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Pearson BTEC
Level 1/Level 2
First Award

Centre Number						Learner Registration Number					

Construction and the Built Environment

Unit 1: Construction Technology

Wednesday 18 May 2016 – Morning Time: 1 hour	Paper Reference 21492E
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You do not need any other materials.	Total Marks
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Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 50.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Answer ALL questions.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ~~☒~~ and then mark your new answer with a cross ☒.

1 Preconstruction activities have to be completed before work can begin on a construction site.

(a) Identify **two** site set-up activities.

(2)

- A Fencing
- B Wall finishes
- C Temporary lighting
- D Roofing
- E Foundations

(b) Name **two** services that may need to be protected before work can begin on a construction site.

(2)

1

2

(Total for Question 1 = 4 marks)

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2 (a) Give the purpose of:

(i) a concrete slump test

(1)

(ii) the compressive testing of concrete.

(1)

(b) Identify **two** methods of stress grading structural timber.

(2)

- A Acoustic
- B Density
- C Machine
- D Compressive
- E Visual

(Total for Question 2 = 4 marks)

3 Identify **two** types of thermal insulation.

- A Glass fibre
- B Soffits
- C Flashings
- D Tile battens
- E Foam

(Total for Question 3 = 2 marks)



4 (a) Identify **two** types of external wall finish.

(2)

- A Mineral wool
- B Chipboard
- C Facing brickwork
- D Wall plates
- E Rendered blockwork

(b) Name **two** types of internal wall partition.

(2)

1

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2

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(Total for Question 4 = 4 marks)

5 Name **two** types of internal floor finish.

1

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2

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(Total for Question 5 = 2 marks)

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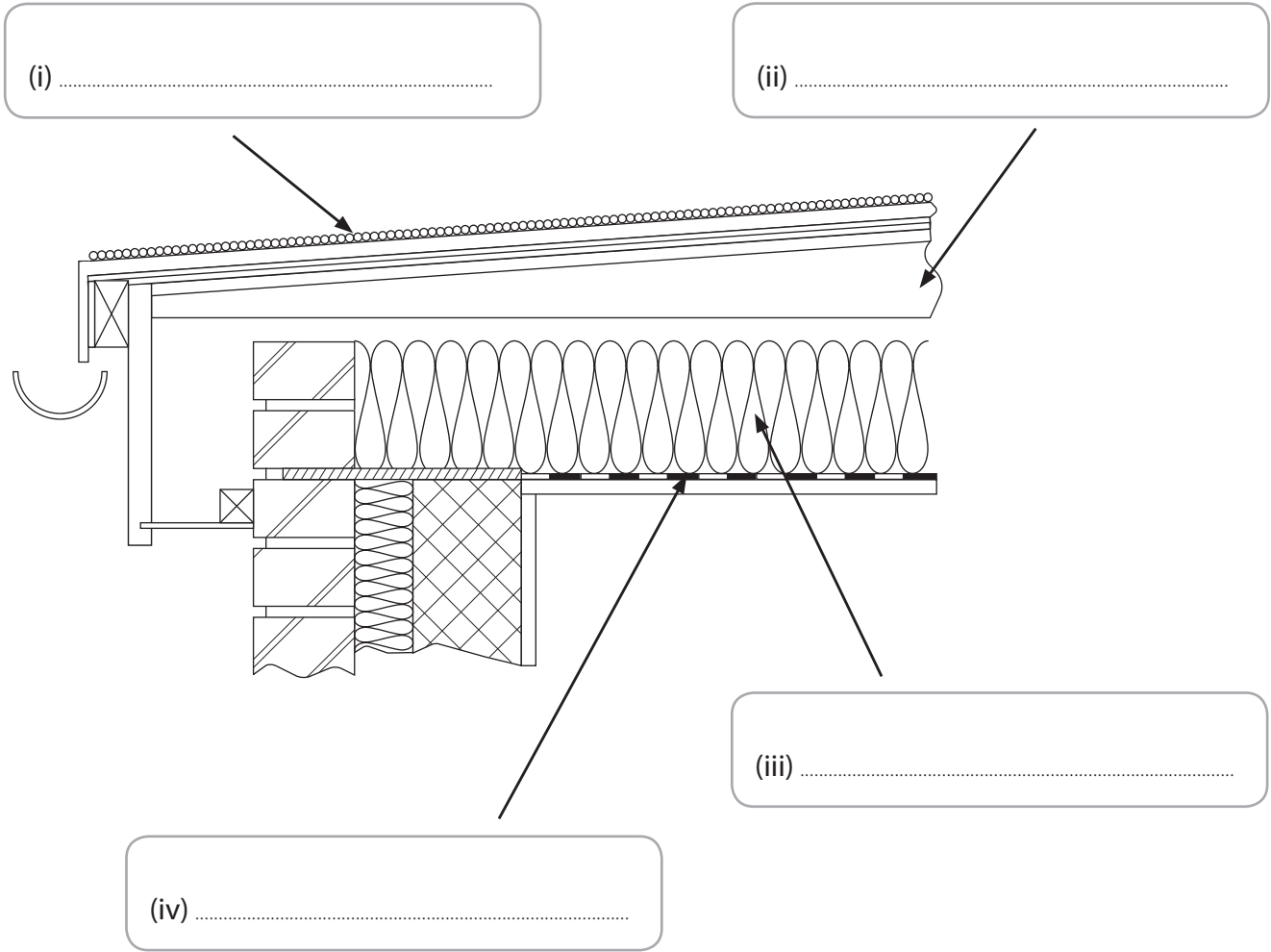
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6 Diagram 1 shows a section through a flat roof at eaves level.
Label the **four** parts of the flat roof shown in diagram 1.



(Total for Question 6 = 4 marks)



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7 Sketch a cross section through a strip foundation and a masonry cavity wall up to damp-proof course (DPC) level.

You should annotate your diagram.

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(Total for Question 7 = 5 marks)



8 Explain **two** advantages of using eco-joists, instead of solid timber joists, as part of the upper floors of a building.

1

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2

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(Total for Question 8 = 4 marks)

9 Give **two** functions of a wall opening.

1

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2

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(Total for Question 9 = 2 marks)

10 Vertical restraint of roofs is used to resist uplift from:

- A spread of fire
- B self-weight
- C snow loading
- D wind loading

(Total for Question 10 = 1 mark)



11 Explain **one** reason why a builder is unlikely to use a solid concrete floor for a house on a sloping site.

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(Total for Question 11 = 2 marks)

12 Explain **two** advantages of a raft foundation compared to a strip foundation in poor ground conditions.

1

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2

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(Total for Question 12 = 4 marks)

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13 Explain **one** advantage and **one** disadvantage of using a prefabricated concrete cross-wall construction form to build a new apartment block.

Advantage

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Disadvantage

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(Total for Question 13 = 4 marks)

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(Total for Question 14 = 8 marks)

TOTAL FOR PAPER = 50 MARKS



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