

Answer ALL the questions. Write your answers in the spaces provided.

1. You have just started your new job working as a trainee in the planning department for a major construction company. Your first task is to sort construction processes into order.

The chart below shows the different stages of a construction project. Five stages have not been identified in the first column.

CBE Diploma Technology Centre										
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1. Site set up	█									
2. Excavation and earthworks		█								
3. Substructures		█	█							
4.			█	█						
5. Roofing				█	█					
6.				█	█	█				
7. Internal walls and partitions					█	█	█			
8. First fix							█	█		
9. Plastering and dry lining								█	█	
10.									█	█
11.									█	█
12. External works						█	█	█	█	█
13.										█

Identify the **five** missing stages by placing a cross (☒) next to the correct stage in the following tables.

- (a) Stage 4 is:

A	Prefix	<input checked="" type="checkbox"/>
B	Snagging and handover	<input checked="" type="checkbox"/>
C	Superstructure brickwork	<input checked="" type="checkbox"/>
D	Floor finishes	<input checked="" type="checkbox"/>
E	Grouting	<input checked="" type="checkbox"/>

(1)



(b) Stage 6 is:

A	Suspended ceilings	<input type="checkbox"/>
B	Grouting	<input type="checkbox"/>
C	Foundations	<input type="checkbox"/>
D	External doors and windows	<input type="checkbox"/>
E	Painting and decorating	<input type="checkbox"/>

(1)

(c) Stage 10 is:

A	Second fix	<input type="checkbox"/>
B	Door furniture	<input type="checkbox"/>
C	Alarm installations	<input type="checkbox"/>
D	Final fix	<input type="checkbox"/>
E	Plumbing installations	<input type="checkbox"/>

(1)



Leave blank

(d) Stage 11 is:

A	Wall cladding	<input type="checkbox"/>
B	Third fix	<input type="checkbox"/>
C	Inspections	<input type="checkbox"/>
D	Finishes and decorations	<input type="checkbox"/>
E	Snagging and handover	<input type="checkbox"/>

(1)

(e) Stage 13 is:

A	Third fix	<input type="checkbox"/>
B	Second fix	<input type="checkbox"/>
C	Electrical installations	<input type="checkbox"/>
D	Plumbing installations	<input type="checkbox"/>
E	Snagging and handover	<input type="checkbox"/>

(1)

Q1

(Total 5 marks)



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2. Working in the planning department you are investigating construction methods and processes used on site.

Place a cross (☒) in the box next to the correct word(s) to complete the following sentences.

(a) _____ is needed for safety when deep excavations are carried out.

A	A toe board	<input type="checkbox"/>
B	Scaffolding	<input type="checkbox"/>
C	Earthwork support	<input type="checkbox"/>
D	A brick guard	<input type="checkbox"/>

(1)

(b) A simple on-site test for the workability of concrete is known as the _____ test.

A	concrete	<input type="checkbox"/>
B	easy	<input type="checkbox"/>
C	curing	<input type="checkbox"/>
D	slump	<input type="checkbox"/>

(1)

(c) A frame structure that is used for single storey buildings to provide a wide clear span is known as a _____ frame.

A	rectangular	<input type="checkbox"/>
B	portal	<input type="checkbox"/>
C	triangulated	<input type="checkbox"/>
D	timber	<input type="checkbox"/>

(1)



Leave
blank

(d) _____ and block floors are commonly used in modern construction.

A	Brick	<input type="checkbox"/>
B	Concrete	<input type="checkbox"/>
C	Beam	<input type="checkbox"/>
D	Timber	<input type="checkbox"/>

(1)

(e) A trussed rafter roof requires _____ bracing.

A	wind	<input type="checkbox"/>
B	additional	<input type="checkbox"/>
C	sound	<input type="checkbox"/>
D	shock	<input type="checkbox"/>

(1)

Q2

(Total 5 marks)

