



**NAMIBIA UNIVERSITY  
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF ENGINEERING AND SPATIAL SCIENCES**

**DEPARTMENT OF ARCHITECTURE AND SPATIAL SCIENCES  
(LAND AND PROPERTY SECTION)**

<b>QUALIFICATION(S):</b> BACHELOR OF PROPERTY STUDIES DIPLOMA IN PROPERTY STUDIES	
<b>QUALIFICATION(S) CODE:</b> 08BPRS 06DPRS	<b>NQF LEVEL:</b> 6
<b>COURSE CODE:</b> PMT611S	<b>COURSE NAME:</b> PROPERTY MAINTENANCE
<b>ASSESSMENT DATE:</b> JUNE 2022	<b>PAPER:</b> THEORY
<b>DURATION:</b> 3 HOUR	<b>MARKS:</b> 100

<b>FIRST OPPORTUNITY EXAMINATION QUESTION PAPER</b>	
<b>EXAMINER(S)</b>	ELINA TEODOL
<b>MODERATOR:</b>	VERINJAERAKO KANGOTUE

<b>INSTRUCTIONS</b>
<ol style="list-style-type: none"><li>1. Read the entire question paper before answering the Questions.</li><li>2. Please write clearly and legibly!</li><li>3. The question paper contains a total of <b>4 questions</b>.</li><li>4. You must answer <b><u>ALL QUESTIONS</u></b>.</li><li>5. Make sure your name and Student No. is on the ANSWER SHEET(S).</li></ol>

**PERMISSIBLE MATERIALS**

1. Non-programmable Scientific Calculator

**THIS QUESTION PAPER CONSISTS OF 10 PAGES** (Including this front page)

---

**Question 1****SECTION A**

Choose the correct answer for each of the following multiple-choice questions. Each correct answer carries 1 mark. (20)

- 1) \_\_\_\_\_ is most closely associated with breakdown maintenance.
  - A) Equipment adjustments
  - B) Equipment cleaning
  - C) Equipment inspection
  - D) Repair of broken parts
  - E) Replacement of worn parts
  
- 2) A \_\_\_\_\_ is a negotiated agreement between two parties where one is the customer, and the other is the service provider
  - A) Service improvement plan
  - B) Service level agreement
  - C) Service level management
  
- 3) A list of deficiencies in the construction compiled by the project manager or architect near the end of a job is known as a:
  - A) Punch list
  - B) Bid
  - C) Contract
  
- 4) In Property Maintenance an inspection is defined as \_\_\_\_\_
  - A) Term used to indicate that a piece of equipment has a deficiency
  - B) To determine the serviceability of an item by comparing its physical characteristics with established standards
  - C) Tells you how long who and what you need to fix it

- D) Critical element of maintenance management that direct maintenance in a way that provides maximum output of quality work
- 5) As the Property Manager of NUST, you walk past a garden tap on your way to lunch and notice that it's running water non-stop. What should you do?
- A) Contact the facility supervisor for immediate repair
  - B) Call the facility supervisor after lunch
  - C) Ignore it
  - D) Anticipate that the facility manager will notice it
- 6) Attempting to determine when preventive maintenance activities should be performed is known as:
- A) Breakdown maintenance
  - B) Forecasted maintenance
  - C) Preventive maintenance
  - D) Predictive maintenance
  - E) Corrective maintenance
- 7) Benchmarking is defined as \_\_\_\_\_
- A) Setting a standard for how long a piece of equipment may run until it needs to be replaced
  - B) Evaluate performance in terms of absolute measures against an expected norm
  - C) A required criterion or outcome that must be met in terms of levels of achievement
- 8) A Breakdown maintenance is also known as a \_\_\_\_\_.
- A) Reactive
  - B) Proactive
  - C) Expensive
  - D) Inexpensive
  - E) Easy

- 9) Factors affecting the decision of how much preventive maintenance is desirable during the lifetime of the building typically include all the following except:
- A) Design
  - B) Type of product
  - C) Materials
  - D) Workmanship
  - E) Function
- 10) Fault is defined as \_\_\_\_\_
- A) Term used to indicate that a piece of equipment has a deficiency
  - B) To determine the serviceability of an item by comparing its physical characteristics with established standards
  - C) Tells you how long who and what you need to fix it
  - D) Critical element of maintenance management that direct maintenance in a way that provides maximum output of quality work
- 11) Ideally, preventive maintenance will be performed:
- A) After a planned inspection
  - B) After the passage of a specified period
  - C) After a predetermined number of operating hours
  - D) Just prior to the start of the workday
  - E) Just prior to a breakdown or failure
- 12) Ideally, what per cent of the maintenance activities should be allocated to a preventive plan?
- A) Ideally, all maintenance activities should be preventive
  - B) Ideally, it should be as close to 50% as possible.
  - C) 80/20 ratio for scheduled and non-scheduled maintenance
  - D) None of the above

