

7908-003/503 Level 3 Plastering (Fibrous)

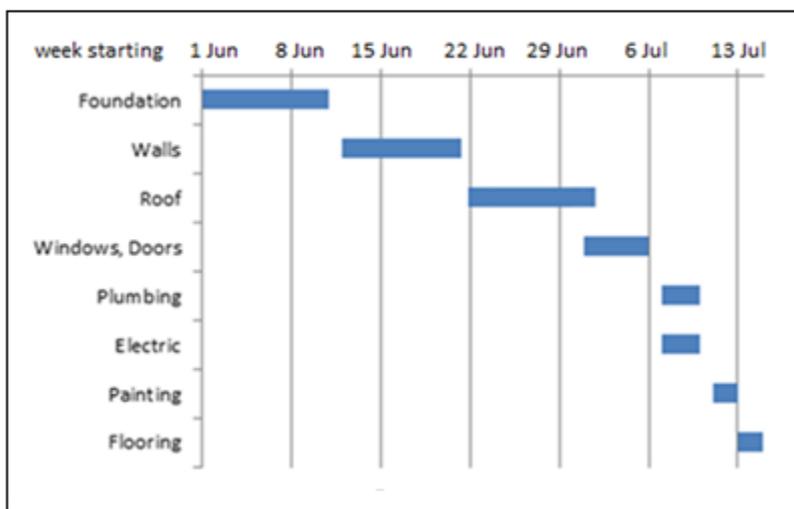
Version 1.0 – November 2016

Sample Marking Scheme

The correct responses to the multiple questions are in **BOLD**.

- 1 Where would multi-foil insulation **most** commonly be installed in a building?
 - a) Over floor joists.
 - b) Under rafters in a loft.**
 - c) Between cavity brickwork.
 - d) Between studs in a partition.

- 2 What term is used when a sum of money is held back until the end of the defects liability period?
 - a) Penalty clause.
 - b) Staged payment.
 - c) Retention costs.**
 - d) Investment costs.



- 3 A lead time of three weeks is required when ordering roof trusses. Referring to Figure 1 above, what is the **last** date they can be ordered?
 - a) 25 May.
 - b) 1 June.**
 - c) 8 June.
 - d) 22 June.

- 4 What is the **main** purpose of a toolbox talk?
 - a) To provide information on work defects.
 - b) To provide information on annual leave.
 - c) To provide information on staff benefits.
 - d) To provide information on safety issues.**

- 5 When ordering traditional materials for a restoration contract, what does reading the manufactures' instructions beforehand ensure?
- a) **Correct storage.**
 - b) Competitive pay.
 - c) Correct delivery.
 - d) Control stock.
- 6 What type of reinforcement should be added to traditional lime mortar mix?
- a) Hessian.
 - b) Scrim cloth.
 - c) Chop strand.
 - d) **Horse hair.**
- 7 Which moulding design is classed as an enrichment?
- a) Torus.
 - b) Cyma reversa.
 - c) **Egg and dart.**
 - d) Fillet.
- 8 Which running mould is run on an eccentric rule?
- a) **Half slipped.**
 - b) Double stock.
 - c) Double slipped.
 - d) Half stock.
- 9 Which two items are used when fixing plaster casts to a ceiling grid?
- a) Screws and plugs.
 - b) Resins and dowels.
 - c) Nails and dowels.
 - d) **Cleats and wires.**
- 10 What should be used when casting in sand and cement?
- a) Air roller.
 - b) **Tamping sticks.**
 - c) Splash brush.
 - d) Weighing scales.

11

Name the **three** dimensions that are required to calculate the number of cubic metres of concrete needed to pour a footing. (3 marks)

Answer

Answers should include the **three** answers listed below, **one** mark for each:

- Length
- Width.
- Depth.

12

Explain why energy performance certificates are important to potential buyers or tenants. (5 marks)

Answer

Explanation could include:

Allows potential buyers or tenants to budget for general running costs of the property, and also paints an accurate picture where future investment may be required to increase the energy rating of a building EG changing the boiler to a more efficient model, having double glazing fitted, insulating the cavity or loft space and fitting more efficient LED lighting.

13

Explain why a plasterer would use traditional lime mortars when running in-situ mouldings. (4 marks)

Answer

Explanation could include the **four** points listed below for **four** marks:

- Vapour permeable, which allows moisture to be absorbed and evaporated from masonry structures.
- Highly flexible, which allows all aspects of movement within a substrate.
- More compatible with historic building materials, as it is a natural product that contains no man made chemical properties. Lime based mortars are more sympathetic to older masonry backgrounds like stone, soft clay bricks and timber laths.
- Better Aesthetics bring out the natural colour of the sand it is mixed with, so more in keeping when working within conservation areas.

14

Name the **four** methods that can be used to core out when running internal or external in-situ mouldings. (4 marks)

Answer

Answers should include the **four** answers listed below, **one** mark for each:

- Solid core.
- Corbel brickwork.
- Scotch bracketing.
- Timber keels.

