

Version No.	Description	Author	Reviewer	Approval	Effective Date
1	EX063 Master Qualification Module One to Three Assignments Candidate Brief	Syllabus Portfolio Manager	Examination Board	Chair of Board of Examiners	16/12/2025

Master Qualification

Modules One to Three

Assignments – Candidate Brief

1. General features of the assignment

The assignment must be an original piece of work and will be assessed by the CIBD Board of Examiners (BoE) against the following criteria:

- Relevance to the assignment question and quality of content
- The assignment should demonstrate the candidate's own experiences, ideas, judgement and investigations.
- Every opportunity should be taken to demonstrate the candidate's information gathering and presentation skills, as well as their ability to interpret and evaluate information critically and creatively.

Assignments for all modules will form part of the candidate's **Module Five portfolio**.

Confidentiality

The content of the assignment and the candidate's name will remain confidential (as for all other modules). Candidates must be aware of their company's confidentiality policy and confirm this with their Sponsor.

Declaration

Candidates will have to declare formally in writing that the assignment is their own work.

If verification or validity of authorship is required, the BoE reserves the right to contact the candidate. This may be further explored during the **Module Five *viva voce***.

Late submissions

Assignments submitted after the stated deadline will **not** be accepted for assessment for that year.

Timetable

- **Assignment question issued to candidates**. Date issued on website
- **Module One submission deadline**: Date issued on website
- **Module Two submission deadline**: Date issued on website
- **Module Three submission deadline**: Date issued on website
- **Autumn**: Assignment results published alongside other exam results

Assignment format:

- The assignment must include the candidate's CIBD P number and clearly state which module the submission relates to.

- The assignment must be written in **English**, using **Microsoft Word**, and consist of **3,500 to 5,000 words** in the candidate's **own words**.
- **Double line spacing** is required throughout the document.
- All relevant **tables**, **lists**, **diagrams**, **and photographs** should be embedded **within the body of the text**, not as appendices.
- **Photographs** should be included **only if they add value** and enhance understanding of the referenced content.

2. CIBD Master Qualification: Candidate Guidance and Model Assignments Brief (Modules One to Three)

- **Document Purpose: Candidate Guidance**

Objective: To outline three model assignments that require candidates to integrate deep technical knowledge with strategic, financial, and management expertise, demanding strategic leadership and advanced professional expertise.

Core Requirement: All assignments must necessitate critical evaluation, independent judgement, substantial investigation, and a high degree of complexity. All submissions must adhere to the 3,500 – 5,000-word limit.

- **General Preamble to Model Assignments (Modules One to Three)**

The following three example model assignments demonstrate the **structure and rigour** required for a CIBD Master Qualification submission.

Please Note: The core skills evaluated are applicable across all modules. While each model assignment below is drafted with a specific operational focus (e.g., Module One focuses on the Brewhouse), the underlying framework can be adapted. For instance, the **Strategic Quality Roadmap (Module Two)** structure could be applied to a Packaging Quality failure (Module Three), provided the analysis remains rigorously anchored to the operational content of the module being assessed.

The goal is to demonstrate a high standard of cross-functional application within the constraints of your chosen operational module.

2.1. Model Assignment 1: Advanced Brewing/Distilling Science & Technology

Assignment Title: Evaluating and Implementing Advanced Process Technology for Efficiency and Sustainability

Candidate Context: The candidate is an experienced process or technical manager responsible for **optimising** core production efficiency and reducing environmental impact.

Task Requirements:

Scoping Note: *The analysis must focus on one clearly defined area of sub-optimal performance. Investigation of novel technology should be limited to two to three options,*

focusing the word count on deep evaluation and implementation planning rather than exhaustive literature review.

1. **Problem Identification & Investigation:** Identify and define a critical area of suboptimal performance within a core process (e.g., fermentation kinetics, continuous distillation yield, **flavour** stability in non-alcoholic products). The analysis must be based on a minimum of 12 months of operational data and must quantify the commercial and technical impact.
2. **Critical Technology Evaluation:** Critically evaluate and investigate at least **two novel or non-standard technical solutions** (e.g., advanced separation membranes, CO2 purification/re-use, AI-driven process control systems) that could resolve the identified issue. The evaluation must include detailed engineering principles, process flow modifications, and safety justifications.
3. **Implementation Plan & Justification:** Select the most viable option. Develop a comprehensive, science-backed implementation plan, including a detailed **cost-benefit analysis (CBA)** encompassing capital expenditure (CAPEX), operational savings (OPEX), and calculated **Return on Investment (ROI)** over a minimum five-year horizon.

