*î***-LEVELS** Institute for Apprenticeships & Technical Education

Welcome to the T Level Core Component Assessment Practices and Principles

Building Service Engineering (BSE)

The workshop will begin shortly

An e-copy of the Specification is located <u>here</u>.





Using the Teams platform

If you need to comment, or have a question, please raise your hand. You can use the chat function as well to ask questions.

Please mute when not speaking to avoid background noise. We are delivering from home so apologies for any background noise



This session is not being recorded



Agenda

- 1 Introduction to the core assessments /overview of curriculum planning resources
- 2 Technical Qualification theory exam overview
- 3 Employer set project overview of assessment
- 4 Q&A



- Overview of curriculum planning support materials
- The assessment requirements of the Core
- Occupational specialisms
- Progression
- Industry placements
- Reviewing content





Introduction to the workshop panel



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Curriculum planning

• Link to examples of curriculum planners

https://www.cityandguilds.com/tlevels/construction-bse

Link to curriculum planning webinar

https://youtu.be/QQ0A_A5qXZY

- Link to curriculum planning slides <u>here</u>
- Exam dates-draft only.



Overview of assessment for core content





Overview of the Core Assessments

Learners must complete:

- Two externally set exams covering knowledge from the building services engineering core (component 350)
- One employer-set project covering knowledge and skills from the building services engineering core (component 350)

Technical qualification scheme of assessment overview

Core Component – Learners must complete all assessment components							
Assessment component (number)	Method	Duration	Marks	Weighting	Marking	Grading	
Exam paper 1 (031)	Externally set exam	2.5 hours	110	35%	Externally marked	This component will	
Exam paper 2 (032)	Externally set exam	2.5 hours	110	35%	Externally marked	be awarded on the	
Employer-set project (033)	Externally set project	17 hours	100	30%	Externally marked	grade scale A" - E	

• 320 marks in total aggregated to one total score



https://www.markcalculate.com/calculators/marks-percentage-calculator

Core Theory Exam Paper 1

The exam has been split into two sections which will be made up of different question types that include short answer questions, structured questions, and extended response questions

Each exam paper is made up of two parts:

- Part A (70%)
- Part B (30%)
- Section A is made up of 77 marks and includes 21 short answer and medium answer questions.
- Section B is made up of 33 marks and includes 3 extended response questions.

Both core exams will follow the same structure but each core exams covers different technical content.

The level of difficulty will increase through the paper with lower demand questions at the beginning of the question paper to higher demand questions at the end of the question paper.

Content overview:

Health and safety in construction Construction design principles Construction and the built environment industry Construction sustainability principles Building technology principles

Tools, equipment and materials



Exam Preparation

In examinations, certain words, often called command words, are used as prompts to give an indication to learners of the type of response that is expected by the question. These words include 'state', 'describe', 'explain' and 'discuss'.





Understanding of Command Verbs in Questions

What are command verbs?

Command verbs in exam papers are the words your learners need to understand. These tell you what response the examiner is looking for.

Below are some examples of command verbs that you may well see in the technical qualification theory exam papers.

Explain, define, describe, compare, identify, summarise, calculate, illustrate, outline

It's really important learners understand what is being asked of them.

Typical command verbs to test knowledge : define, describe, label, list and state Typical command verbs to test understanding : explain.., why.., suggest reasons for...identify Typical command verbs to test applied learning: these usually require candidates to discuss, or explain a topic in some detail



Application of Command Verbs in Questions

AO1 (a) Demonstrate knowledge-all AOs require the ability to recall knowledge. AO1a) refers to instances where the learner is simply required to demonstrate basic recall (10% weighting)

AO1 (b) Demonstrate understanding- The ability to explain principles and concepts beyond recall (25% weighting)

AO2 Apply knowledge and understanding to different situations and context (45% weighting)

AO3 Analyse and evaluate information and issues (20% weighting)

- Short, lower-tariff (marks) question types, 'state, list'-type, recall questions typically require a separate point per mark
- Medium- tariff (marks) question types, 'explain'-type questions may require a point or limited explanation for 1 mark with a further mark available for more depth or explanation
- Higher tariff 6-12 mark question types, 'discuss'-type questions expect a higher quality of response for higher marks, and these are usually marked using level of response marking (bands).



