7. If 7 per cent. is lost by selling goods for £145 6s. 3d., what would be gained per cent. by selling them for £168 15s.?

8. A and B start at the same time to meet each other from two places 15½ miles apart: when and where do they meet if A walks at the rate of 3½ miles per hour and B at 4¼ miles per hour?

9. If wages vary as the price of wheat, and nine men working for eight weeks earn £43 4s., when wheat is 48s. a quarter, find the price of wheat when eight men working for ten weeks earn £67 10s.

10. A cubic foot of gold is extended by hammering so as to cover an area of six acres: find within one ten-millionth of an inch the thickness of the gold as a decimal of an inch.

11. Find the cube root of 0·121861281 to three places of decimals; and the sixth root of 24794911296.

12. A traveller goes to Paris with £57 10s., which he exchanges for French money at the rate of 25 fr. 35 c. the £1. During his stay he spends 830 fr. 50 c., and on leaving changes the remainder into English money at the rate of 25 fr. 20 c. the £1: find how much he receives to the nearest halfpenny.

Geography.—For Class D. Time allowed : 3 hours.

1. If the angle between the zenith and the sun at noon on the 22nd December (the summer solstice) is found to be 26½ degrees, what is the latitude of the point of observation?

2. Explain the following terms: *Sargasso sea, cyclone, mistral, bore, solfatara, fumarole, striation, roches moutonnées, moraines, névé.*

3. Explain the phases of the moon. Show why the moon is in the meridian about 48 min. later each day than the day before.

4. "The Pacific is surrounded by a series of volcanic mountains, constituting a circle of fire." Mention in order the principal summits in this circle.

Give an example, taken from the North Island of New Zealand, of a volcanic line of weakness.

5. Explain the importance of ocean currents. How are they affected by (a) excess of saltness, (b) the earth's rotation, (c) submarine ridges, (d) continental masses? Illustrate your answer from the Pacific equatorial and the Peruvian current.

6. Describe briefly *two* of the following railway routes: North Pacific, Canadian Pacific, Russo-Chinese, Cape to Cairo.

7. In 1640 Berlin was a fishing village; in 1800 it had a population of 120,000; its present population is about 2,000,000: account for its sudden rise and subsequent expansion, and compare its history with that of Cologne or Vienna.

8. Give geographical reasons for the rise of the following towns: Madrid, Singapore, Bombay, Christchurch (New Zealand), Moscow, Orleans, Rome, Paris, Dresden, Augsburg.

9. Illustrate by a diagram the position of the leading provinces of Austro-Hungary. Write a paragraph on the geographical distribution of its German, Slavonic, Romanic, Magyar, and Illyrian population.

10. What countries are the chief exporters of cinchona, diamonds, maize, rubies, pearls, timber, attar of roses, spices, indiarubber, roofing-slate, currants?

11. Since 1870 Germany has become a great commercial nation. Enumerate the branches of industry and trade in which the Germans excel.

Geography.—For Class E, and for Junior Civil Service. Time allowed : 3 hours.

1. Explain the terms *estuary, geyser, llano, magnetic pole, moraine, prairie, rapids, snow-line, steppe, tundra.*

2. Explain clearly and account for the difference between an "insular" and a "continental" climate. Illustrate your answer by a comparison between the climate of Ireland and that of Yakutsk.

3. What are the tropics? Trace the course of the Tropic of Cancer round the world, mentioning and briefly describing the various countries through which it passes.

4. Mention and briefly describe the chief desert regions of the world.

5. Give a list of the British possessions in Asia and Africa; state which of them have self-government; and give as full an account as you can of the following: Mauritius, Aden, Labuan.

6. Give an account of the mountain system of North and South America.

7. Mention the chief trade routes leading to New Zealand, and state what commodities are chiefly brought by each route.

8. Mention the chief ship canals of the world, and give any information you can about them.

9. What do you know of Abo, Apia, Beirut, Broken Hill, Duluth, Fashoda, Guam, Maimatchin, Palapye, Punta Arenas?

10. Draw a map of Africa south of the Equator, inserting as much detail as you can.

History.—For Class D. Time allowed : 3 hours.

1. Describe the domestic policy of William the Conqueror.

2. Trace briefly the growth of Parliament up to the end of Edward the First's reign.

3. "The final result of the Great Rebellion was a return to the limited monarchy of the Lancastrian period." Describe and account for the loss of national liberties under the Tudor sovereigns.