BRENTWOOD
OPEN LEARNING COLLEGE

Assignment Cover Sheet

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Course:	Construction Management level 4 diploma
Assignment NO:	# 11

Marking Criteria:

We expect the learners to write minimum one well expressed point in three lines against each allocated mark. This means one needs to write 15 lines with 5 well expressed points to get high grades for a 5 marks question.

For high grades use examples and illustrations where appropriate.

Question (1)
(i) What are the economic objectives of quality control, and how are they achieved?

(Objectives and achievements are in bold type)

(Objectives)
The economic objectives of quality control involve implementing **cost measures to prevent failure costs in a business due to quality issues with materials or productivity,** which may result in **remedial work, scrapping, low productivity in the field** or even **spoilage of items.**

(objectives)
Other **objectives are the inherent appraisal cost associated with** conducting **quality control assurance** using **testing**, **inspection,** and other means of **product evaluation.**

(Achievements) cost savings **achievements are derived by minimizing rejects or remedial work.**

(Achievements)
Prevention cost is usually achieved **by avoiding mistakes during construction** traditionally **linked to inadequate personnel training, quality control engineering,** and **equipment maintenance**.

Keeping within the boundaries of design specifications and making quality products at no extra cost to involved parties achieves project cost savings.

(Quality control breakdown and analysis)

Quality control is crucial to any company that manufactures products or provides specific services.

It is **the process a business uses** to **ensure that a product or service adheres to a predefined set of quality standards** or meets **the requirements of customers or clients.**

Quality control **encourages quality consciousness, lowers production costs, increases overall customer satisfaction, enhances goodwill, improves production methods, boosts sales; attracts new customers, raises employee morale and ensures a company's use of resources.**

(Quality consciousness)
Quality control **encourages quality consciousness** by encouraging employees to keep quality in mind throughout the manufacturing process.

(Lower production cost)
One can achieve **lower production costs** by **checking** and **correcting** any problems that do not meet quality standards.

(Increases overall customer satisfaction)
Manufacturing and supplying products free of **errors** and **defects, assures** and **increases overall customer satisfaction.**

(Enhance goodwill)
By consistently **satisfying customer needs** and **producing quality products** that meet an organization's quality control requirements, enhances goodwill; thereby **upholding the reputation of a business.**

(Employee and company morale)
Employee production and recognition of high-quality products for consumers promote **employee and overall company morale.**

(Improve production methods, boost sales and attract new customers)
A consistent quality control process helps **streamline and improve production methods**, (**Boost sales)** and can help a company develop a reputation for quality which may **attract new customers**.

(company use of resources)
Quality control **Ensures a company's use of resources by** effectively utilizing minimum product and material waste.

Quality control ensures that contractors meet all design and functionality specifications in construction.

Quality control is primarily undertaken to **achieve a higher product or outcome.**

A good product is the result of an owner and contractor's partnership ensuring that all quality control procedures are executed at every stage of a project, through **dialogue, communicating technical issues, meetings, discussions and adhering to quality and assurance programmes.**

(Question 1)
(ii)What are the features of field quality control?

Implementation of **accuracy, timeliness, completeness, friendliness, anticipating customer needs, knowledge and the appearance of personnel or facilities** are the features of quality control.

Production of **excellent service, discovering the most effective ways to perform tasks,**
Making use **of experience to get things done while being proud of one's efforts to accomplish tasks, providing business opportunities for contractors and ensuring an owner experiences joy and satisfaction from having value for money** displays field qualities.

Contractors use **employees' expertise and proper equipment,** giving priority to **activities and procedures** with the **highest quality control rating** to achieve effective quality control measures depending on the **workload, field scheduling activity** and **other facilities** stipulated in a contract.

Question (1)
(iii)How can contractor quality control be implemented effectively?

Implementing effective contractor quality control requires the contractor to be **sharp** and **diligent** in implementing his quality control program.

Sharp in showing his **competence** and **clear understanding** of the results of his program through **clever resourcefulness,** being **well alert, careful** and **persevering** in carrying out his task or duties.