Expected Deliverables: A scientifically rigorous proposal demonstrating mastery of chemical, physical, and/or microbiological principles, linked directly to quantified financial outcomes.

2.2. Model Assignment 2: Quality Management & Sensory Science

Assignment Title: Strategic Quality Roadmap for Flavour Stability and Regulatory Risk Management

Candidate Context: The candidate is a senior Quality Assurance leader responsible for the integrity of the product portfolio and compliance across all markets.

Task Requirements:

Scoping Note: *The gap analysis and roadmap development should be concentrated on the specific failure (e.g., TCA or NDMA contamination) and not a full QMS audit. Focus the word count on strategic response, resource justification, and the integration of sensory science.*

1. **Gap Analysis & Risk Prioritisation:** Conduct a comprehensive gap analysis on the existing Quality Management System (QMS) against an internationally recognized standard (e.g., ISO 22000, BRCGS). This analysis should follow a simulated, high-impact quality failure (e.g., persistent **TCA** (2,4,6-trichloroanisole) contamination, **NDMA** (NNitrosodimethylamine) formation, or major import regulatory non-compliance). Prioritise risks based on impact on public health, brand equity, and financial loss.
2. **Strategic Roadmap Development:** Develop a three-year strategic Quality Roadmap to address the systemic failures. This roadmap must detail revisions to Critical Control Points (CCPs), Operational Prerequisite Programs (OPRPs), and the deployment of advanced analytical and microbiological monitoring techniques.
3. **Sensory Integration and Justification:** Detail how the enhanced QMS will incorporate **advanced sensory risk management**. This includes revising the **flavour** standard and proposing a structured, validated training and calibration **programme** for the site sensory panel. Justify the required investment in technology and human resources to the executive level.

Expected Deliverables: A strategic Quality Management document demonstrating the candidate's ability to apply risk-based thinking and sensory expertise to manage complex, plant-wide quality and compliance issues.

2.3. Model Assignment 3: Business Management, Finance & Project Management

Assignment Title: Full Business Case Development and Risk Mitigation Strategy for a Large-Scale Plant Expansion (Investment Proposal)

Candidate Context: The candidate is the nominated **Project Sponsor** responsible for the financial justification and governance of a major capital expenditure (CAPEX) project **(£35M+)**.

Task Requirements (Structured as an Investment Proposal):

Scoping Note: *To ensure the assignment is manageable within the 3,500 to 5,000-word limit, the candidate must focus on the strategic analysis and high-level justification of the investment, not the exhaustive detail of a full operational business plan. Analysis should focus on* ***key findings and strategic implications****, not exhaustive data sets.*

1. Commercial Rationale and Strategic Alignment

- **Market Opportunity:** Provide a robust market analysis, clearly defining the specific market segments the added capacity will serve (e.g., new formats, export growth). The project scope is defined as **400,000 hL/year** incremental capacity, and the candidate must justify this specific capacity figure based on projected market growth rates and opportunity cost.
- **Strategic Fit:** Explicitly demonstrate how the investment supports the corporate 5-year strategy (e.g., market share increase, cost leadership, diversification).

2. Financial Model and Investment Appraisal

- **Core Metrics:** Present a **12-year discounted cash flow (DCF) model** (2-year execution, 10-year operational) to calculate and report the following metrics. All assumptions (e.g., inflation rate, sales price) must be clearly stated in a **summary table** to conserve word count:
  - **Net Present Value (NPV):** Using a derived Weighted Average Cost of Capital (WACC) as the discount rate. NPV is the current value of all future cash flows.
  - **Internal Rate of Return (IRR):** To demonstrate the rate of return exceeding the **business acceptable hurdle rate**. IRR is the discount rate at which the NPV of all the cash flows is zero.
  - **Payback Period:** To define the time required for capital recovery.
- **Sensitivity Analysis:** Perform a **two-variable sensitivity analysis** (e.g., impact on NPV/IRR if CAPEX increases by 15% and/or Annual Revenue decreases by 10%) to prove project resilience.