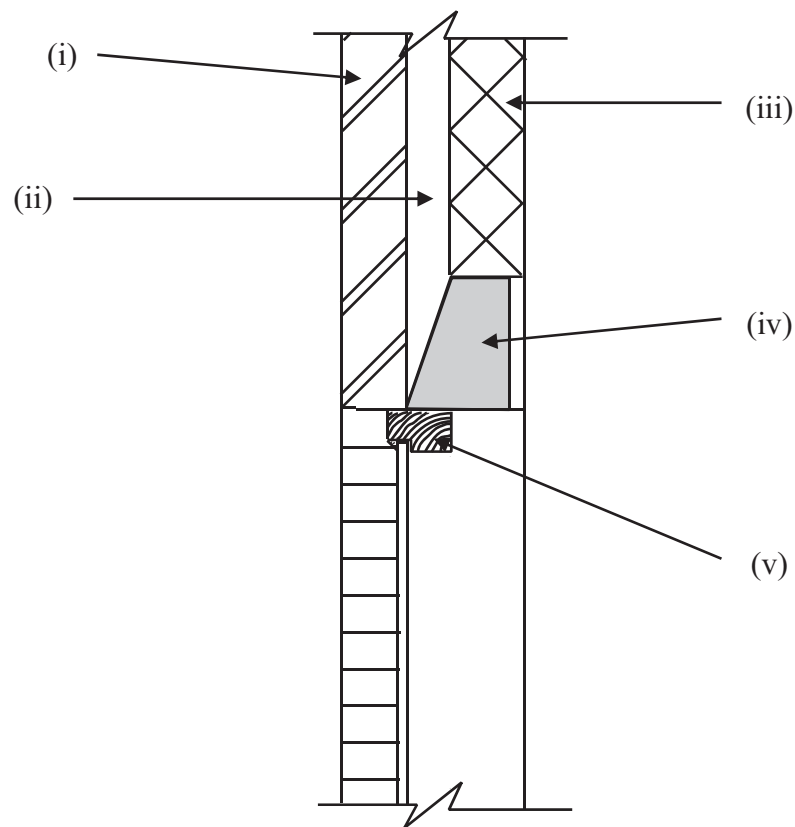
7

Turn over



3. You are now working as an assistant buyer. You will be scheduling materials and will need to be able to identify materials or features shown on construction drawings.

The diagram below shows a vertical section through a window head detail.



Identify the different parts labelled (i) to (v) by placing a cross (☒) next to the correct answer.

(a) Label (i) shows:

A	blockwork	<input checked="" type="checkbox"/>
B	brickwork	<input checked="" type="checkbox"/>
C	stonework	<input checked="" type="checkbox"/>
D	render	<input checked="" type="checkbox"/>

(1)



(b) Label (ii) shows:

A	brickwork	<input type="checkbox"/>
B	void	<input type="checkbox"/>
C	cavity	<input type="checkbox"/>
D	steel	<input type="checkbox"/>

(1)

(c) Label (iii) shows:

A	brickwork	<input type="checkbox"/>
B	cladding	<input type="checkbox"/>
C	ashlar stone	<input type="checkbox"/>
D	blockwork	<input type="checkbox"/>

(1)

(d) Label (iv) shows:

A	lintel	<input type="checkbox"/>
B	coping	<input type="checkbox"/>
C	soldier course	<input type="checkbox"/>
D	DPC	<input type="checkbox"/>

(1)



Leave
blank

(e) Label (v) shows:

A	aluminium frame	<input type="checkbox"/>
B	steel frame	<input type="checkbox"/>
C	PVCu frame	<input type="checkbox"/>
D	softwood frame	<input type="checkbox"/>

(1)

Q3

(Total 5 marks)



Leave blank

4. In the planning department you learned about what is included in first fix and second fix.

In the left hand column there is a list of different construction operations. Place a cross (☒) in the box that indicates whether the operation forms part of first fix only, second fix only, both or neither.

	First fix only	Second fix only	Both	Neither
(a) Plumbing work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Electrical works	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Painting and decorating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Studwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Fixing architraves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Total 5 marks)

Q4



5. You are now working with the quantity surveyors and are learning about construction documentation.

Place a cross (☒) in the box next to the correct word or term to complete the following sentences.

(a) A quantity surveyor would normally be a member of the _____

A	RIBA	<input type="checkbox"/>
B	ICE	<input type="checkbox"/>
C	IStructE	<input type="checkbox"/>
D	RICS	<input type="checkbox"/>

(1)

(b) Detail drawings are commonly produced to a scale of _____.

A	1:5	<input type="checkbox"/>
B	1:50	<input type="checkbox"/>
C	1:500	<input type="checkbox"/>
D	1:5000	<input type="checkbox"/>

(1)



(c) Construction project management software is commonly used to produce _____ charts.

