

(6.) *Calamina Praeparata*. From what is it obtained, how prepared and into what official preparation does it enter?

(7.) Give mode of preparation, ingredients, dose and incompatibles of *Vinum Ferri*.

(8.) How many official preparations of Iodine are there? Name them, giving the doses of those taken internally, and antidotes.

(9.) Acid Tartrate of Potassium. How is it prepared; appearance, taste, dose? Solubility in cold and hot water, and in what official preparations is it a component part?

(10.) Give official name of Sucrose (*Syn.*), its solubility in water, and Rectified Spirit; general use in Pharmacy, and the official preparation thereof.

CHEMISTRY.

Examiner—CHARLES NELSON. Time—2 Hours.

(1.) Define the following:—Chemistry, Elements, Atoms, Molecules, Combustion, Solids, Liquids and Gases.

(2.) Give the formula, symbols and atomic weights of the following:—Potassium, Sodium and Ammonium; also briefly state the analogies of these and their compounds.

(3.) Describe the B. P. method of preparing strong *Solu. Ammonia Acet.*, giving the diagrams, and also the other solutions of Ammonia.

(4.) Give name, atomic weight, and sources of the following:—An., Cr., Sn., Pt. and Cd.

(5.) Describe the analogies between Chlorine, Bromine, Iodine and their compounds, giving briefly the properties of each.

(6.) Describe mode of the preparation of Hydrocyanic Acid. Give equation of the re-action, stating how much real acid there is in 1 oz. of the B. P. liquid.

(7.) KIO_3 . What is it? How prepared? Give formula of the re-actions.

(8.) $H_2C_4H_4O_6$. Name? From what and how obtained, and how is it distinguished from other acids?

(9.) Name two or three acids which contain Hydrogen, Sulphur and Oxygen, giving formula and mode of preparation.

(10.) By what tests would you find impurities or adulterations in Acids Benzoic and Boric, Cocaine Hydrochlor and Elaterium.

DISPENSING AND READING OF PRESCRIPTIONS.

Examiner—T. M. HENDERSON.

Write the following:—

1-*R* Potass. Nitrat. drs. 1
F. E. Hyosciam. oz. 1½
Potass. Bicarb. oz. 1
Syr. Limonis. oz. 2½
Aqua ad. oz. 6

Sig.—A dessertspoonful three times a day in water.

2-*R* Acid Arsenios grs. 2½
Ferri Sulph. drs. 4
Ext. Nucis Vomica. grs. 30
Ext. Belladonna. grs. 10
Ext. Gentian. q. 5

Div. in Pil. No. 12.

Sig.—One three times a day before meals.

(3.) How would you make the following mixture?

R Ferri Sulph. grs. 25
Potass. carb. grs. 30
Gum Myrrh } ad. grs. 60
Saccharum }
Spts. Myrist. drs. 4
Aqua Rosa. oz. 9½

(4.) Give the Latin names of (a) Bitter Root. (b) Calabar Bean. (c) Bouset. (d) Canada Snake Root. (e) Cascarrilla. (f) Black Cohosh.

(5.) Give the English names of (a) *Turnera Aphrodisiaca*. (b) *Paullinia Sorbillis*. (c) *Stillingia Sylvatica*. (d) *Krameria Triandra*. (e) *Phytolacca Decandra*. (f) *Piper Methysticum*. (g) *Mica Panis*.

(6.) Give maximum dose of (a) *Elaterium*. (b) Tinct. *Aconito B. P.* (c) Ext. *Opii*. (d) Acid Hydrocyanic Dil. (e) Liq. *Strychnin Hydrochlor*. (f) Liq. *Hydrarg. Perchlor*. (g) *Soda Arsenias*.

(7.) Reading and translating original prescriptions.

(8.) Dispense the following:—

R Soda Bicarb. drs. 4
Soda Ribor. drs. 2
Acid Carbolic. drs. 2
Glycerine. drs. 1½
Aqua ad. oz. 6

Sig.—Use as directed.

