

**EXTERNAL INTERGRATED SUMMATIVE ASSESSMENT**

**Quality Controller, NQF4**

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| **STUDENT NAME & SURNAME** |  |
| **IDENTITY NUMB ER** |  |
| **ASSESSMENT CENTRE** |  |
| **ACCREDITATION NUMBER** |  |
| **QUALIFICATION** | **QUALITY CONTROLLER** |
| **QAQA ID** | **117309** |
| **NQF LEVEL** | **4** |
| **CREDITS** | **173** |
| **PAPER NUMBER** | **1D** |
| **DATE OF EISA DD/MM/YYYY** |  |
| **DURATION** | **2 HOURS** |
| **TOTAL MARKS** | **120** |

**EXTERNAL INTEGRATED SUMMATIVE ASSESSMENT**

**QUALITY CONTROLLER**

**QUESTION PAPER 1D**

**GENERAL EISA RULES**

**1. Students are only allowed to use the supplied EISA booklets.**

**2. Students are only allowed to use a black pen for their answers.**

**3. Students to ensure that their name, surname and EISA registration number appears on the front of your EISA booklet.**

**4. This is a closed book examination; therefore, no other material or belongings are to be brought into the assessment centre. Should you bring any other material or belongings into the assessment centre, you will be required to leave such at the front of the assessment centre examination room. The assessment centre will not be held liable for any loss or damage to property brought into the assessment centre examination room.**

**5. All EISA booklets must be handed back to the invigilator intact. No pages may be torn off from the EISA booklet. The removal of EISA booklets from the examination room is prohibited.**

**6. Students may make use of a calculator in this EISA.**

**7. Unless this is an online examination where access to a computer will be made available to you; the use of any communication devices, including smart watches, cell phones, tablets, iPads, headphones and laptops are prohibited.**

**8. All cell phones are to be switched off for the duration of the EISA.**

**9. The invigilator will not assist you with the explanation of questions related to the EISA.**

**10. Students are prohibited from conversing in any manner with other students.**

**11. Students may not leave the examination venue within one hour of the start of the examination and in the last 10 minutes of the allotted examination period.**

**12. Students who are found to be disruptive and unruly in the assessment centre will be requested to leave the assessment centre by the invigilator.**

**I HEREBY CONFIRM THAT I HAVE READ THE ABOVE EISA RULES AND DECLARE THAT I**

**UNDERSTAND AND ACCEPT THE RULES.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**SIGNATURE OF STUDENT**

**CANDIDATE INSTRUCTIONS**

* **Candidate must complete all question s in the EISA**
* **Candidates must ensure that they use only a black pen when completing this EISA.**
* **Should you require additional space to complete your answer, please request additional paper from your invigilator.**
* **Ensure that you indicate your name, surname and EISA registration number at the top of the additional paper.**
* **Also ensure that the question number is clearly marked on your additional paper.**

**-----------------------------------------------------------------------------------------------------------------**

ur Sayzwani Abd Suki;Elmi Abu Bakar ,Shahrul Kamaruddin/ A Case Study on Improvement of Outgoing Quality Control Works for Manufacturing

Products 4(1), pp. 12-21, 2015

**Question 1.1**

* + 1. **Complete a quality inspection checklist for input, inline and endline for product or service**

**(10 Marks)**

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| 1.1.1 Case Study  Allocate ten mark each for number 1  Use discretion to allocate marks for any other relevant point that may be given by the student. |

Case Study:

Quality inspection is the measurements aimed at checking, measuring, or testing one or more product characteristics and relating the results to the requirements to confirm compliance. This task is usually performed by quality inspectors and does not fall within the responsibility of production workers.

**Purpose of Quality Inspection**

* To distinguish good batches from bad batches
* To distinguish good pieces from bad pieces.
* To determine if the process is changing.
* To determine if the process is approaching the specification limits.
* To rate the quality of the product.
* To rate the accuracy of inspectors.
* To measure the precision of the measuring instrument.
* To secure products – design information.
* To measure process capability.