Activity for your learners : give a meaning to the typical theory exam command verbs

- 1. explain
- 2. define
- 3. describe
- 4. compare
- 5. identify
- 6. summarise
- 7. calculate
- 8. illustrate
- 9. outline
- 10. discuss

Answers can be found in the link below

https://www.macmillandictionary.com/dictionary/british/outline_1



Answer Guide for Tutors Command Verbs

Explain-Make (a situation, idea, process, etc) clear or easier to understand by giving details (..how..) Give the stages or steps, etc in a process, including relationships, connections, etc between these and causes and effects. Give example(s) **Define-**Give the meaning of, technical vocabulary, terms, etc.

Describe-Give a detailed written account of a system, feature, etc (..the effect of...on...) the impact, change

that has resulted from a cause, event, etc (..the process..) give the steps, stages, etc

Compare-(...and contrast) or describe the similarities/differences)

Identify-Recognise a feature, usually from a document, image, etc and state what it is

Summarise-Give a brief statement of the main points (of something)

Calculate-Work out the answer to a problem using mathematical operations

Illustrate-Use examples or images to support, clarify or demonstrate, an explanation, argument, theory, etc **Outline-**to give the main ideas of a plan without giving specific details

Discuss-Talk/write about a topic in detail, considering the different issues, ideas, opinions related to it



Question Types





	Section A	
-	. State one statutory document that specifically regulates each of the following activities.	
	a) The use of power tools on a construction site.	
	[1 mark]	
•		
	b) The hazards of working on live electrical systems during maintenance procedures.	
	[1 mark]	
•		
		1

KO



State-give the relevant points briefly

Key words learners need to understand are **statutory** and **regulates**

1	State one statutory document that specifically regulates each of the following activities.
---	--

- a) The use of power tools on a construction site.
- b) The hazards of working on live electrical systems during maintenance procedures.

Acceptable answer(s)	Guidance	Max marks	Test Spec ref & AO
 a) The Provision and Use of Work Equipment Regulations - PUWER b) The Electricity at Work Regulations - EWR 	Award 1 mark for each Accept answers in full or acronyms	2	1.3 AO1a
KO1 Health and safety			



4. List two professional bodies in Building they are affiliated with.	g Services Engineering, including the specialism [2 marks]

Question is in two parts.

The command verb is **List** with a further **Preposition or** instruction to **include**.

List- Provide an itemised series of parts.

Key word learners need to understand is **affiliated** (associated or linked to something)

Acceptable answer(s)	Guidance	Max marks	Test Spec ref & AO
 IET- Institution of Engineering and Technology-electrical CIBSE- Chartered Institution of Building Services Engineers-general building services CIPHE- Chartered Institute of Plumbing and Heating Engineering - plumbing heating Institute of Refrigeration (IoR) – Refrigeration 	Both the professional body and the specialism is required for 1 mark . Accept any other answer that identifies a professional body relevant to BSE	2	7.5 AO1a



14. A contractor has won the contract to design and build a high-rise block of flats. The building will be constructed using a structural steel frame.

Give **four** advantages of steel that makes it suitable for the structural frame of the high-rise building.

[4 marks]

Picking out the relevant parts of a question (that requires understanding;

Q14 A contractor has won the contract to design and build a high-rise block of flats. The building will be constructed using a structural steel frame.

Give **four** advantages of steel that makes it suitable for the structural frame of the high-rise building.