A	sick leave	<input type="checkbox"/>
B	coverage	<input type="checkbox"/>
C	Gantt	<input type="checkbox"/>
D	smart	<input type="checkbox"/>

(1)

(d) The _____ path is the quickest route to project completion.

A	critical	<input type="checkbox"/>
B	direct	<input type="checkbox"/>
C	surveyed	<input type="checkbox"/>
D	bypass	<input type="checkbox"/>

(1)

(e) Bills of quantities are produced using a standard method of _____.

A	writing	<input type="checkbox"/>
B	surveying	<input type="checkbox"/>
C	notation	<input type="checkbox"/>
D	measurement	<input type="checkbox"/>

(1)

Q5

(Total 5 marks)



6. You are now working as a site engineer and have commenced work on the project shown in the picture.



Place a cross (☒) in the box next to the correct word(s) to complete the following sentences.

(a) _____ is the physical marking out of the building using pegs, lines and profiles prior to work commencing.

A	Marking up	<input type="checkbox"/>
B	Setting out	<input checked="" type="checkbox"/>
C	Surveying	<input type="checkbox"/>
D	Levelling	<input type="checkbox"/>
E	Setting up	<input type="checkbox"/>

(1)



(b) _____ is the name given to the temporary 'mould' or edge support given to concrete until it sets and cures.

A	Planking and strutting	<input type="checkbox"/>
B	Temporary support	<input type="checkbox"/>
C	Centering	<input type="checkbox"/>
D	Formwork	<input type="checkbox"/>
E	Setting up	<input type="checkbox"/>

(1)

(c) It is often necessary for concrete to be _____ tested by making concrete cubes at the time of pouring. These are then tested for strength after 7 and 28 days.

A	compression	<input type="checkbox"/>
B	strength	<input type="checkbox"/>
C	tensile	<input type="checkbox"/>
D	safety	<input type="checkbox"/>
E	construction	<input type="checkbox"/>

(1)



Leave
blank

(d) A _____ is an item of mechanical plant that transports the concrete quickly to areas of the site that would be otherwise difficult to access.

A	forklift	<input type="checkbox"/>
B	wheelbarrow	<input type="checkbox"/>
C	hod	<input type="checkbox"/>
D	concrete pump	<input type="checkbox"/>
E	loading shovel	<input type="checkbox"/>

(1)

(e) Steel column base plates have to be _____ after the steelwork has been plumbed.

A	levelled	<input type="checkbox"/>
B	welded	<input type="checkbox"/>
C	tied	<input type="checkbox"/>
D	shot blasted	<input type="checkbox"/>
E	grouted	<input type="checkbox"/>

(1)

Q6

(Total 5 marks)

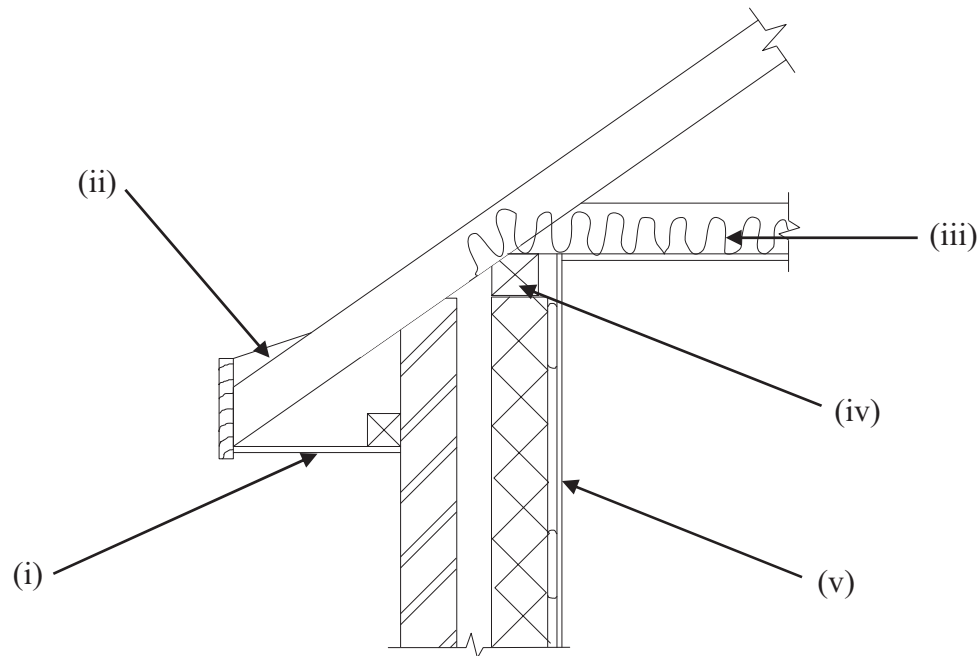


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7. You are working as an assistant buyer. You will be scheduling materials and will need to be able to identify materials and components shown on construction drawings.

