Give preparations of myrrh. (*f*) State any simple tests which would distinguish P. myrrh from powd. gentian.

7. Nux Vomica.—(*a*) Describe its gross appearance. (*b*) Give habitat. (*c*) State all its principal constituents. (*d*) Percentage of chief ones. (*e*) Are any of the principal constituents obtained from other plants? If so, name them; plants and alkaloids as well.

8. Rhubarb.—Give (*a*) constituents, and specify the active principle. (*b*) Habitat. (*c*) Principal varieties of root. (*d*) State how prepared and collected for the market. (*e*) Differentiate powdered rhubarb from powdered gamboge. (*f*) Are any precautions necessary in keeping rhubarb? If so, what?

9 and 10. Oral examinations.

Values—10, 10, 10, 10, 10, 10, 10, 10, 20.

PHARMACY.

Examiner: F. T. Harrison. Time allowed: two hours.

1. Syrupus ferri iodidi:

Iron, in wire..... 25 grammes
Iodine..... 83 "
Refined sugar....825 "
Distilled water, a sufficient quantity.

(*a*) Describe accurately how you would proceed in preparing the above, with notes as to precautions to be observed, etc.

(*b*) To what extent, if any, is the iron or the iodine in excess of that theoretically required to combine with the other?

(*c*) State the strength of the finished product, and give method for estimating same.

(Fe = 55.6. I = 125 9).

2. Describe briefly the B. P. method of preparing the following: Camphor water, chloroform water, cherry-laurel water, peppermint water, elder-flower water.

3. Give the alkaloidal strength of the following preparations of belladonna: Alcoholic extract, liquid extract, green extract, tincture, ointment and plaster. Also say from what part of the plant each is prepared, and briefly outline method of assay for the alkaloids of a belladonna preparation.

4. Give strength, menstruum used, and method of extraction employed for each of the following: Tincture of aconite, tincture of orange, tincture of calumba, tincture of cinchona, ethereal tincture of lobelia, tincture of opium.

5. In what way and from what cause are the following preparations liable to differ from the standard of strength and purity given in the B. P.: Diluted hydrocyanic acid, sulphurous acid, mercuric nitrate ointment, spirit of nitrous ether, Goulard's extract?

6. What do you understand by the terms "Volatile Oils" and "Fixed Oils"? Describe the general methods employed in preparing the former, and say how you might determine whether or not they were adulterated with a fixed oil or alcohol.

7. Enumerate the ingredients in the following: Aromatic sulphuric acid, aromatic spirit of ammonia, chloric ether, Fowler's solution, tincture of kino, compound tincture of cinchona.

8. Phenacetin: State from what it is prepared, and give its chemical and physical properties.

9 and 10. Oral and recognition of specimens.

Values—12, 8, 14, 12, 10, 9, 9, 6, 20.

DISPENSING.

Examiner: W. Murchison. Time allowed: 3 hours.

MISS KAY.

℞ Quin. sulph.....gr. xij.
Bism. subnit.....gr. xij.
Ol. menth, pip.....gtt. i.
Misce ft. massa et in pil. viij. div.
i. vel. ij. proj dosi nocte maneque.

FRED HUNT.

℞ Sp. terebinth.....℥j.
Tr. guaiaci.....℥ij.
Tr. tolutani.....℥iij.
Ol. menth. pip.....℥ss.
P. acaciæ.....q. s.
Aq.....ad. ℥iv.
Fiat mist. cujus capiat coch. min. subinde.

LAURA ROSS.

℞ Emp. lyttæ, q. s. ut fiat emp. 3½ x 5 in., extende super emp. adhesiv. Lateri dolenti applicand.

BERTHA LAKE.

℞ Hydrarg. ammon. chlor.....℥i.
Acidi tannici.....gr. x.
Vaselini.....℥i.
Misce intime ut fiat ung. frequenter utendum.

THOS. FLINT

℞ Plumbi acet.....gr. iij.
Acidi tannici.....gr. iij.
Ol. ricini.....gtt. ij.
Ol. theobrom.....gr. xij.
Fiat suppos. mitte quatuor.
More solito utend.

Values—19, 24, 19, 19, 19.

BOTANY.

Examiner. Chas. E. Sheath. Time allowed. Two hours.

1. What are buds? Enumerate and define the different kinds of buds.

2. What are the functions of a root? Distinguish between roots and underground stems

3. What do you mean by the following terms: Cambium layer, interstitial deposit, bichogamy, æstivation, imperfect flowers?

4. Write notes on: Cell wall, chlorophyll, protoplasms, and fibro-vascular buds.

5. What are the functions of the leaf? Explain its minute structure.

6. Define terms: Multiple fruit, accessory fruit, pome fruit, drupe fruit. Give examples.

7. Parasitic plants. Define and give examples. How do they differ from epithytes?

8, 9, and 10 oral.

The Chemists and Druggists' Diary for 1900—This annual donation to subscribers to the *Chemist and Druggist* has come to hand.

As usual it is full of good things and this year contains what possibly will be of more general interest to the trade than usual. Besides the interleaved diary proper the work contains "Formulæ and Memoranda" of value to all practical chemists, and in addition has valuable chapters on "The Spectacle Trade," "The Manufacture of Aerated Waters," "Photographic Goods," "Radiography," etc., all treated as "side lines for druggists." The Diary alone is well worth the subscription price asked for the *C.&D.*

The Living Age for 1900. During the fifty-six years of its existence this sterling weekly magazine has steadily maintained its high standard. It is a thoroughly satisfactory compilation of the most valuable literature of the day, and as such is unrivalled. As periodicals of all sorts continue to multiply, this magazine continues to increase in value; and it has become a necessity to the American reader. By its aid alone he can, with an economy of time, labor and money otherwise impracticable, keep well abreast with the literary and scientific progress of the age, and with the work of the ablest living writers. It is the most comprehensive of magazines, and its prospectus for 1900, which appears in another column, is well worth the attention of all who are selecting their reading matter for the new year. To new subscribers remitting now for the year 1900 the intervening numbers of 1899 are sent *gratis*. The Living Age Co., Boston, are the publishers.