

## EXTERNAL INTEGRATED SUMMATIVE ASSESSMENT EXEMPLAR 1A

<b>STUDENT NAME &amp; SURNAME</b>	
<b>ID NUMBER</b>	
<b>EISA REGISTRATION NUMBER</b>	
<b>ASSESSMENT CENTRE</b>	
<b>ASSESSMENT CENTRE ACCREDITATION NUMBER</b>	
<b>QUALIFICATION</b>	Occupational Certificate: Maintenance Planner
<b>SAQA ID</b>	101874
<b>CREDITS</b>	261
<b>NQF LEVEL</b>	<b>5</b>
<b>PAPER</b>	1A (there are 3 papers to be written: 1A, 1B and 1C)
<b>DATE OF EISA</b>	
<b>DURATION</b>	3 Hours
<b>TOTAL MARKS</b>	165

### 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 cover 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, i-Pads, 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.

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**SIGNATURE OF STUDENT**

**CANDIDATE INSTRUCTIONS**

- Candidates must complete all questions in this 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.



**Question 1.1.2**

The work order/job card for preventative planned maintenance was issued to an artisan/technician for execution. The artisan/technician has completed the work and has identified and recorded the defect by means of the feedback section in the work order/job card. To ensure that the corrective work order /job card to be generated by planning department is of good quality, respond to the following:

- a) Explain the importance of evaluating notifications. **(5)**


- b) List 5 key factors that need to be evaluated in the notification to ensure that work orders / job cards are of high quality. **(5)**


**Question 1.1.3**

The primary function of the Maintenance Planning Unit within the Maintenance Department is to plan and coordinate all types of maintenance work for execution to ensure equipment availability and reliability.

- a) Identify different types of maintenance schedules and describe the process to review these maintenance schedules from the Computerized Maintenance Management System (CMMS) or manual system. **(5)**


- b) List the planning requirements to ensure that work orders / job cards to be issued have sufficient detail for proper execution to the assigned maintenance staff. **(5)**


**Question 1.1.4**

You are about to compile the work order/job card for planned scheduled maintenance work to be carried out in the week ahead. List all necessary information that should be on the work order/job card from the Computerized Maintenance Management System (CMMS) or manual system. You can use any example from your own experience. **(5)**


**Question 1.1.5**

a) Describe different types of equipment failures that can be identified from notifications/work request or feedback from work orders/job cards. Give any practical examples. **(5)**


**b) List examples of the equipment failure mode that can be noted from notifications or work order feedback. (5)**


**c) Explain the process on how the identified equipment failures and root causes are analysed and processed for corrective maintenance work. (10)**






**Question 1.2 Scope and plan work in accordance with identified notifications /work requests.**

**Question 1.2.1**

- a) Give a brief description of **what** Job Scoping is, **why** it is a necessary part of maintenance planning and **how** is it done. **(6)**


- b) List and describe all the resource requirements for Job Scoping. **(14)**




**Question 1.2.2**

Following Job Scoping process show by an example how you will compile the work order with all task list and other resources. Show example from maintenance system you are familiar with. (10)

**Question 1.2.3**

Describe reservations and requisitions and its importance within maintenance planning function. (10)


**Question 1.2.4**

a) Define the work order cycle / process from the point when it is opened to when it is closed. (5)


- b) Give an example of work order status codes based on work progress, changes, and updates.  
 Show an example from a maintenance system that you are familiar with. (5)


- c) List the causes of maintenance backlogs and how to control it. (5)






### Question 1.3.2

It is Monday morning, the Maintenance Supervisor issues corrective maintenance work order / job card to a Mechanical Fitter to replace bearings on a motor. This motor must be removed and taken to maintenance workshop for this task to be carried out. Upon arrival on site the Maintenance Fitter informs the Production Supervisor on the day that he will need few hours to remove the motor to replace the bearing. The Production Supervisor was surprised and advised that he was not informed and he cannot release the equipment because it will disrupt the Production output planned for the day.

The Production Supervisor informs the Mechanical Fitter that the equipment can be released at the end of the shift when the factory closes. The Mechanical Fitter then arranges after hours overtime to carry out this task. After hours when the Mechanical Fitter was about to start removing the motor, he realize that he needs an Electrician to disconnect the motor and he has not made arrangement with Electrician to be available for overtime. The Mechanical Fitter could not remove the motor due to the unavailability of the Electrician.

The next morning on Tuesday, the Maintenance Fitter informs to the Maintenance Supervisor that he could not do the task because he forgot to arrange with Electrician to be available after hours to disconnect the motor. The arrangement is made for the Electrician to be available after hours since the Production Department can only release the equipment at end of the shift. At the end of the shift the Electrician disconnect the motor and the Mechanical Fitter also decouple the motor. The Maintenance Fitter then realize that the motor requires the forklift to be taken to the workshop and the forklift was not available.

They then had to wait till next morning to get the forklift. On Wednesday morning when the forklift was available the motor was then taken to the workshop. On Wednesday morning the Production Department wanted to start the shift and they could not because the motor has been removed and the task was not completed by maintenance team. There was production loss on that day. The Mechanical Fitter then began to strip the motor and remove the old bearings. Thereafter he went to the maintenance stores to get the bearings. The store man advised the Mechanical fitter that the bearings are not available, and he was not made aware to place order. The store man then places an order and was informed by the supplier that the bearings will be only available next day late afternoon.

On Thursday morning the Production Department was informed that they are waiting for bearing from the supplier to be delivered late in the afternoon. The Production Department was affected for the day. The bearings were later delivered and were replaced. The Mechanical Fitter installed back the motor and the electrician reconnected the motor. The installation was completed late on Thursday afternoon and handed over the equipment to Production Department the next morning. The Production Department only resumed production of Friday morning.

Given the scenario above answer the following:

- a) Identify key scheduling constrains and possible root causes. **(5)**


- b) Make recommendations for improvement and how to prevent reoccurrence of the problem areas identified. **(10)**







[55]

**TOTAL MARKS FOR THE EXAM: 165**

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