

6. Are you the holder of a certificate from the St. John Ambulance Society?
7. What are the requisite materials and appliances which should be kept at convenient places at all collieries for the rendering of first aid in cases of accident?
8. How would you render first aid to persons suffering from severe burns?
9. What are the first and subsequent steps to be taken for the relief of persons suffering from the effects of having inhaled noxious gases?
10. How would you bandage with the object of stopping profuse bleeding from the forearm?
11. Describe your knowledge of the Coal-mines Act with reference to—
 - (a.) Ventilation.
 - (b.) Reporting of accidents and inspection of the scene of accidents.
 - (c.) Signals in shafts and engine-places.
 - (d.) The duty of firemen; and briefly state the duties of the manager under the Act.

QUESTIONS ASKED AT THE EXAMINATION FOR SECOND-CLASS MINE-MANAGERS'
CERTIFICATES OF COMPETENCY, 1913.

SUBJECT 1.—*Prospecting, Opening out a Colliery, Working Coal, and Timbering.*

1. What special and general rules do you consider should be strictly observed in order to minimize the risk of injury to men employed in shaft-sinking?
2. Describe what you consider the best means of lighting the bottom of a shaft when sinking, and how would you ventilate a shaft which has to be sunk to a depth of 1,000 ft.?
3. What examinations are required to be made during the sinking of a shaft, and what special features are required to be strictly attended to in order to protect men from being injured by material falling upon them?
4. What are the advantages and disadvantages of systematic timbering in mines, having special regard to safety?
5. In visiting the working-places of your colliery on your rounds of inspection, to what special features would you direct your attention?
6. Give your experiences of electric shot-firing, and say what is meant by "electric hang-fires." When such occur, how much time should elapse before returning to the face of working?
7. Describe the operations of coal-winning in (a) bord-and-pillar workings, (b) longwall workings; and state the condition which would guide you in adopting either one of these systems in preference to the other.
8. If you were hewing coal in a bord on the outbye side of a ventilating district and observed your lamp full of flame, what steps would you take, and in what order would you take them?

SUBJECT 2.—*Mine-gases, Spontaneous Combustion, and Ventilation.*

1. Describe the modern safety-lamp, and say why it is considered safe, how used for testing for firedamp, and state the lowest percentage which can, in your opinion, be detected by the safety-lamp.
2. Describe what is meant by the term "ventilating district," and say how you would satisfy yourself that a fiery colliery is adequately ventilated; also, having regard to splits, what do you consider the extreme velocity allowable for air travelling in the working-faces of a fiery colliery?
3. Give your experience, if any, in dealing with underground fires. Say what, in your opinion, is the best course to adopt with such outbreaks, and what you consider is the cause of such occurrences.
4. Give the properties, symbols, and specific gravity of the following gases, and state how each affects the human body:—
 - (a.) Carbon-monoxide.
 - (b.) Hydrogen-sulphide.
 - (c.) Carbon-dioxide.
 - (d.) Firedamp.
5. Give sketch of what you consider a good construction of air-crossing.
6. Having headings going one to the dip and the other to the rise, say which would be the easiest to ventilate, and why.
7. Ventilate the annexed plan, having regard to the haulage. Show by conventional signs position of doors, air-crossings, stoppings, &c.