R Ext. *Aloes Aq.* grs. 1
Ext. *Nucis Vomica* gr. 4
Ferri Sulph. grs. 1
Pil *Rhei Co* grs. 2
Ft. Pil: Mitte 24.

Sig.—One twice a day.

R Ext. *Opii* grs. 2
Ext. *belladon.* grs. 4
Ol. *Theobrom.* drs. 3
Ft. suppos., No. 6.

Sig.—One to be used when required.

BOTANY.

Examiner—H. H. WATSON. Time—2 Hours.

(1) (a) What is Botany? (b) *Protoplasma*. What is it? What are its characters, its appearance and its chemistry? What effect has Alcohol on it? Give a test for *Protoplasma*.

(2.) (a) Of what use are deadcells? (b) What do you mean by assimilation? (c) How are new cells formed? (d) *Chlorophyll*. What is it, and what are its functions?

(3.) (a) Draw a transverse section of a *Dicotyledonous* stem, showing internal arrangements of bark, etc. (b) What are Lenticels? (c) How do *Monocotyledonous* stems differ from *Dicotyledonous* stems?

(4.) (a) What are adventitious super-numary and naked buds? (b) What causes formation of knots? (c) What are Offsets, Bulbs and Rhizomes, and give two B. P. Rhizomes and Botanical names?

(5.) (a) What is a root, how many kinds are there, and how do they differ from stems? (b) What is Inflorescence?

(6.) (a) What are Bracts, and what are the different terms applied according to

their arrangement? (b) What causes the death of the leaf? (c) What is *Præfloration*? (d) *Præfoliation*? (e) *Stipules*? (7.) (a) What is the Anther? (b) What is Pollen? (c) What are the male and female organs of the flower called? (d) What are the terms used to indicate the number of Carpels in the Gynæceum? (e) How do you distinguish between seeds and fruits? (f) What do you mean by Germination, and what are the necessary conditions?

MATERIA MEDICA.

Examiner—H. H. WATSON.

(1.) What do you understand by *Materia Medica*?

(2.) *Glycerine*. State briefly how and from what obtained? Name some of its solvent properties. Mention the source of Castor, Croton and Olive Oil, and give doses. Name ten (10) products of animal origin in B. P. What is the best plan for storing Essential Oils, Cantharides, Insect Powder, and Prussic Acid to prevent deterioration?

(3.) Give B. P. name, Botanical name, Natural order, Habitat, Parts used, and preparations into which the following enter:—(a) *Nux Vomica*. (b) *Opium*, (ten preparations). (c) *Ergot*. (d) *Cinchona*. Also state Alkaloids if any obtained from the foregoing drugs.

(4.) Name seven (7) Alkaloids of B. P. Give their source and doses.

(5.) Give antidotes for the following poisons:—Carbolic Acid, Oxalic Acid, Prussic Acid, Morphia, Cocaine, *Strychnine* and *Atropia*.

(6.) Define the following terms:—Antiseptic, Anæsthetic, Alcoholic, Emmenagogue, Anthelmintic, Hypnotic.

(7.) Name ten—10—barks and eight leaves of the B. P. Give their natural order and doses.

Questions 8, 9 and 10 oral and specific.

PROF. DR. KOSINSKI, Conducting Physician, Jesus Hospital in Warsaw, reports in the "Medycyna" in Warsaw:—Antinervine is a remedy that quickly lowers fever and has no hurtful influence on the action of the heart. As an antirheumatic and antinervine it is to be preferred to all others in reducing and removing pain, because, without doubt, it neither induces stomacheal troubles nor noises in the ears. For adults, 0.5 to 1 gramme 4 to 5 times daily can be prescribed. It is a very cheap remedy, useful alike in private and hospital practise. Besides its use in rheumatism, neuralgia and rheumatic pains, it can also be employed to advantage in fever cases with quickly rising temperature.

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