SUBJECT F.—*A Knowledge of Arithmetic and the Method of keeping Battery Accounts.*

1. If ore contained by assay before treatment 2 oz. 11 dwt. 12 gr. of gold and 11 oz. 12 dwt. 12 gr. of silver to the ton, and after treatment the gangue assayed 4 dwt. 12 gr. of gold and 2 oz. 16 dwt. 12 gr. of silver to the ton, show the value of the gold and silver recovered from 100 tons of ore, taking the value of gold to be £4 4s. per ounce and silver 2s. 4d. per ounce.

2. The gold extracted from a goldfield made a pyramid 3 feet square at the bottom and 8 feet 6 inches high: how many pounds avoirdupois did the pyramid contain, taking the specific gravity of gold to be 19·25?

3. The wages of 20 men employed in connection with the treatment of ore was £60 per week. These men were divided into 4 classes: A class had 10 men, B class 5 men, C class 3 men, and 2 men were in D class. Each man in B had $\frac{1}{8}$ more than each man in A, each man in C had $\frac{7}{8}$ of each man in B, and each man in D had $\frac{1}{4}$ more than each man in C: how much did each man receive?

4. A certain piece of work took 10 men and 3 boys 72 hours to accomplish; each boy did two-thirds the work of a man. How long would it take 5 men and 9 boys to do the same work?

5. Divide 0·0034 by 67, and extract the cube root of the quotient.

SUBJECT G.—*A Knowledge of Part V. of "The Mining Act, 1905."*

Oral.