Below you will see part of an eaves detail.



Identify the parts labelled (i) to (v) by placing a cross (☒) next to the correct answer.

(a) Label (i) shows:

A	fascia	<input checked="" type="checkbox"/>
B	gutter	<input type="checkbox"/>
C	soffit	<input type="checkbox"/>
D	lining	<input type="checkbox"/>
E	bargeboard	<input type="checkbox"/>

(1)



(b) Label (ii) shows:

A	tilt fillet	<input type="checkbox"/>
B	bracing	<input type="checkbox"/>
C	tile batten	<input type="checkbox"/>
D	ridge	<input type="checkbox"/>
E	furring	<input type="checkbox"/>

(1)

(c) Label (iii) shows:

A	plasterboard	<input type="checkbox"/>
B	roofing felt	<input type="checkbox"/>
C	building paper	<input type="checkbox"/>
D	insulation	<input type="checkbox"/>
E	polythene	<input type="checkbox"/>

(1)



Leave blank

(d) Label (iv) shows:

A	wrot softwood wall plate	<input type="checkbox"/>
B	hardwood wall plate	<input type="checkbox"/>
C	mild steel wall plate	<input type="checkbox"/>
D	plywood wall plate	<input type="checkbox"/>
E	sawn softwood wall plate	<input type="checkbox"/>

(1)

(e) Label (v) shows:

A	two coat plasterwork	<input type="checkbox"/>
B	blockwork	<input type="checkbox"/>
C	dry lining	<input type="checkbox"/>
D	rendering	<input type="checkbox"/>
E	screed	<input type="checkbox"/>

(1)

Q7

(Total 5 marks)



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8. You are working in the construction department and are considering the sustainability practices that the company adopts.

Place a cross (☒) in the box next to the correct word to complete each of the following sentences.

(a) The use of a _____ helps to maintain good relationships between all stakeholders.

A	police officer	<input type="checkbox"/>
B	site receptionist	<input type="checkbox"/>
C	community liaison officer	<input type="checkbox"/>
D	site manager	<input type="checkbox"/>
E	site agent	<input type="checkbox"/>
F	bonus surveyor	<input type="checkbox"/>

(1)

(b) It is essential to use _____ on any temporary surface water drains to prevent the main drains becoming blocked.

A	silt traps	<input type="checkbox"/>
B	grease traps	<input type="checkbox"/>
C	septic tanks	<input type="checkbox"/>
D	sewage treatment	<input type="checkbox"/>
E	manholes	<input type="checkbox"/>
F	SUDS	<input type="checkbox"/>

(1)



(c) The use of _____ hoardings will reduce sound transfer to neighbouring properties.

A	green	<input type="checkbox"/>
B	mesh	<input type="checkbox"/>
C	temporary	<input type="checkbox"/>
D	acoustic	<input type="checkbox"/>
E	security	<input type="checkbox"/>
F	advertising	<input type="checkbox"/>

(1)

(d) Prior to starting on site it is good sustainable practice to relocate _____.

A	drains	<input type="checkbox"/>
B	trees	<input type="checkbox"/>
C	services	<input type="checkbox"/>
D	the datum	<input type="checkbox"/>
E	animal habitats	<input type="checkbox"/>
F	mine shafts	<input type="checkbox"/>

(1)



Leave blank

(e) Bund walls should be used around _____.

A	temporary accommodation	<input checked="" type="checkbox"/>
B	site compounds	<input checked="" type="checkbox"/>
C	storage areas	<input checked="" type="checkbox"/>
D	timber racks	<input checked="" type="checkbox"/>
E	site perimeters	<input checked="" type="checkbox"/>
F	fuel storage tanks	<input checked="" type="checkbox"/>

(1)

Q8

(Total 5 marks)



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9. You are now working on site and the site manager has decided to test your knowledge of construction terminology.