Acceptable answer(s)	Guidance	Max marks	Test Spec ref & AO
 Award 1 mark for each of the following points up to a maximum of 4 marks: High strength Relatively low weight Ease of installation Availability of a wide range of readymade structural sections Ability to resist dynamic forces such as wind and earthquakes 	Do not accept properties of steel that are not relevant to the context	4	7.7 AO2

Common errors students can make is to answer a question in part only.

Part B type questions-extended response

What is the key Information

A client wants a two-storey extension constructed on the back of an office. The site has very easy access for materials and machinery.

The main constraint is that the time allowed for the construction work on site, from commencement to handover, is extremely limited.

Evaluate the different types of construction methods and processes and suggest the most suitable for this project.

These type of questions are designed for stretch and challenge for more able learners.

You may need to break these types of questions down during formative assessments so learners can access some marks



Part B type questions-extended response

A client wants a two-storey extension constructed on the back of an office. The site has very **easy__ access** for materials and machinery.

The **main constraint is that the time** allowed for the construction work on site, from commencement to handover, is extremely limited.

Evaluate the **different types** of construction methods and processes and **suggest** the most **suitable** for this project.

Command verbs are evaluate (Consider several options, ideas) and suggest (Give possible reasons)

These type of questions are designed to stretch and challenge learners.

You may need to break these types of questions down during formative assessments so learners can access some marks



Indicative content

As the amount of time allowed on site is extremely limited, a modular or premanufactured superstructure is the best option. This is where the main structure of the building is constructed elsewhere or off-site and then broken down into sections, moved to site then assembled or put together in a much shorter time.

As the site has easy access, the items can easily be delivered and lifting equipment can place it in correct position for quick assembly This system requires long planning times for construction. Co-ordination between superstructure size and sub-structure installation and dimensions is very important to minimise problems

Discussion can also be negative such as reasons for not using traditional methods of construction due to the time taken on site to set-out, build and cure.

It is important for the discussion to note the risks such as the super structure and sub-structure being built in different places, so communication is key to ensure correct dimensions



Band 1 1-3 marks

Demonstrates a basic use of analysis of the different types of construction methods. Demonstrates basic application of knowledge and understanding of the use of different construction methods relevant to the time constraints. Demonstrates basic evaluative skills with limited reasoning to which method would be most suitable

Band 2

4-6 marks

Demonstrates a good use of analysis of the different types of construction methods. Demonstrates good application of knowledge and understanding of the use of different construction methods relevant to the time constraints. Demonstrates good evaluative skills with clear reasoning to which method would be most suitable.

Band 3

7-9 marks

Demonstrates a thorough use of analysis of the different types of construction methods. Demonstrates thorough application of knowledge and understanding the use of different construction methods relevant to the time constraints. Demonstrates thorough evaluative skills with thorough reasoning and justifications to which method would be most suitable.

Band 4 10-12 marks

Demonstrates comprehensive use of analysis of the different types of construction methods. Demonstrates comprehensive application of knowledge and understanding the use of different construction methods relevant to the time constraints. Demonstrates comprehensive evaluative skills comprehensive reasoning and justifications to which method would be most suitable.



Core Theory Exam Paper 2

The exam has been split into two sections which will be made up of different question types that include short answer questions, structured questions, and extended response questions

Each exam paper is made up of two parts:

- Part A (70%)
- Part B (30%)
- Section A is made up of 77 marks and includes 25 short answer and medium answer questions.
- Section B is made up of 33 marks and includes 3 extended response questions.

Both core exams will follow the same structure but each core exams covers different technical content.

The level of difficulty will increase through the paper with lower demand questions at the beginning of the question paper to higher demand questions at the end of the question paper.

Content overview:

Construction science principles Construction measurement principles Construction information and data principles Relationship management in construction Digital technology in construction Construction commercial/business principles Building Services Engineering (BSE) systems Maintenance principles



Question types

1. **State** the **two factors**, along with Force, used to **determine** the mechanical power required to move a load.

