



**EMA2602  
RRM2602**

October/November 2017

**ENGINEERING MANAGEMENT II (MODULE B)**

Duration 2 Hours

100 Marks

**EXAMINERS**

FIRST

SECOND

EXTERNAL

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**Use of a non-programmable pocket calculator is permissible**

**Closed book examination**

**This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue**

This examination paper consists of 9 pages (including this page).

Answer all the questions in the answer book

**QUESTION 1 (Multiple-choice questions)**

This question consists of multiple-choice questions. Answer them in your answer book. Read through the instructions below.

**Instructions:**

(i) Suppose a question reads as follows

Which of the following statements is/are **correct**?

- a) Good employment relations will usually result in improved employee productivity
- b) Good employment relations will usually result in reduced absenteeism
- c) One of the main functions of a trade union is to negotiate better wages and working conditions on behalf of its members.

- [1] a
- [2] a and c
- [3] a, b and c
- [4] b and c
- [5] c

In this case, all three of the statements (a, b and c) are correct and, therefore, you would write [3] in your answer book next to the number of the question.

(ii) Write down only one of the options (1 to 5) for each question.

(iii) You will receive two marks for a correct answer. No marks will be deducted for incorrect answers.

(iv) Question 1 consists of 10 questions and is marked out of 20.

(v) **Write your answers to the questions in your answer book. Write down the number of the question and, next to it, the number of the option you have selected, for example:**

- 1.1 [5]
- 1.2 [4]
- 1.3 [3]

Employment relations and labour legislation

1 1 Which **one** of the following does **not** form part of the information that an employer should provide to a new employee at commencement of employment? (2)

- [1] brief description of the work
- [2] date on which employment began
- [3] wage or wage rate
- [4] annual, future pay increases during period of employment
- [5] deductions that will be made

1.2 Read the following three statements

- a) An employee is entitled to 14 consecutive days' annual leave per leave cycle
- b) An employer is not required to pay an employee while she is on maternity leave
- c) In terms of the BCEA it is a criminal offence to employ a child who is under 15 years of age

Which of the above statements is/are **correct**? (2)

- [1] a
- [2] a and c
- [3] b and c
- [4] c
- [5] None of the options (1, 2, 3, or 4) is correct

1 3 Read the following three statements

- a) The grievance procedure is a form of downward communication from management to employees
- b) Unresolved employee grievances can lead to unproductiveness and even strikes
- c) A grievance procedure usually provides for an informal, formal and external procedure

Which of the above statements is/are **correct**? (2)

- [1] a
- [2] a and c
- [3] a, b and c
- [4] b and c
- [5] None of the options (1, 2, 3, or 4) is correct

1 4 Read the following three statements

- a) Offences are usually classified as minor, serious, very serious and dismissable in the disciplinary codes of organisations

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- b) Verbal warnings, written warnings, final written warnings, transfer, suspension, demotion and dismissal are all examples of disciplinary sanctions that may be taken against an employee
- c) *In terms of the LRA* there are only three grounds that justify dismissal, namely misconduct, incapacity and operational requirements

Which of the above statements is/are **correct**? (2)

- [1] a
- [2] c
- [3] a, b and c
- [4] b and c
- [5] None of the options (1, 2, 3, or 4) is correct

Engineering contracts and law

1 5 Read the following 3 statements:

- a) One of the requirements of an offer is that it must be definite and complete
- b) A tender that was called for constitutes an offer.
- c) An advertisement is an offer to do business.

Which of the above statements is/are **correct**? (2)

- [1] b and c
- [2] a and c
- [3] a and b
- [4] a
- [5] None of the options (1, 2, 3, or 4) is correct

1 6 Read the following three statements

- a) One of the requirements of an offer is that it must be directed at a definite person or persons
- b) A contract has not yet been concluded when a counter-offer is made
- c) An offer lapses or expires when a counter-offer is made

Which of the above statements is/are **correct**? (2)

- [1] b and c
- [2] a and c
- [3] a and b
- [4] a, b and c
- [5] None of the options (1, 2, 3, or 4) is correct

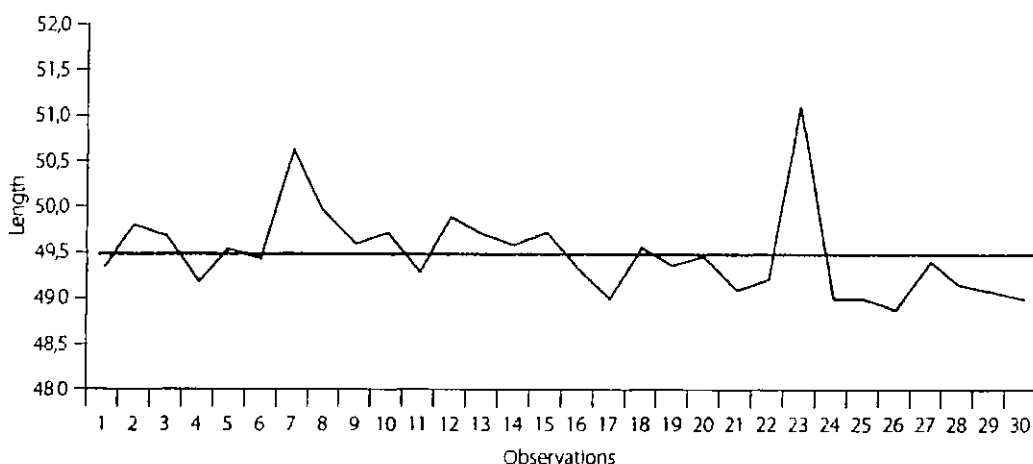
Total quality management (TQM)