15

Explain why it is important to analyse traditional lime mortars, when working on historic buildings. (4 marks)

Answer

Explanation could include the **four** points listed below for **four** marks:

- Ensures compatibility with the background in relation to the mix ratios and strength of lime that was originally applied
- Reduces erosion to the fabric of the building, as lime mortar mixes contain no acidic impurities that may attack stonework/brickwork or mortar beds.
- Identifies the correct grading and quality of aggregate, to provide a well blended and stable mix (Size of sand 0 to 3 or 3 to 5 Microns).
- Identifies any additives that may have been incorporated in the original mix, to act as a binder or to reduce the carbonation process i.e Pozzolan, brick dust.

16

Name the additive that is mixed with rubber to make it set. (1 mark)

Answer

Catalyst.

17

Name the additive that is mixed with rubber when taking a squeeze. (1 mark)

Answer

Thixotropic.

18

Name the **three** types of running moulds that are constructed for running straight diminished plasterwork. (3 marks)

Answer

Answers should include the **three** answers listed below, **one** mark for each:

- Double hinged.
- Triple hinged.
- Twisted.

19

Explain how to produce a fibre glass reverse mould from a plaster model so that it is ready for the production of plaster mouldings. (8 marks)

Answer

Explanation must cover all the **KEY** points below to obtain **eight marks**.

- Apply a suitable sealing agent to the model to prevent moisture from attacking the gel coat.
- Apply a suitable release agent such as a liquid wax to enable the finished reverse mould to release from the model.
- Mix gel coat with catalyst and apply a thin even layer to the model (avoiding any excessive thickness, to reduce heat built up and surface pickling, to the face of the mould).
- Cut 30 gram fibre glass tissues matting, mix resin and apply fibre glass tissue matting to ensure all members are picked up free from any bubbles or misses and allow to cure.
- Cut 300 gram fibre glass matting, mix resin and apply 3 No layers of matting, removing any air from the fibre glass matting with a suitable paddle roller, trim moulding ground edges once the material has begun to cure.
- Cut and position suitable backing brackets to ensure finish mould sits flat on bench and repeat the process above covering the brackets.
- Allow the mould to cure and remove the mould from plaster model. Wash any residue off release agent, and sand the face of the mould with a fine grit wet and dry sandpaper to produce a smooth finish.

20

Explain how to set out, ready to run off an elliptical moulding. (3 marks)

Answer

Explanation could include the **three** points listed below for **four** marks:

- Produce the running mould containing a gig stick containing zinc shoes.
- Construct the trammel board, pivot blocks and pins, and fix to the bench to given height.
- Mark $\frac{1}{2}$ the major and $\frac{1}{2}$ the minor axis on the gig stick and locate with pivot blocks and pins along each axis.

21

List **four** possible background defects that can affect the alignment when fixing a cornice. (4 marks)

Answer

Answers could include any **four** answers from the list below, **one** mark for each:

- Uneven wall lines.
- Uneven ceiling joists.
- Ceiling and wall junction not square.
- Internal or external angles out of square.

22

Compare the **two** methods of casting using traditional materials when producing external mouldings. (8 marks)

Answer

Comparison of the **two** methods could include:

Slip casting and dry packing are two methods that are used for producing external mouldings. Slip casting is the preferred method used in industry to produce ornate or undercut mouldings, when casting from rubber moulds, as the firstings is mixed to a slurry consistency, which can easily be applied to the mould to ensure the detail within the cast is easily replicated, and without any defects to the face of the cast. Dry packing is a better method than slip casting for producing plain external mouldings, as casts can be demoulded quicker due to the nature of the mix being a semi dry consistency. The casts are produced from either loose piece fibreglass or plaster mould unlike rubber moulds used for slip casting. The moulds need to be rigged for dry packing as the material is placed in the back of the mould, and compacted down using shaped tamping sticks.

23

A prospective client has asked you to produce a cornice to a new extension measuring 18 m x 10 m. The client wishes to match the original run in-situ design found within the existing house as shown below.

Based on the image below and scenario above, discuss how to plan and complete the work.



(12 marks)

Answer

Indicative content

- communication and planning skills
- process methods of matching existing cornice
- materials used for each stage of the process
- construction of the running mould and reverse models/moulds
- manufacturing and installation methods.

Band 1 (1 – 4 marks)

Basic discussion, providing a vague description of procedures and methods used to undertake the work. No references to pre-planning.

In order to access higher marks

To access higher marks, some references made to materials that are used for completing the different stages of the work.

Band 2 (5 – 8 marks)

Basic discussion, providing a limited description of procedures and logical methods used to undertake work.

In order to access higher marks

To access higher marks, limited justification of pre-planning and methods used for the work. Most references made to materials that are used for completing the different stages of the work.

Band 3 (9 – 12 marks)

Detailed and clear discussion of procedures and logical methods used to undertake work.

In order to access higher marks

To access higher marks, detailed justification of pre-planning and methods used for the work. All references made to materials that are used for completing the different stages of the work.