Already given one example which is force

Q2	State the two factors, along with Force, used to determine the mechanical power required to move a load.								
	Acceptable answer(s)	Guidance	Max marks	Test Spec ref & AO					
	Distance Time	Award 1 mark for each	2	2.4 AO1a					
KO	KO2 Construction science principles								

Command verb is **state** (give the relevant points briefly)

Key word factors and determine





Q. You are part of the design team for an office refurbishment project. The client is unsure of the types of heating system they should have installed. Describe 5 advantages which make convection heaters suitable for this project.

(5 Marks)

Answers should include, but are not exclusive to, the following points, with details of the advantages of convection heaters.

- Convection heaters warm up a room evenly.
- Convection panel heaters can be mounted higher up on any open wall space in any size of room.
- Convection heaters can also be recessed into the floor, which means they can be placed directly in front of a stairway or floor-to-ceiling windows.
- With convection heaters of any kind, the temperature of each room can be controlled individually.
- In most cases, convection heaters are silent.
- Convection heaters save about 10 per cent more in energy costs when compared to electric baseboard heaters.
- Award 1 mark for each description up to a maximum of 5 marks. Accept any other suitable description which demonstrates an understanding of the advantages of convection heaters.



Section B

The top two floors of a large office building have their water supplied by a set of two pumps. Following a temporary interruption to the water supply, it has been discovered that one of these pumps had failed, leaving only one service.

As a contractor who offers building services maintenance, you have been asked to investigate the failed pump. You discover blocked filters have caused the pump to seize. There are no isolation points on the supply pipework, meaning the cold-water service to the entire building will need to be isolated to enable the exchange of the pump.

Discuss the best course of action to replace the pump whilst minimizing disruption to the building, **giving recommendations** for what could be put in place to prevent this type of failure in the future.

It may be useful to practice these types of questions with learners.

Get them to list the key points of the question- what is the question asking them to do? Highlight the key information and command verbs.

Command verb is **discuss--**Talk/write about a topic in detail, considering the different issues, ideas, opinions related to it

Give recommendations- a suggestion that something is good or suitable for a particular purpose or job



The top two floors of a large office building have their water supplied by a set of two pumps. Following a temporary interruption to the water supply, it has been discovered that one of these pumps had failed, leaving only one in service.

As a contractor who offers building services maintenance, you have been asked to investigate the failed pump. You discover blocked filters have caused the pump to seize. There are no isolation points on the supply pipework, meaning the cold-water service to the entire building will need to be isolated to enable the exchange of the pump.

Discuss the best course of action to replace the pump whilst minimizing disruption to the building, **giving recommendations** for what could be put in place to prevent this type of failure in the future.

Answer guide

The intention of this question is to allow the candidate to demonstrate their understanding of the scenario in terms of the task at hand (changing the pump) but also a more holistic view of the overall scenario and how future issues could be resolved or prevented. The candidate should be able to identify that the pump must be replaced, but that it's not an emergency as the water supply is still working, albeit without a backup. It should be identified this form of maintenance is purely reactive. The water supply being switched off will cause major disruption to the rest of the building and its users and should consider when the works take place, such as outside of working hours, giving advance notification, informing all users of the building. The candidate should introduce the principle of planned/preventative maintenance and what this entails. Recommendations: It's been identified that there is a lack of isolation, rectifying this should be considered, such as fitting isolation points for future maintenance tasks.

Bands

Band 1 1- 3 marks

Demonstrates basic analysis of the information provided. Demonstrates basic application of knowledge and understanding of the type of maintenance activity and action required to repair. Demonstrates basic use of evaluative skills providing only brief recommendations of how to prevent this from occurring in the future.

Band 2 3-6 marks

Demonstrates good analysis of the information provided. Demonstrates good application of knowledge and understanding of the type of maintenance activity and action required to repair. Demonstrates good use of evaluative skills providing some good considerations and recommendations of how to prevent this from occurring in the future.