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| When creating a check list for quality inspection, the above mentioned purposes of Quality inspection must be taken into consideration. **Create a Quality Inspection checklist** which will address the purposes of Quality Inspection listed above. | |
| **Total** | **10** |

* + 1. **Identify whether testing and/or inspecting is applicable in a product manufactured or service environment.**

**(10 Marks)**

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| 1.1.2 Constructive Response  Allocate ten marks  Use discretion to allocate marks for any other relevant point that may be given by the student. |

[Quality](https://ceopedia.org/index.php/Quality) parameter refer to the size characterizing the [quality](https://ceopedia.org/index.php/Quality) level of the final product/service, the [quality](https://ceopedia.org/index.php/Quality) of final products or services can be described using some of the following Quality Inspection process below:



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| Looking at the process above at what stage will there be a need to perform either inspection or testing. Give industry related example to substantiate your answer. | |
| **Total** | **10** |

**1.1.3 Complete a testing checklist for a product or service across all processes (input, inline and endline)**

**(10 Marks)**

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| 1.1.3 Case Study  Allocate ten mark each for number 1  Use discretion to allocate marks for any other relevant point that may be given by the student. |

Service testing starts with the inputs, processing and outputs of services. It is important that inputs of services are tested for quality requirements before the service process starts. That is if the inputs are of good quality, it is likely that the quality services will be rendered.



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| Generate a testing checklist that will ensure that there will be no gaps in the recruitment service process. The checklist should address all the steps in the process. | |
| **Total** | **10** |

**1.1.4 Continuously inspect and test input, inline and endline to prevent non-conformance and make recommendations.**

**(15 Marks)**

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| 1.1.4 Case Study  Allocate fifteen Marks for number 1  Use discretion to allocate marks for any other relevant point that may be given by the student. |



The problem solving process can assist in making recommendations to prevent non-conformance during the input, inline and endline of a process

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| **Number** | **Question and Answer** | **Mark** |
| 1 | Discuss the problem solving process which will assist in preventing non-conformance for the **input, inline** and **endline** | 15 |
| **Total** |  | **15** |

* + 1. **Apply knowledge of and adhere to good manufacturing principles (GMP) of product or good laboratory practices (GLP) of services**

**(10 Marks)**

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| 1.1.5 Constructive Response  Allocate 10 marks for number 1 |



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| **Number** | **Questions and Answers** | **Marks** |
| 1 | Discuss the recycling process in the picture above applicable to a quality control environment. | 10 |
| **Total** | | **10** |

**1.16 Apply different testing methods for different characteristics to test for product/service quality applicable in their environment**

**(10 Marks)**

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| 1.1.6 Case Study  Allocate ten marks for no1  Use discretion to allocate marks for any other relevant point that may be given by the student. |

Case Study:

Testing methodologies are applied in different types of industries. The types of tests conducted depend on the products/services being produced, these tests are important for a company to grow and to be competitive.

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| **Number** | **Questions and Answers** | **Marks** |
| 1. | Discuss the five test methodology below in details and give industry example.   1. Integration testing 2. Unit testing 3. System testing 4. Performance testing 5. Load testing | **10** |
| **Total** |  | **10** |

* + 1. **Apply knowledge of testing procedures of a product or service.**

**(10 Marks)**

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| 1.1.7 Constructive Response  Allocate ten marks for no1  Use discretion to allocate marks for any other relevant point that may be given by the student. |

Random testing is often a difficult practice to approach for businesses in all industries. Both established and growing businesses need the same questions answered in regard to how they should implement a random test program.

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| **Number** | **Questions and Answers** | **Marks** |
| 1. | Discuss Random testing and the 9 guidelines for an effective random testing program: | **10** |
| **Total** |  | **10** |

* + 1. **Test if product/service conforms to the required standard**

**(5 Marks)**

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| 1.1.8 Multiple Choice Questions  Allocate 1 mark each for number 1 to 5 | | | |
| **Number** | **Multiple Choice Questions** | **Answers** | **Marks** |
| 1. | The quality of the final product /service is determined by the characteristics of   1. Resource Functioning 2. Resource Testing 3. Resource Allocation 4. Resource Analysing |  | 1 |
| 2. | A quality problem may occur due to   1. Lack of resource, 2. Skilled employees 3. Poor management 4. All of the above |  | 1 |
| 3 | When carrying out the remedial measures, The Shewhart PDCA cycle Means  A. Plan, Check, Do, Apply  B. Plan, Check, Do, Adopt  C. Plan, Check, Do, Analyse  D. None of the above |  | 1 |
| 4 | When analysing a problem it may be necessary to look beyond the obvious by,   1. Seek other perspectives 2. Be flexible in your analysis 3. Consider various strands of impacts 4. All of the above |  | 1 |
| 5 | This technique is used to give a rough assessment for the probability of a source of a problem  A. Flow Diagram  B. Pareto Charts  C. Histogram  D. Cause and effect diagram |  | 1 |
| **Total** | | | **5** |