Fig 1 - Run chart that records the lengths of fittings (METS-3 170)

1 7 Read the following three statements regarding fig 1

- a) The varying length of various fittings recorded is an example of process variation
- b) The process that produces the various lengths appears to be unstable
- c) A process is in control when all special causes of variation have been removed

Which of the above statements is/are

**correct?**

(2)

- [1] a and b
- [2] a and c
- [3] a, b and c
- [4] a
- [5] None of the options (1, 2, 3, or 4) is correct

The engineer, user of information systems

1 8 Read the following three statements

- a) Computers are excellent devices for data storage and retrieval
- b) Information and communication technologies (ICTs) can assist companies with increasing the rate at which new products are designed
- c) Expert systems can assist decision makers

Which of the above statements is/are **correct?**

(2)

- [1] b and c
- [2] a and b

- [3] a, b and c
- [4] a and c
- [5] none (not a, b, or c)

### Managing technology and innovation

1 9 Read the following three statements

- a) Applied research is usually based on one of the natural sciences and entails studies that involve the understanding of how the laws of nature regulate the world around us
- b) The science-push approach to innovation starts with scientific discovery whereas the demand-pull approach starts with the needs of the customer
- c) Increasing the memory capacity of a flash memory stick from 4GB to 8GB is an example of radical innovation

Which of the above statements is/are **correct**? (2)

- [1] a, b and c
- [2] b and c
- [3] a and b
- [4] a and c
- [5] None of the options (1, 2, 3, or 4) is correct

### Entrepreneurship

1.10 Read the following three statements

- a) The purpose of a business plan is to define how the entrepreneur/management intends to capitalise on a business opportunity
- b) The “executive summary” section of the business plan should include the essential features of the business plan
- c) The business plan of a new (start-up) business should justify the business opportunity to new investors

Which of the above statements is/are **correct**? (2)

- [1] c
- [2] b and c
- [3] a and c
- [4] a, b and c
- [5] None of the options (1, 2, 3, or 4) is correct

[20]

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**QUESTION 2 (Employment relations and labour legislation)**

- 2 1 Describe the purpose of the grievance procedure and briefly explain how grievances should be lodged and handled (6)
- 2 2 Explain when an employee may be suspended. (2)
- 2 3 Discuss the purpose of the Employment Equity Act (No 55 of 1998) (3)
- 2 4 i) Briefly describe the purpose of the Unemployment Insurance Fund (UIF) (2)  
 ii) List 2 types of workers who are excluded from the Unemployment Insurance Act 63 of 2001 (2)  
 iii) What contributions do employees and employers have to make to the UIF? (2)
- 2 5 Describe the role of unions in an organisation What matters should they be consulted about? (6)
- [23]**

**QUESTION 3 (Engineering contract and law)**

- 3 1 The top management of a company, which sells complex engineering equipment, has put extreme pressure on its sales engineers to generate new sales and conclude contracts One of the sales engineers sold some of the company's products on the basis of qualities that it does not possess After the client started to use the equipment they realised that it does not have all the qualities that the sales engineer mentioned They based their purchasing decision on these qualities which are critical to their operations.  
 Required
- i) May the client cancel this contract? Explain your view (3)  
 ii) What is this type of action, by the sales engineer, called? (1)  
 (4)
- 3 2 Differentiate between a debtor and creditor – the terminology as used in the context of contracts (2)
- 3 3 Mary and Susan agree that their verbal contract must be reduced to writing Explain whether a valid contract will be concluded before it has been reduced to writing (3)

- 3.4 Define duress and state what the consequences of duress could be when drawing up a contract (2)
- 3.5 Match each of the following terms (related to the transfer and termination of obligations arising from a contract) in the left-hand column with its correct description or example from the right-hand column. In your answer book, write down the number of each term, and next to it the letter representing the correct option, e.g. 1 j (4)

1 Cession agreement	a The transfer of contractual duties from the original debtor to a third party
2 Delegation	b Peter was required to deliver a golden ring to Sharon. They both agreed that he would deliver a diamond ring in its place.
3 Novation	c Rights arising from a contract can be transferred by the holder thereof to another person.
4 Set-off	d John owes his father R500. Before he could pay his father this amount, he fixed his father's car for the amount of R1 500. The result is that his father now has to pay him R1 000. Example 2 LG Electronics has entered into a cross licensing agreement with GE Consumer & Industrial that will allow LG and GE to use one another's patents for refrigerators and cooking appliances without paying licensing fees. (27 Feb 2008, <a href="http://www.appliancemagazine.com">http://www.appliancemagazine.com</a> )

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**QUESTION 4 (Total quality management)**

- 4.1 Briefly list and describe some of the steps in implementing TQM (total quality management) on an enterprise-wide basis (5)
- 4.2 Richard Schonberger has set up rules that sustain the habit of continuous quality improvement while aiming for zero defects. List these rules (7)

[12]

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**QUESTION 5 (The engineer, user of information systems)**

5.1 How are the information needs of decision makers determined? What questions will you ask a decision maker in your company to answer when you try to establish the information needs of the person? (8)

5.2 Define "information system" and briefly describe the various components of an information system (5)

**[13]**

**QUESTION 6 (Managing technology and innovation)**

6.1 List any four sources from where ideas can be generated when a new product is developed (4)

6.2 Give an example of a technological discontinuity and illustrate its consequences for established companies (3)

**[7]**

**QUESTION 7 (Entrepreneurship)**

7.1 List four possible sources of business ideas (4)

7.2 There is an opportunity to start a Kentucky Fried Chicken (KFC) in a shopping centre in the town where you stay. Describe this type of business and list some of the advantages and disadvantages of this type of business (6)

**[10]**

**Total: 100**



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