- 13) In the broadest sense, equipment and facilities preventive maintenance extends back to the:
- A) Design and selection stage
  - B) Procurement stage
  - C) Installation stage
  - D) Pilot-testing stage
  - E) Implementation stage
- 14) Maintenance activities are often organized into the two groups:
- A) Breakdown maintenance and preventive maintenance
  - B) Breakdown maintenance and predictive maintenance
  - C) Preventive maintenance and predictive maintenance
  - D) Equipment maintenance and breakdown maintenance
  - E) Equipment maintenance and buildings maintenance
- 15) Many facility operations run continuously. The only way to perform required maintenance in these facilities is to have a \_\_\_\_\_.
- A) Set-up period
  - B) Following up period
  - C) Shutdown period
- 16) Mechanical parts that tend to wear out quickly are scheduled to be replaced during which type of maintenance activity? \_\_\_\_\_.
- A) Preventive maintenance
  - B) Corrective maintenance
  - C) Scheduled maintenance
  - D) Reactive maintenance

- 17) Preventive maintenance is \_\_\_\_\_.
- A) Proactive
  - B) Reactive
  - C) Inexpensive
  - D) Expensive
  - E) Hard
- 18) Preventive maintenance is generally scheduled based on:
- A) Planned inspections
  - B) Passage of time
  - C) Number of operating hours
  - D) All the above
  - E) None of the above
- 19) Reactive maintenance is also known as \_\_\_\_\_ maintenance.
- A) Planned
  - B) After the event
  - C) Proactive
  - D) Predictive
  - E) Preventive
- 20) Responsibilities of the contractor for a construction project include:
- A) Supplying the project concept and requirements.
  - B) Taking responsibility for all materials and workmanship.
  - C) Providing and arranging the financing.

**SECTION B**

For each of the following statements indicate whether it is 'TRUE' or 'FALSE'. Each correct answer carries 1 mark. (7)

- 1) A well-run maintenance department will not have a backlog of work orders.
- 2) Building codes or regulations refers to the regulations that promote general safety by regulating the design and construction of a building's components.
- 3) Following up with the department that requested maintenance to make sure it was completed sufficiently is known as "closing the loop".
- 4) In planning maintenance activities, the first step in the maintenance process is to analyse for improvement.
- 5) In planning maintenance activities, the planner must consider the priority of various tasks, the amount of time required for completion, the type of tools, equipment and labour needed and the size and skill of the maintenance crew.
- 6) Is there ever a circumstance when "run to failure" is the best maintenance practice?
- 7) Life cycles costings is a process to determine some of the costs associated with an asset, including acquisition, installation, operation, maintenance, refurbishment, and disposal costs.

[27]

---

**Question 2**

- a) Daniels is a property maintenance manager. He has been contracted to perform all the typical duties of a property manager. Outline the four (4) main duties expected of Daniels as a property maintenance manager. (4)
- b) Tender document helps to maintain and protect the relationship between client and contractor. List any ten (10) documents to be included as part of the Tender documents in the preparation to invite tenders (5)
- c) State the eight (8) basic principles of tendering process in the construction industry. (4)
- d) State the three (3) types of inspections under planned structural maintenance. (3)
- e) With the aid of a diagram, demonstrate the two main types of maintenance and their respective categories of maintenance management approaches. (4)

**[20]**

---



**Question 3**

- a) Building inspectors are often instructed by property owners or prospective home buyers to inspect and report on the condition of property. Outline the nine (9) basic requirements of a good building defects Survey Report that can be understood by a layman. (11)
- b) Identify the four (4) primary stages of the building conversion process and their respective components. (4)
- c) What is meant by the term 'Project time Management'? (4)
- d) Explain the six (6) steps and processes involved in Project Time Management? (6)
- e) With the aid of a diagram show the six (6) stages of Tendering in the construction industry. (3)

**[28]**

**Question 4**

- a) Mr. Jarson owns Jarson & Sons Property Maintenance Company. To achieve the company's objective, he must consider several strategies for contracting out maintenance work. Outline the four (4) types of maintenance contracts in building that he may adopt. (4)
- b) Majority of builders still obtain much of their work by system of tendering. State the three (3) principal methods of choosing a contractor through tendering in the construction industry. (3)
- c) Outline the three (3) common problems in property maintenance. (3)
- d) State the three (3) causes of Contract changes in the building maintenance industry. (3)
- e) Briefly discuss the main Maintenance Budgets that can be employed for maintenance work. (12)

**[25]**

---

**Good luck!!!**