



## Level 2 Principal Learning in Engineering

## The engineered world

**If provided, stick your candidate  
barcode label here.**

**Thursday 15 May 2014**  
**09:00 – 10:30**

Candidate name (first, last)

[illegible][illegible]

Candidate enrolment number

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Date of birth (DDMMYYYY)

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Gender (M/F)



Assessment date (DDMMYYYY)

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Centre number

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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.
- 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.**

**You should have the following for this assessment**

- A pen with blue or black ink.

## General instructions

- The marks for questions are shown in brackets.
- The **maximum** mark for this paper is 48.
- You may take an unannotated copy of the 2760-201 May 2014 preparation sheet into the examination.
- This examination contains **fifteen** questions. Answer **all** questions.
- Answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Cross through any work you do not want to be marked.

**Section A**

The following questions are about how you worked as part of a team.

- 1 State your role in the team. Give the reason you were given that role.

Role

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Reason

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(3 marks)

- 2 Successful team members provide support and feedback to others in the group.

Describe **three** ways of providing support and feedback to others

1 

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2 

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3 

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(6 marks)

Past question paper

The following questions refer to the design and manufacture of the chassis of a Formula One racing car.

- 3 The chassis of early racing cars was made from metal. The chassis of current Formula One cars are made from composite materials.

Give **two** reasons why the materials used for the chassis of racing cars have changed.

1 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(4 marks)

- 4 Name **one** composite material used in the chassis of a modern Formula One racing car and the specific material it replaces.

Explain why the composite is an improvement on the material previously used.

Composite material

\_\_\_\_\_

Material it replaces

\_\_\_\_\_

Improvement

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(4 marks)

- 5 Describe how a chassis is made using modern composite materials.

Explain an advantage of this process compared with making a chassis from metal.

Making a chassis

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Advantage

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(4 marks)

- 6 State **three** ways in which ordinary people may benefit by the development of materials found in the modern Formula One racing car.

1 

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2 

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3 

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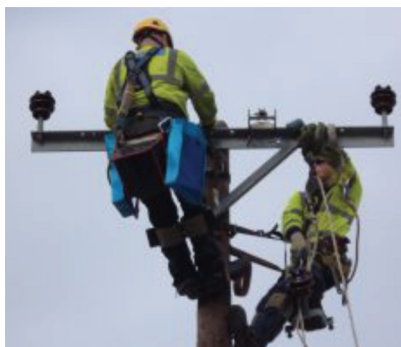
(3 marks)

Past question paper

**Section B**

This section refers to sectors that make up the engineering industry, career and training opportunities and employment legislation.

7 Name the engineering sector that **each** of the following photographs represents.



[www.ssepd.co.uk](http://www.ssepd.co.uk)

a) \_\_\_\_\_

(1 mark)



[www.telegraph.co.uk](http://www.telegraph.co.uk)

b) \_\_\_\_\_

(1 mark)



[www.ukti.gov.uk](http://www.ukti.gov.uk)

c) \_\_\_\_\_

(1 mark)

- 8 a) Describe a **product** from the Nuclear Technologies sector of the engineering industry.

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(2 marks)

- b) Describe a **product** from the Sports and Medical sector of the engineering industry.

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(2 marks)

- 9 a) Describe a **service** from the Nuclear Technologies sector of the engineering industry.

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(2 marks)

- b) Describe a **service** from the Sports and Medical sector of the engineering industry.

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(2 marks)

- 10 There are three **main** groups of engineering jobs: professional, technical and operative.  
State which group **each** of the following jobs belongs to.

Telecommunications Installer

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Plant Engineer

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Lathe Worker

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(3 marks)

- 11 Give **one** example of a job title in the Vehicle systems and Transport infrastructure sector. Identify the training required for this role.

Job title

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Training required

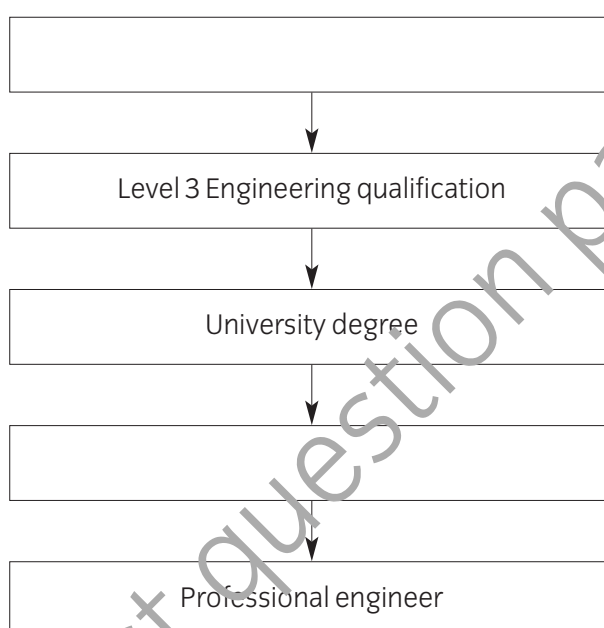
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(2 marks)

- 12 Complete the following flow chart, which shows the career path to becoming a professional engineer.



(2 marks)

- 13 The Engineering Council (EC) is an example of a professional body.

Give **two** examples of how members can be supported by a professional body.

1 

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2 

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(2 marks)

- 14 State **two** things that employers are required to do by law to protect their workers from poor pay and very long working hours.

1 \_\_\_\_\_  
\_\_\_\_\_

2 \_\_\_\_\_  
\_\_\_\_\_

(2 marks)

- 15 Employees have rights and responsibilities when they are at work.

State **one** right to personal protection and **one** responsibility when working in dusty conditions.

Right

\_\_\_\_\_  
\_\_\_\_\_

Responsibility

\_\_\_\_\_  
\_\_\_\_\_

(2 marks)

End of assessment

Past question paper



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Past question paper

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