Using the following photographs identify the items by placing a cross (☒) next to the correct word or term.

(a)

A	Frame structure	<input type="checkbox"/>
B	Shell structure	<input type="checkbox"/>
C	Monolithic structure	<input type="checkbox"/>
D	Surface structure	<input type="checkbox"/>
E	Cross wall structure	<input type="checkbox"/>
F	Cellular structure	<input type="checkbox"/>



(1)

(b)

A	Dado	<input type="checkbox"/>
B	Architrave	<input type="checkbox"/>
C	Cover	<input type="checkbox"/>
D	Fascia	<input type="checkbox"/>
E	Apron	<input type="checkbox"/>
F	Skirting	<input type="checkbox"/>



(1)



Leave blank

(c)

A	Shelf	<input type="checkbox"/>
B	Window ledge	<input type="checkbox"/>
C	Window board	<input type="checkbox"/>
D	Fascia	<input type="checkbox"/>
E	Platform	<input type="checkbox"/>
F	Lining	<input type="checkbox"/>



(1)

(d)

A	Dumper	<input type="checkbox"/>
B	Loading shovel	<input type="checkbox"/>
C	Backhoe	<input type="checkbox"/>
D	Backacter	<input type="checkbox"/>
E	Transporter	<input type="checkbox"/>
F	Forklift	<input type="checkbox"/>



(1)

Q9

(Total 4 marks)



10. You are now working in the design department and you are considering construction details.

Place a cross (☒) in the box next to the correct word(s) or abbreviation to complete each of the following sentences.

(a) Where cavities are closed around openings it is necessary to install a vertical _____ to prevent passage of moisture to the inner leaf of the cavity wall.

A	DPA	<input type="checkbox"/>
B	DPK	<input type="checkbox"/>
C	DPF	<input type="checkbox"/>
D	DPM	<input type="checkbox"/>
E	DPC	<input type="checkbox"/>
F	DPW	<input type="checkbox"/>

(1)

(b) The section of the building below ground floor level is known as the _____.

A	underground structure	<input type="checkbox"/>
B	substructure	<input type="checkbox"/>
C	surface structure	<input type="checkbox"/>
D	foundations	<input type="checkbox"/>
E	ground works	<input type="checkbox"/>
F	superstructure	<input type="checkbox"/>

(1)



Leave
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(c) The U value of a wall is substantially improved by adding more _____.

A	insulation	<input type="checkbox"/>
B	brickwork	<input type="checkbox"/>
C	blockwork	<input type="checkbox"/>
D	render	<input type="checkbox"/>
E	plasterboard	<input type="checkbox"/>
F	paint	<input type="checkbox"/>

(1)

(d) Internal partitions can be upgraded to provide compartmentalisation for _____ protection.

A	water	<input type="checkbox"/>
B	fire	<input type="checkbox"/>
C	flood	<input type="checkbox"/>
D	light	<input type="checkbox"/>
E	structural	<input type="checkbox"/>
F	sound	<input type="checkbox"/>

(1)

Q10

(Total 4 marks)



Leave
blank

11. You have been asked to compare two different roof types.

Roof A is a flat roof with three layers of built-up felt.

Roof B is a pitched roof with interlocking concrete tiles.

Compare the two roof types and then examine statements (a) to (d). Place a cross (☒) in the box to indicate whether the associated statement (a) to (d) applies to roof A only, roof B only, to both or to neither.

	Roof A	Roof B	Both A and B	Neither
(a) Normally requires a covering of reflective chippings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Requires a gutter to dispose of rainwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Requires an underfelt between the rafter and the tile battens as secondary protection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Is fixed with screws	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Q11

(Total 4 marks)



Leave
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12. Working with the plant manager, you have been asked to consider the use of construction plant when compared with more traditional methods. State **four** advantages of using construction plant.

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Q12

(Total 4 marks)



Leave blank

13. You are now looking into sustainability and have been asked to investigate two potential sites. One is a brownfield site and the other is a greenfield site.

In terms of sustainability, state **four** advantages that the development of a brownfield site has over a greenfield site.

1

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3

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4

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Q13

(Total 4 marks)

TOTAL FOR PAPER: 60 MARKS

END