**Question 2.1**

**2.1.1 Identify tools (what) and method (how) to use in processing information during manufacturing and service rendering**

**(5 Marks)**

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| 2.1.1 Multiple Choice Question  Allocate one mark each for number 1 to 5 | | | |
| Number | Multiple Choice Questions | Answers | Marks |
| 1. | Used by quality assurance personnel to validate the quality of purchased raw materials based on set acceptance criteria   1. Technical datasheet 2. Certificate of Conformance 3. Inspection checklist 4. Testing checklist |  | 1 |
| 2. | Documented information needs to be maintained by the organization to establish   1. The scope of the quality management system. 2. The information which will not support the operation of processes. 3. Measure to hide the quality policy and procedures. 4. None of the above |  | 1 |
| 3 | 3 steps constituting the data processing cycle are:   1. Input, Output, Process 2. Process, Input, Output 3. Input, Process, Output 4. All of the above |  | 1 |
| 4 | Collation plays the following roles:   1. Can be used as a tool to control theft. 2. Customer complaints are listed in files and can be attended to promptly. 3. The prices for different products are listed accordingly. 4. All of the above. |  | 1 |
| 5 | Customer complaints documents are inputs used to:   1. attend to complaints from customers 2. Attend customer complaint from employees 3. Attend customer complaints from managers 4. Attends customer complaints from suppliers |  |  |
| **Total** | | | **5** |

**2.1.2 Gather information using tools from samples taken and data from statistical process control (SPC) (10 Marks)**

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| 2.1.2 Case Study  Allocate 10 marks for number 1  Use discretion to allocate marks for any other relevant point that may be given by the student. |

The data table can be used to draw charts and combined to summarize information as shown below.



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| **Number** | **Question and Answer** | **Marks** |
| 1 | Study the data above and discuss why the **chart with data table** was used to gather the above information.  You must cover the following in your answer:  1.The relationship between the two batches  2.Interptretation of the graph peaks for the two batches  3. If control charts would have provided the same feedback | 10 |
| **Total** | | **10** |

**2.1.3 Analyse sample results and data collected from service delivered or manufacturing process (10 Marks)**

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| 2.1.3 Constructive Respond  Allocate 10 marks for number 1  Use discretion to allocate marks for any other relevant point that may be given by the student. |



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| **Number** | **Questions and Answer** | **Marks** |
| 1 | Use the diagram above to collect data and analyse it from a service delivered or a manufacturing process which might have gone wrong. | 10 |
| **Total** | | **10** |

**2.1.4 Make recommendation for process improvements based on the analysis (15 Marks)**

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| 2.1.4 Constructive Respond (Cognitive Category – Medium Order = 10 and High Order = 5)  Allocate 15 marks for number 1  Use discretion to allocate marks for any other relevant point that may be given by the student. |

In order to improve a process, data must be collected, interpreted and analysed. Study the diagram below and discuss the 13 steps of problem solving methodology and make recommendation on the process improvement.



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| **Number** | **Question and Answer** | **Marks** |
| 1 | ‘ | 15 |
| **Total** | | **15** |

**Marks Allocation Grid (For use by Assessor Only)**

|  |  |  |
| --- | --- | --- |
| **Question** | **Marks** | **Allocated Marks** |
| 1.1.1 | 10 |  |
| 1.1.2 | 10 |  |
| 1.1.3 | 10 |  |
| 1.1.4 | 15 |  |
| 1.1.5 | 10 |  |
| 1.1.6 | 10 |  |
| 1.1.7 | 10 |  |
| 1.1.8 | 5 |  |
| **Total Question 1.1** | **80** |  |
| 2.1.1 | 5 |  |
| 2.1.2 | 10 |  |
| 2.1.3 | 10 |  |
| 2.1.4 | 15 |  |
| **Total Question 2.1** | **40** |  |

**Assessor Details**

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| --- | --- |
| **Assessor Name and Surname** |  |
| **Registration Number** |  |
| **Signature** |  |
| **Date** |  |

**Moderator Details**

|  |  |
| --- | --- |
| **Moderator Name and Surname** |  |
| **Registration Number** |  |
| **Signature** |  |
| **Date** |  |