buchu and Uva Ursi Leaves. Aconite Root and American Hellebore Root.

2. Castor Oil—

(a) Give Latin name of the plant from which it is obtained.

(b) In what country does the plant grow?

(c) From what part of the plant is the oil obtained, and how?

(d) What is the dose, and how may it be best administered?

(e) What are its medicinal properties?

(f) Name some other purposes for which it is used.

3. Rubber—

(a) Give English and Latin names of plants from which this is obtained.

(b) From what country does the largest supply come?

(c) How is it collected?

(d) In what condition is it when collected?

(e) In what condition is it when sent to the manufacturer?

(f) How is this change effected?

(g) In your estimation, do goods manu-