Construction quality control entails **ensuring** that all **materials, personnel and activities** are carried out to higher quality standards at each phase of a project.

A contractor should set **clear measurable quality objectives; documenting quality, and deliverables** that **align with the project's budget, stakeholders' expectations, processes and outcome while adhering to all design and functionality specifications.**

The contractor quality control plan should **clearly state the definition and communication** of **acceptable criteria** using **checklists** and **notes** to **conduct inspections**, **correct deficiencies**, and **verify acceptable criteria and analysis to prevent future deficiencies and associated costs** while **avoiding mistakes** during construction.

The contractor should try to **minimize** or **reduce failure costs** due to **quality issues** with materials or products.

He must also seek to **reduce remedial work**, **scrapping**, **low productivity in the field,** or even **spoilage of items**.

Summary
To effectively implement contractor, control a contractor must focus on **clear communication, detailed contract terms, thorough pre-qualifications of contractors, regular inspections, utilising project management software, proactive risk assessment, provide consistent feedback and evaluation** to **monitor performance** and **address issues promptly throughout a project's life cycle.**

Question 1
(iv) Why are specifications important?

Specifications are important because **they specifically deal with the prescribed quality of work being undertaken in the field** and the **right kind** and **quality** use of materials in the field,

Specifications **ensure the successful completion of a project by providing clear guidelines and instructions.**
They establish **shared understanding** by **defining a project's performance and construction expectations** which minimise misunderstandings between **stakeholders.**

By using **statistical and probability tools** to **evaluate samples** and **determine the quality of materials** used in the field; It is the designer's **prerogative** to specify what constitutes an **acceptable or unacceptable result** from the inception of a project.

Specifications also **Reduce risk** by identifying **potential challenges** and **managing** them **proactively**.

Specifications help **ensure** a project adheres **to legal requirements and safety codes.**
Supports cost control by **specifying budgetary limits** and necessary **resources thereby,** avoiding **cost overruns.**

Specifications can serve as a **roadmap** for a project, **ensuring consistent progress** towards **set goals.**

Being the basis of all offers used **to ensure chosen suppliers adhere to and provide what is specified in their contracts. "Specifications support contract management".**

Specifications also **support client assurance** and **improve product development.**
In these cases, specifications help assure clients that their commissioned assets are the ones being delivered.
Client support assurance and **well-defined product specifications** help ensure consistent

performance, predictability and product durability.

Question 1
(v) What are incentives and penalties in specifications?

Incentives and penalties are **contractual statements** that **measure performance** in specifications**.** They are **contractual clauses** designed to **motivate desired behaviours** and hold parties accountable for performance outlined in the specifications.

Though **important** and **necessary** both **Penalties** and **incentives** are included in contracts but where **incentives motivate** a workforce to create a **powerful and positive worksite atmosphere.**
Penalties may have **negative connotations** and produce a **negative domino effect on a project** and should be avoided by an owner.

(Summary)

(Incentives)
"Incentives "are rewards or **bonus payments paid** to a contractor or supplier for exceeding performance expectations. e.g. completing a project ahead of schedule or exceeding quality standards.

Incentives are **a basic part of any construction contract**; they promote an attitude of motivation in the contractual relationship, outline stipulated compliance procedures and take the form of **inducement, encouragement and threats.**

(Penalties)
Penalties are **financial deductions** imposed on a contractor for failing to meet specified criteria such as missing deadlines or delivering substandard work.

A **penalty clause** in a contract assesses **a monetary penalty** on a contractor usually daily for the delay in the completion of a project.
The main objective of using late payment penalties is to push construction actors to respect their commitments.
However, it is advisable to avoid including penalties because they tend to strain relationships between an owner and the contractor.

(**Q2**) **How can you achieve quality control in the field?**
To achieve quality control in the field; one must display the necessary technical and practical expertise to establish clear quality standards, by implementing robust inspection processes, conducting regular audits, utilising statistical data analysis, training employees on quality procedures, monitoring performance against standards and actively identify and address issues through corrective actions while fostering a culture of continuous improvement and accountability across an organization.

While fostering a culture of continuous improvement and accountability across an organization.

