7905-501 APRIL 2017
Level 3 Advanced Technical Diploma in Bricklaying (450)
Level 3 Bricklaying – Theory exam

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.

You should have the following for this examination
• non-programmable scientific calculator
• a pen with blue or black ink

General instructions
This question paper is the property of City and Guilds of London and should be returned after the examination.
• This examination contains 20 questions. Answer all questions.
• Section A consists of 10 multiple choice questions, each carrying 1 mark.
° Indicate your response (a, b, c or d) in the space provided.
• Section B – consists of 10 structured/short answer questions.
° Answer the questions in the space provided.
° The marks for each question are shown in brackets.

If provided, stick your candidate barcode label here.

© The City and Guilds of London Institute 2017
ST00050269   A3   PO4500125892   10296099

See the latest qualification handbook for the updated test specification.
Section A

1. What type of information does Building Information Modelling (BIM) provide a contractor with?
   a) Risk assessments.
   b) Procurement costs.
   c) Method statement.
   d) Three-dimensional layout.

   Response: ______________________

2. Who is responsible for the implementation of the CDM regulations on a construction project?
   a) Sub contractor.
   b) Principal contractor.
   c) Quantity surveyor.
   d) Site manager.

   Response: ______________________

3. Which external authorised personnel would check that construction work conforms to regulations?
   a) Health and safety officer.
   b) Principal contractor.
   c) Building control officer.
   d) Specialist contractor.

   Response: ______________________

4. Which document is used to plan the duration of a project?
   a) Risk assessment.
   b) Job specification.
   c) COSHH sheet.
   d) Gantt chart.

   Response: ______________________

5. What is the main advantage of using steel reinforcement in concrete?
   a) Increases tensile strength.
   b) Reduces setting time.
   c) Increases compressive strength.
   d) Acts as formwork.

   Response: ______________________
6 What is the terminology given to the indicated section shown in Figure 1?
   a) Springing point.
   b) Intrados.
   c) Striking point.
   d) Extrados.

   Response: __________________________

7 What can be used to construct an arch **without** using temporary support?
   a) Prop.
   b) Lintel.
   c) Brace.
   d) Strut.

   Response: __________________________

8 What is the decorative feature shown in Figure 2?
   a) Dentil course.
   b) Plinth course.
   c) Ramped course.
   d) Oversailing course.

   Response: __________________________
9 What would be the **best** material to strengthen a hollow brick pier?
   a) Wall ties.
   b) Mortar.
   c) Concrete.
   d) Brick rubble.

   Response: ____________________

10 What is the **minimum** distance a superimposed hearth should be extended from the face of the breast?
   a) 200 mm.
   b) 300 mm.
   c) 400 mm.
   d) 500 mm.

   Response: ____________________
Section B

11 Identify three inspections the Building Control Officer carries out during the construction of the substructure of a building. (3 marks)

12 Describe the differences between a method statement and a permit to work, giving an example when each would be used. (5 marks)

13 Identify four defects that could be caused by water leaking from a defective down pipe. (4 marks)
14 Explain what safety checks are required prior to using portable disc cutter, giving reasons for each check. (6 marks) 

15 Identify the term that relates to each of the following 
   a) centre brick of an axed arch (1 mark) 
   b) the angled brickwork from which a segmental arch turns (1 mark) 
   c) the temporary framework that supports an arch during construction (1 mark) 
   d) the name of an individual arch brick. (1 mark)
16 Explain how to set out a semi-circular arch with a span of 1.2 m and a face depth of 0.225 m.

(6 marks)
17 Give two examples of where each of the following would be used.

a) Dentil course. (2 marks)

b) Oversailing course. (2 marks)

c) Soldier course. (2 marks)

d) Tumbling in. (2 marks)

e) Plinth course. (2 marks)
18 a) Name two types of bricks that can be used to form an obtuse quoin on a boundary wall. (2 marks)

b) Identify two examples of where obtuse angles are used in brickwork. (2 marks)

19 a) Identify two hazards associated with working on chimney breasts, flues and stacks. (2 marks)

b) Explain how to reduce the risks associated with each hazard, identified in 19 a). (4 marks)
A client has requested that you carry out some decorative alterations to their chimney breast and fireplace in preparation for their installation of a log burner. They would like you to cut out a corroded metal plate lintel that forms the fire opening and replace it with a brickwork arch that would form a new feature for the opening.

Discuss how to carry out the task. (12 marks)