3. Project Governance and Risk Mitigation

- **Governance Selection:** Justify the selection of an appropriate project management methodology (e.g., PRINCE2) and detail the high-level governance structure (Steering Committee, Project Team roles). Avoid creating detailed Gantt charts; focus on **justification of the organisational and control structure**.
- **Risk Register and Mitigation:** Compile a detailed risk register for the project. For the three highest-impact risks, formulate and justify specific, actionable mitigation and contingency strategies. The analysis must cover commercial, financial, and technical risks.

Expected Deliverables: A highly professional, data-driven report that functions as a complete business case, demonstrating the ability to manage complexity at the nexus of technology, finance, and project execution.

3. Assignment Marking Guidance and Assessment Criteria

All three assignments will be assessed against the following four criteria. The total marks will be weighted equally across the core technical and strategic areas.

Criterion	Description	Weighting

A. Technical Depth and Rigour	Accuracy of scientific/engineering principles, use of current industry standards (e.g., QMS, process control), quality of data analysis, and technical justification of proposed solutions.	30%
B. Critical Evaluation and Problem Solving	Ability to diagnose complex problems, critically evaluate multiple options, exercise sound professional judgement, and provide wellreasoned recommendations based on evidence.	30%
C. Strategic Application and Integration	Integration of technical solutions with commercial, financial, and strategic objectives. This includes effective risk management, governance structuring, and application of business models (e.g., NPV, ROI).	25%
D. Communication and Presentation	Clarity, logical structure, professional tone (executive/board-level appropriate), correct use of industry terminology, and adherence to assignment length and formatting requirements.	15%

4. General Penalties and Submission Rules

To ensure fairness and maintain the professional standard of the Master Qualification, the following penalties and submission rules apply:

Rule Category	Standard Requirement	Penalty Applied
Late Submission	Assignments must be submitted by the published deadline (as per the annual timetable).	**Zero Mark:** Assignments submitted after the stated deadline will not be accepted for assessment for that year and will receive a zero mark.
Word Count Breach	The submission must fall within the range of 3,500 to 5,000 words (excluding mandatory declarations and references).	**Graduated Deduction:** A penalty deduction of **10% of the final mark** will be applied for submissions falling outside the stated range (below 3,500 or exceeding 5,000 words).
Academic Misconduct	The assignment must be the candidate's own original work, fully adhering to the CIBD declaration.	**Fail and Disqualification:** Plagiarism, collusion, or falsification of data is treated as academic misconduct. The submission will receive a zero mark, and the candidate may face disqualification from the qualification.
Confidentiality	Candidates must adhere to their company's confidentiality policy, confirmed with their Sponsor.	**Referral to Sponsor:** Any perceived breach of confidentiality may lead to the assignment being withheld from assessment pending verification with the candidate's Sponsor.

5. Exceptions (Mitigating Circumstances)

Candidates may apply for formal exceptions to the standard penalties for Late Submission due to **Mitigating Circumstances**.

Mitigating Circumstances (Late Submission Exception)

Candidates may apply for an exception to the **Late Submission** penalty only under severe, unforeseen, and unavoidable circumstances, known as Mitigating Circumstances.

Process for Requesting Exception:

1. **Immediate Notification:** The candidate must notify the CIBD office in writing (via email) immediately upon becoming aware of the circumstances, and **prior to the published submission deadline.**
2. **Formal Application:** A formal application for Mitigating Circumstances must be submitted on the official CIBD form.
3. **Mandatory Evidence:** The application **must** be supported by independent, verifiable evidence (e.g., a formal medical certificate signed by a practitioner, police report, or official documentation). Evidence provided after the submission deadline will not normally be considered.
4. **Decision:** The decision to grant an extension or waive the penalty is made by the Board of Examiners, and their decision is final. Approved exceptions usually result in a short, fixed extension to the deadline for the current assessment period.

Note on Academic Misconduct: The policies and penalties relating to Academic Misconduct (plagiarism, cheating) are absolute and are **not subject to mitigation**.