Band 3 6-9 marks

Demonstrates thorough analysis of the information provided. Demonstrates thorough application of knowledge and understanding of the type of maintenance activity and action required to repair. Demonstrates thorough use of evaluative skills providing detailed considerations and recommendations of how to prevent this from occurring in the future





Employer set project (ESP) sample

Consists of a number of different tasks

Task	Time allocated	Marks
1.1 – Research	3 hours	9 marks
1.2 – Report	6 hours	26 marks
1.3 – Project plan	3 hours	24 marks
1.4 – Presentation	2 ½ hours	18 marks
2.1 – Collaborative problem-solving	1 ½ hours	15 marks
2.2 – Evaluation	1 hour	8 marks
	Total time 17 hours	Total marks 100 marks

- Tasks will be released in order of sequence
- The time allocated and allocation of marks are not related.
- It is the weighting and level of skills being assessed that determine the marks for each task.



More Information on the ESP

- The employer-set project samples knowledge drawn from across the core content. However, due to their importance all versions of the employer-set project will cover content from the following core underpinning knowledge outcomes of :
- Health and safety
- Construction design principles
- Sustainability principles
- Building services engineering (BSE) systems

Assessment overview:

- The employer-set project is an assessment made up of several tasks that will take place within controlled conditions, assessing the knowledge and skills learned as part of the core element of the T Level.
- The project only draws on the content from the common core knowledge that sits across all specialisms for BSE
- Students will be marked on the quality and accuracy of the written work they produce.



Assessment Objectives and Weightings-Employer Set project •

Assessment objective	Typical evidence (examples in brief)	Approximate weighting
AO1 Planning skills and strategies	Clearly structured response to brief, cohesive response with ordered sections, logical approach to referencing, research and sources	14%
AO2 Apply knowledge and skills to the context of the project	Relevant core knowledge applied to respond to brief, references relevant legislation, building controls, materials, concepts, waste disposal and site access considerations.	54%
AO3 Analyse contexts to make informed decisions	Analysis of key issues, evidence of risk rating and prioritisation of key issues relating to brief.	10%
AO4 Use maths, English and digital skills	Use of correct terminology, abbreviations, units of measurement in context, (technical versus nontechnical wording), use of calculations/graphs etc appropriately, consideration of the use of ICT in presentation.	16%
AO5 Carry out tasks and evaluate for fitness for purpose	Considered analysis and evaluation of project outcome, what went well and what could be improved.	6%

Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
				Pa	art 1					
1.1 Research	2	3	0	2	0	0	2	0	0	9
1.2 Report	6	6	6	2	2	2	2	0	0	26
1.3 Project plan	4	10	6	2	2	0	0	0	0	24
1.4 Presentation	2	6	6	2	0	2	0	0	0	18
Total	14	25	18	8	4	4	4	0	0	77
				Pa	art 2					
2.1 Collaborative problem-solving	0	6	5	2	0	0	0	2	0	15
2.2 Evaluation	0	0	0	0	0	4	0	0	4	8
Total	0	6	5	2	0	4	0	2	4	23
AO	14	5	4	10		16		(6	100

Assessment objectives

The Employer-Set Project is assessed against five assessment objectives (AOs). The assessment objectives are mapped against each task within the marking grids:

		Assessment Objective
AO1		Plan their approach to meeting the project brief
AO2		Apply core knowledge and skills as appropriate
•	AO2a	 core knowledge
•	AO2b	 core skills
		 i) communication e.g. providing information and advice to customers and / or wider stakeholders on the potential risks of a change to an industrial system, or making a presentation to a stakeholder on the implications of change ii) work collaboratively with other team members and stakeholders e.g. to develop content to bid for a construction project iii) applying a logical approach to solving problems, identifying issues and proposing solutions e.g. through setting criteria for successful implementation of a system, using cost / benefit analysis of the introduction of new procedures or equipment iv) primary research e.g. obtaining measurements related to a design and / or customer requirement.
AO3		Select relevant techniques and resources to meet the brief
AO4		Use maths, English and digital skills as appropriate
•	AO4a	o maths
•	AO4b	 English
•	AO4c	o digital
AO5		Realise a project outcome and review how well the outcome meets the brief
•	AO5a	 realise a project outcome – was the right outcome achieved
•	AO5b	 review how well the outcome meets the brief, how well was the brief met, the quality of the outcome in relation to the brief

Research 1.1

(The logical investigation into and study of materials and sources in order to establish facts and • • reach new conclusions).

