

7. *Cantharides*.—(a) Describe it. (b) How and from what obtained? (c) Constituents? (d) Active principle, and percentage of same. (e) State adulterations of the whole and powdered drug, and give a practical test for detecting them in the powdered article. (f) Preparations of cantharides.

8. Give (a) Habitat of kine, ol. theobroma, rue sabadilla, santonica, scammony, tragacanth, uva ursi, rad veratri, quassia. (b) From what are the following obtained:—Berberia, chrysarobin, delphinine, jervine, saponin, narcein, pell-etierine, pilocarpine, saccharin, picro-toxine eserine, salisin, codeia, salol? (c) Five of them (in b) give the doses of.

9 and 10. Oral Examination.

Values, S, 12, 10, 10, 10, 10, 10, 20.

BOTANY.

Examiner:—CHAS. R. SNEYTH. Time allowed: Two hours.

1. Describe the natural orders, crucifere and labiatae. Name two members of each.

2. Write short descriptive notes on the following, viz., ovule, cellulose, archegonia, antheridia, parenchyma.

3. What is a fruit? Classify and explain your classification.

4. (a) What classes of plants are grouped under series bryophyta and pteridophyta respectively? (b) Describe the general characteristics and mode of reproduction of the class filices.

5. (a) Explain the different kinds of dichotomous branching. (b) How does it differ from the monopodial form?

6. Describe the different forms of leaf apices. Illustrate by diagram, naming correctly.

7. (a) What is prefoliation or veneration? (b) Describe the various forms.

8. What is anthotaxy? Define the two kinds, and name (without description) the principal forms of each.

9 and 10. Oral examination.

Values—10, 15, 7, 10, 10, 10, 10, 20.

The United States Congress has under consideration the matter of imposing a stamp tax on all proprietary medicines in order to provide an additional revenue for war purposes.

The result of the season's fishing at Lofoden, Norway, shows a vast difference between this year and last. In 1897 the catch was twenty-six million codfish and 18,300 hectos of cod-liver oil; in 1898 it is only fifteen millions codfish and 11,000 hectos of oil.

Alcoholic Menstrua of the New Pharmacopœia.

By F. C. J. BIRD, Pharm. Jour., Eng.

The strength of the standard alcohol of the Pharmacopœia having been increased by the revisers of the new edition from 56 o. p. to 58 o. p., chemists and druggists will shortly be faced with the necessity of requiring to convert rectified spirit of either strength into alcohol of various degrees of dilution. To facilitate matters the following table is published, as it gives the approximate quantities (sufficiently exact for all practical purposes) of rectified spirit 56 o. p., or alcohol 90 per cent., and water, required to form either 1 gallon or 1 litre of the alcoholic menstrea of the new Pharmacopœia. If the proportions requisite to produce a given

bulk of diluted alcohol, after contraction has taken place, are known, further measurement is unnecessary, and generally the method of dilution to a unit volume will be found more convenient than the addition of water to a unit volume of strong alcohol, as indicated officially. These calculations are based on a percentage of 88.7 by volume of alcohol in Spiritus Rectificatus, B.P. 1885, and in the table the quantities of alcohol and water required to produce 1 gallon of the required dilute spirit are first given, the quantities required to produce 1 litre being given below. The special mixture of 20 per cent. alcohol (2 vols.) and 45 per cent. alcohol (1 vol.) is that required in the preparation of Liquor Senegæ Concentratus.

Menstrua, B.P., 1898.	Spt. Rectificatus (56 o.p.) B.P. 1885.		Spt. Rectificatus (Alcohol, 90 p.c.) B.P. 1898.		Product, Sp. Gr., and Proof Strength.		
	S.V.R. 56 o.p.	Water.	Alcohol, 90 p.c.	Water.	Product.	Sp. Gr.	Proof Degs.
Alcohol, 90 p.c.	142½ f. oz. 889 C.c.	18 f. oz. (absolute alcohol) 112 C.c. (absolute alcohol)			1 gall. 1000 C.c.	'834	40 o.p.
Alcohol, 90 p.c., 7 vol. } { Water, 1 vol. }	144½ f. oz. 903 C.c.	17½ f. oz. 108 C.c.	142½ f. oz. 889 C.c.	19½ f. oz. 123 C.c.	1 gall. 1000 C.c.	'864	40 o.p.
Alcohol, 70 p.c.	126½ f. oz. 789.2 C.c.	36½ f. oz. 228.5 C.c.	124½ f. oz. 777.7 C.c.	38½ f. oz. 241.6 C.c.	1 gall. 1000 C.c.	'890	22 5 o.p.
Alcohol, 60 p.c.	108½ f. oz. 676.4 C.c.	55½ f. oz. 346.3 C.c.	106½ f. oz. 666.6 C.c.	57½ f. oz. 357.3 C.c.	1 gall. 1000 C.c.	'913	5 5 o.p.
Alcohol, 45 p.c.	81½ f. oz. 507.5 C.c.	83 f. oz. 518.4 C.c.	80 f. oz. 500 C.c.	84½ f. oz. 526.6 C.c.	1 gall. 1000 C.c.	'943	21 u.p.
Alcohol, 20 p.c., 2 vol. } { Alcohol, 45 p.c., 1 vol. }	53½ f. oz. 334 C.c.	109½ f. oz. 686.3 C.c.	52½ f. oz. 328.8 C.c.	110½ f. oz. 692 C.c.	1 gall. 1000 C.c.	'966	49 u.p.
Alcohol, 20 p.c.	36 f. oz. 225.5 C.c.	126 f. oz. 787.3 C.c.	35½ f. oz. 222.2 C.c.	126½ f. oz. 791 C.c.	1 gall. 1000 C.c.	'976	65 u.p.

Items of Interest.

The unfortunate war in which our United States neighbors have become involved has affected the prices of many lines of drugs and chemicals. Quinine, which always appears to be the most quickly affected in price, has advanced somewhat, but we are inclined to think it is due more to speculation than to the fear of any scarcity. The numerous sources of supply, and the keen competition amongst an increased number of

manufacturers, will not permit, we believe, of any very great advance.

The Spanish Government, through their ambassador at London, has entered a protest against the export of sulphur from Canada to the United States on the ground that the article is contraband of war. Many large shipments have recently been made, and it is said a large quantity is now on the way to this country to be resold or transferred to United States houses.