

CLASS D.—ARITHMETIC.

Tuesday, March 23.—Morning 10 to 1.

1. Divide seven thousand and eight millions ninety-four thousand and six by two hundred and thirty-one in three factors. Explain the method of finding the correct remainder.
2. Show why it is that, if a number is an exact divisor of two other numbers, it also divides exactly their sum or difference.
3. Multiply 27 acres 3 roods 15 poles 18 yards by $23\frac{1}{4}$.
4. Find, by Practice, the value of 24 tons 16 cwt. 1 qr. 11 lb. at £2 13s. 4d. per cwt.
5. A dealer buys 14 barrels of tobacco, each containing 2 cwt. 36 lb., at £15 8s. 8d. per cwt. He paid for freight and charges 16s. 9d. per barrel, and 6s. per lb. duty. How much did he gain by retailing it at 6d. per oz.?
6. Explain carefully the rule for the addition of vulgar fractions, taking for illustration the fractions— $\frac{2}{3}$, $\frac{4}{7}$, $\frac{7}{8}$.
7. Simplify $\frac{2}{3}$ of $5\frac{1}{2} + 4\frac{1}{2}$ of $\frac{3\frac{1}{2}}{3\frac{3}{4}} - \frac{5}{8}$ of $4\frac{1}{2}$, and also $\frac{5\frac{1}{2} - 3\frac{1}{2}}{5\frac{1}{2} + 3\frac{1}{2}} \div \frac{2}{3}$ of $7\frac{1}{2}$.
8. One of two partners owns $\frac{1}{5}$ of a farm, and the other the remainder, the difference between their shares being 39 acres 3 roods 20 poles. If the land be worth £7 $\frac{1}{2}$ per acre, find the value of the farm.
9. A and B together can do a piece of work in $3\frac{1}{2}$ days, which A alone could have done in 5 days. Show that A works twice as fast as B.
10. Divide 35·7 by ·00224, and multiply 25·6 by 1·127.
11. Express the difference between $1\frac{5}{8}$ of 5s. and ·016 of £4 10s. as the decimal of 1·44 of 3s. 10d.
12. If the carriage of $24\frac{1}{2}$ tons for $7\frac{7}{8}$ miles cost 5 guineas, what weight will be carried $4\frac{1}{2}$ miles for £6 12s.?
13. A rectangular block, whose length is twice its breadth, contains 2,420 acres. Find the expense of putting a fence round it, at 16s. per chain.
14. Explain the meaning of the terms *interest* and *rate per cent.* If £1,160 amounts in 7 months to £1,210 15s., find the rate per cent. per annum.
15. A person sells out £4,000 New Zealand 5 per cent. stock at 102 $\frac{1}{2}$. He lends £1,500 of the proceeds on mortgage at 8 per cent., and invests the remainder in 3 per cent. Consols at 97 $\frac{1}{2}$. To what extent will his income be affected by these transactions?
16. A person embarked the whole of his capital, which was originally £1,275, in three successive speculations. In the first he gained 55 per cent., and in each of the others he lost 20 per cent. Find his whole gain or loss.

CLASS D.—GEOGRAPHY.

Tuesday, March 23.—Afternoon, 2.30 to 5.30.

1. Explain the means which are taken to represent with sufficient accuracy the spherical surface of the earth, or portions of it, on a flat map. Explain the nature of Mercator's Projection, and show the advantages and disadvantages which that mode of constructing a map possesses.
2. Which has the longer winter days, Dunedin or Auckland? And which the longer summer days? Give fully the reasons for your answer.
3. What are the causes of currents in the ocean? Trace the course of the great Equatorial Current.
4. Trace the course of the great European watershed, and enumerate in order, beginning from the east, the rivers which flow north or west from it.
5. Draw an outline map of Asia, insert the names of the capes, and mark the positions of the capital towns of the various countries in it.
6. Give the position of the following towns in the British Isles, and state anything for which each is remarkable:—Winchester, Drogheda, Stornoway, Cardiff, Shrewsbury, Cork, Coventry, Carnarvon, Yarmouth, Paisley, St. Albans, Maidstone, Perth, Limerick.
7. Draw a map of the South Island of New Zealand, and mark its more important physical features.
8. Give an account of the more important British possessions, their situation, principal town, and any other facts which you think worthy of note.
9. Give the political divisions of South America, and the chief towns of each division.
10. Write a brief account of the Fauna and Flora of Australia.

CLASS D.—ENGLISH HISTORY.

Monday, March 22nd.—Afternoon, 2.30 to 5.30.

[NOTE.—Candidates may omit three questions.]

1. Compare briefly the influence of Latin peoples with that of Teutonic peoples on England and its history before the Norman Conquest.
2. Describe the inroads of the Danes, and the political confusion in England arising therefrom.
3. Give a brief history of the attitude of the Church and the Throne towards each other between the Norman Conquest and the reign of Elizabeth.
4. How did feudalism and national spirit affect each other in England?
5. Give an outline of Magna Charta, and point out anticipations of it.
6. Narrate briefly England's connection with the Crusades.
7. What caused the growth of parliamentary government during the twelfth and thirteenth centuries?
8. Explain the difference between the posture of Ireland and that of Wales towards the English Government, and discuss the historical reasons for the difference.
9. Was the position of the English labourer with regard to remuneration, education, and freedom better in the fifteenth and sixteenth centuries than it is in the present day? Discuss the question.