Emp	Employer-Set Project mark distribution										
This objec Set F	This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.										
Tas	sks	A01	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
	Part 1										
1.1	Research	2	3	0	2	0	0	2	0	0	9

Task-specific requirements and considerations Task 1.1

- Candidates should have access to the Internet in order to conduct research
- Research notes are likely to cover approximately 3 sides of A4
- Candidates should be reminded to keep a record of their sources.

(3 hours) (9 marks)



1.2 – Report (written account of something that has been investigated).

Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	A01	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
1.2 Report	6	6	6	2	2	2	2	0	0	26

Task 1.2

- Candidates should be reminded to include details of sources referenced. Sources and references are not
 included in the minimum 1,500 word count.
- To aid deliverability and manageability of assessment, sessions can be split e.g where timetabling of an appropriate location for six hours is not possible, where centres access to computer resources is limited, or where candidates are not available for six consecutive hours (e.g. due to work placement commitments).
- Where necessary sessions can be timetabled over consecutive days. All candidates are required to complete a declaration of authenticity along with their evidence submission.
- If the six-hour session is broken into two three-hour sessions, candidates work must be retained and held securely between sessions.





1.3 – Project plan

(A project plan outlines everything that's needed to create a successful project).

Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	A01	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
1.3 Project plan	4	10	6	2	2	0	0	0	0	24

Task 1.3

- Programme of work plan.
- The supporting statement is likely to be approximately 750 words.

(3 hours) (24 marks)



1.4 – Presentation (conveys information from a speaker to an audience)

Employer-Set Project mark distribution

eal

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	AO1	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 1										
1.4 Presentation	2	6	6	2	0	2	0	0	0	18

Task 1.4 (please refer to centre guidance for full explanation)

- Candidates do not have to use technology to present their findings, but this is encouraged
- Candidates' presentations should be scheduled and timed to include time for questioning following the presentation within the 30 minutes allocation
- All candidates must be asked three questions following their presentation (probing or clarification question not included). The nature of the questions should relate to the content of their presentation. Questions should be posed from the perspective of a client tendering for a construction project and should allow candidates to expand upon and reinforce points covered in their presentation

Examples of types of questions to include are in the centre guidance

(2 ¹/₂ hours) (18 marks)

2.1 – Collaborative problem-solving

(A team approach, a collaboration between peers who help one another solve a problem).

Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks	A01	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
Part 2										
2.1 Collaborative problem-solving	0	6	5	2	о	о	ο	2	о	15

Task 2.1 (please refer to centre guidance for full explanation)

- Candidates should be divided into groups of two or three in order to conduct the discussion element of the task
- Candidates should move directly to drafting the email after the discussions are conducted
- A record of candidates' discussions, interactions collaboration must be included on the assessor observation record in addition all discussions must be video recorded to support observation records to be completed
- The email should be a minimum of 300 words long.



2.2 – Evaluation

How well did the project outcome meet the requirements of the brief

What went well? what didn't go well? what would I do differently?

Employer-Set Project mark distribution

This table illustrates how the 100 marks for the Employer-Set Project are distributed against the tasks and mapped to each assessment objective. These have been set by subject matter experts and employers and will support the comparability between versions of the Employer-Set Project over time.

Tasks		A01	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
2.2 Evaluation		0	0	0	0	0	4	0	0	4	8
Т	otal	0	6	5	2	0	4	0	2	4	23
	AO	0 14 54		10	16			(100		

Task 2.2

• The evaluation account should be a minimum of 750 words long.

