NEBOSH Certificate NGC2/4
Electrical hazards and control

Revision questions

For many people, electricity seems to be perceived as a subject of special obscurity and complexity; for this reason, in the *Electrical hazards and control* element, we decided to adopt a different approach to usual, namely exposing students very early in their study to typical NEBOSH Certificate examination questions; in case you did not attempt all of them at the time, these eight questions are repeated below together with another two questions, questions 9 and 10.

The answers to questions 1–8 are, as you know, given in the study material; the answers for questions 9 and 10 are given in the separate NGC2/4 answer sheet.

Q1 Outline the effects of a severe electric shock on the body, and the emergency action to be taken.

Q2 Outline the measures that need to be undertaken to ensure the safe use of portable electrical appliances that might be found on a building site.

Q3 Outline the hazards and the precautions to be taken when charging batteries of electrically-driven vehicles such as fork lift trucks.

Q4 Describe how earthing can reduce the risk of receiving an electric shock.

Q5 Outline how each of the following provide protection when using electrical appliances:

- ***fuse***
- ***residual current device, rcd***
- ***reduced voltage***
- ***double insulation***

Q6 Describe the principles of operation and typical uses of the following:

- ***earthing***
- ***reduced voltage***

Q7 Outline the electrical precautions to be taken to protect against electrical contact when:

- ***excavating in a built-up area***
- ***working in the vicinity of overhead power lines***

Q8 Describe the principles and limitations of a fuse as an electrical protection device. Identify two advantages that a residual current device has over a fuse.

Q9 Define the meaning of the following terms which are listed in the syllabus: competence, earthing, isolation, insulation, protection, reduced voltage, excess current protection, residual current device and duty holder.

Q10 What does 'double insulation' mean?