



1145-532 MAY 2018

Level 3 Advanced Technical Diploma in Engineering (540)/

Level 3 Advanced Technical Extended Diploma in Engineering (720)

Level 3 Engineering – Theory Exam (2)

If provided, stick your candidate
barcode label here.

Wednesday 23 May 2018
09:30 – 11:30

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration*

- If any additional answer sheets are used, enter the additional number of pages in this box.
- Please ensure that you **staple** additional answer sheets to the **back** of this answer booklet, clearly labelling them with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.
- All candidates need to use a **black/blue pen**. **Do not** use a pencil or gel pen.
- If provided with source documents, these documents **will not** be returned to City & Guilds, and will be shredded. **Do not** write on the source documents.

***I declare that I had no prior knowledge of the questions in this assessment and that I will not divulge to any person any information about the questions.**

General instructions

- Use black or blue ballpoint pen.
- The marks for questions are shown in brackets.
- There are **six questions** in this examination paper. Answer **all** questions.
- Answer the questions in the spaces provided. Answers written in margins will **not** be marked.
- Cross through any work you do **not** want to be marked.
- Write all your working out and answers in this booklet.
- If extra space is required then the blank pages at the back of the pack should be used, clearly identifying the question.



1 One of the issues a company has to deal with is health and safety in its UK premises. The main piece of legislation the company will have to comply with is the Health and Safety at Work Act 1974.

a) Explain what is meant by 'as far as is reasonably practicable'. (4 marks)

b) Explain how risk assessments can **minimise** the probability of injury in a working environment. (6 marks)

(Total marks 10)

- 2 a) Explain why pre-tensioning may be needed when assembling mechanical components. (2 marks)

- b) In the table below, state **two** common types of electrical cable. For **each**, state a typical use. (4 marks)

| Type of cable | Typical use |
|---------------|-------------|
| | |
| | |

(Total marks 6)

- c) Some parts of a product need to be made as prototypes to see how they fit together. Describe how a prototype of a product can be made using 3D printing. (4 marks)

- d) Describe how market testing of a product would be carried out. (4 marks)

(Total marks 16)