One must possess the necessary technical and practical expertise required to specify quality requirements for each activity and facility.

Create clear accurate designs, drawings, specifications and models which translate into quality products in the field.

Have the contractor's field management participate in the design process and quality control specifications

Spearheaded procurement of only quality materials.

Install measures to protect materials and equipment during all phases of construction.

Research effective methods of construction using suitable equipment and tools.

Develop and use the latest quality control technology and know-how to function effectively

Ensuring contractors understand the need for quality control and making sure staff are trained to ensure the highest quality standard in the field.

Assist in establishing quality control on the job site.

Make frequent visits to the job site to ensure quality control programmes are being executed and collaborate with field staff to solve quality control problems.

Make engineers available with enough experience to deal with quality control issues.

Ensuring that the contractor explains to sub-contractors all of their responsibilities and objectives of the project.

Keep effective records of issues and provide feedback to design engineers to help future projects avoid such issues.

And involve design personnel in providing solutions to problems arising in the construction field.

Question 3
What are the advantages and disadvantages of contractor quality control?

The **advantages** of contractor control include **flexibility in hiring specialised skills for specific projects, cost-effectiveness by only paying for work needed** and the **ability to scale up or down quickly** based on project demands.

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Key advantages of contractor control are **access to specialized skills, cost efficiency, flexibility and reduced overhead.**

(Advantages topics breakdown,)

(Access to specialized skills
Companies can easily **access specialized expertise** without the need to hire full-time employees with those skills and **integrating statistical specifications** into the contractor's daily activities and displaying this for others to view daily will yield better overall quality.

(Cost efficiency:)
Only pay for work needed which can be cheaper than maintaining a full-time workforce.
When testing and inspection are an integral part of a project, **the cost can be well managed** by the contractor and testing by the contractor can help him improve his performance or efficiency at a relatively low cost.

(Flexibility:)
A contractor is in a stronger position to anticipate problems and take the necessary steps to adjust the workforce to **quickly scale up or down to solve problems based on a project's need.**

(Reduced overhead:)
No need to provide benefits or other employment related cost to contractors.
Contractors are better placed to build quality into the product than the owner's quality control supervisor and disputes between contractor, suppliers and quality control departments might be avoided if **all quality issues are the main responsibility of the main contractor.**

(Disadvantages)

Key disadvantages of contractor quality control are **potential communication challenges, less control over day-to-day operations, Quality concerns, legal complexities and the potential** for **lack of loyalty and Potential for quality issues, if not properly managed.**

(legal complexities regarding contractor classification)

compliance of loyalty and Potential for quality issues if not properly managed and **legal complexities regarding contractor classification** and **compliance.**

(Disadvantages topic breakdown:)
(Communications challenges:)
Maintaining **clear communication** with external contractors and stake holders can be difficult leading to **misunderstandings.**

Potential lack of control over the work process, difficulty integrating contractors into company culture, managing multiple contracts and potential quality issues if not adequately supervised.

(Communications challenges:)
Maintaining **clear communication** with external contractors and stake holders can be difficult leading to **misunderstandings.**
Potential lack of control over the work process, difficulty integrating contractors into company culture, managing multiple contracts and potential quality issues if not adequately supervised.

A contractor must keep **accurate records** of all **quality checks and inspections** as well as **details** of **problems** and **solutions.**

The disadvantage of contractor quality control can sometimes lead to a **conflict of interest.**

(Inconsistent application of standards due to **varying skill levels among workers**)
well trained quality control experts are required to assist the contractor in meeting quality control targets.
poor communication between stake holders, contractors suppliers and sub-contractors lead to misunderstandings, inadequate documentation cause delays and rework, lack of standardised training, reliance on subjective assessments, potential for overlooking hidden effects and the possibility of cost pressures leads to short cuts in quality checks when time is limited.

Student Statement:

By submitting this assignment, I confirm that this is my own work.

Student Signature	Ithamar Carrington	Date	2/10/2024

For Tutor / Assessor Use Only

Total Marks	
Marks Obtained	
Percentage / Grade	