• Candidates can structure their evaluation account in the way they feel is most clear and appropriate.

(1 hour) (8 marks)



Task schedule summary

The tasks within the project are designed to be scheduled and taken in order, due to the dependency of evidence being generated in one task being used by candidates in the next. For example, the research reference materials produced in task 1.1 are required for completion of task 1.2, therefore task 1.1 must be completed before task 1.2 can be attempted.

Tas	k	Conditions	Evidence produced	Evidence submitted?	* Timings	
1.1	Research	Supervised/ controlled	Research notes, record of sources	Yes	3 hours	
1.2	Report	Supervised/ controlled	Report Record of sources	Yes	6 hours	
1.3	Project plan	Supervised/ controlled	Programme of work and supporting statement	Yes	3 hours	
1.4	Presentation Supervised/ controlled		Video recording of presentation Presentation materials – e.g. slides, handouts etc. Assessor observation record	Yes	2 ½ hours	
2.1	Collaborative problem- solving	Supervised/ controlled	Video recording of discussions Written discussion notes Email draft Assessor observation record	Yes	1 ½ hours	
2.2	Evaluation	Supervised/ controlled	Evaluation account	Yes	1 hour	
	1			Total timing	17 hours	





Assessment Objectives and Weightings-Employer Set project •

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AO5 Carry out tasks and evaluate for fitness for purpose	Considered analysis and evaluation of project outcome, what went well and what could be improved.	6%

Employer-Set Project mark distribution

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Tasks	A01	AO2a	AO2b	AO3	AO4a	AO4b	AO4c	AO5a	AO5b	Total
				Pa	art 1					
1.1 Research	2	3	0	2	0	0	2	0	0	9
1.2 Report	6	6	6	2	2	2	2	0	0	26
1.3 Project plan	4	10	6	2	2	0	0	0	0	24
1.4 Presentation	2	6	6	2	0	2	0	0	0	18
Total	14	25	18	8	4	4	4	0	0	77
				Pa	art 2					
2.1 Collaborative problem-solving	0	6	5	2	0	0	0	2	0	15
2.2 Evaluation	0	0	0	0	0	4	0	0	4	8
Total	0	6	5	2	0	4	0	2	4	23
AO	14	5	4	10	16			(100	

Assessment objectives

The Employer-Set Project is assessed against five assessment objectives (AOs). The assessment objectives are mapped against each task within the marking grids:

		Assessment Objective
AO1		Plan their approach to meeting the project brief
AO2		Apply core knowledge and skills as appropriate
•	AO2a	 core knowledge
•	AO2b	 core skills
		 i) communication e.g. providing information and advice to customers and / or wider stakeholders on the potential risks of a change to an industrial system, or making a presentation to a stakeholder on the implications of change ii) work collaboratively with other team members and stakeholders e.g. to develop content to bid for a construction project iii) applying a logical approach to solving problems, identifying issues and proposing solutions e.g. through setting criteria for successful implementation of a system, using cost / benefit analysis of the introduction of new procedures or equipment iv) primary research e.g. obtaining measurements related to a design and / or customer requirement.
AO3		Select relevant techniques and resources to meet the brief
AO4		Use maths, English and digital skills as appropriate
•	AO4a	o maths
•	AO4b	 English
•	AO4c	o digital
AO5		Realise a project outcome and review how well the outcome meets the brief
•	AO5a	 realise a project outcome – was the right outcome achieved
•	AO5b	 review how well the outcome meets the brief, how well was the brief met, the quality of the outcome in relation to the brief

Questions & answers!

Survey Link

https://forms.office.com/Pages/ResponsePage.aspx ?id=KTVTy09n106NoplvWJ6pS50Mzlp9eMVKp7Z0j 8JQGY9UQ0UzQ0xRV1MzWE1STFIWVzFCQUVN MVM3NS4u









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