Tutorial letter 202/1/2018

Engineering Management II (Module B)

EMA2602

Semester 1

Department of Electrical and Mining Engineering

IMPORTANT INFORMATION:

This tutorial letter contains important information about your module.

BAR CODE

Dear Student

The main purpose of this tutorial letter is to provide you with feedback on Assignment 2. You will find the suggested solution for Assignment 2 attached as Annexure A.

Remember to visit **myUnisa** and participate in the discussion forums. You will find six myUnisa **tutorials** as pdfs under "Additional Resources". These are additional exercises that will help you to master the content of the course and to prepare for the examination. You will find my suggested solutions on myUnisa.

You may have noticed that the tutorials are based on the **workbook**. You will find the latest version of the workbook chapters prescribed for this module under "Additional Resources" on myUnisa. The workbook contains numerous typical examination questions that you can use for self-evaluation purposes. Please do not ask the lecturer for past examination papers in addition to that already provided on myUnisa.

You may have noticed that the three assignments consist of multiple-choice questions only. This will help to prepare you for question 1 of the **examination paper**. Question 1 of the paper contributes 20% towards the total mark. The workbook includes many multiple-choice questions, short and long questions and other types of exercises that you can use for self-evaluation purposes. The six workbook chapters and **tutorials** will help you to prepare for the rest of the examination paper (questions 2 to 7). More information about this will follow in TL203.

I wish you every success with your studies.

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Annexure A

Suggested solution for assignment 2 (Semester 1)

(Unique number: 699796)

Questions are based on chapter 6 (Engineering contracts)

2.1 Read the following 3 statements:

a) A request for a quotation constitutes a firm offer to do business.

b) If the consensus of one of the parties is legally invalid, there can be no contract.

c) The most common way to determine whether there has been agreement is to identify an offer, and acceptance of that offer.

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

[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.

Answer

[1]

a) False, (METS-3: 110)

b) True, (METS-3: 112)

c) True. (METS-3: 109)

2.2 Which **one** of the following statements is **correct**?

[1] Implied terms are terms in a contract which the parties incorporate into a contract.

[2] Express terms are terms in a contract that are incorporated into contracts by operation of law.

[3] Tacit terms are not expressed in words but are based on the parties' true intention.

Answer

[3]; (METS-3: 126);

[1] – false, definition of express terms.

[2] – false,

[3] - true

2.3 Read the three statements below:

a) The registration of professional engineers, technologists and technicians is regulated by the ECSA (Engineering Council of South Africa).

b) Primary, secondary and tertiary rules can be used to interpret contracts.

c) An innocent party (to a contract) is always entitled to claim specific performance.

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

[1] a and b

[2] b and c

[3] a, b and c

[4] a and c

[5] None of the options (1, 2, 3 or 4) is correct

Answer

[3]

a) Correct, (METS-3: 123).

d) Correct, (METS-3: 128).

e) Correct, (METS-3: 131).

Questions are based on chapter 8 (TQM)

2.4 Read the following 3 statements:

a) Total quality management is a process that ensures that products and services are designed, developed, produced, delivered and supported to meet customer expectations fully, the first time, every time.

b) The goal of total quality management is perfect quality (zero defect).

c) To design and build quality into the product is one of the fundamental principles of TQM.

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

[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.

Answer: [3]

a) True, (METS-3: 161);

b) True, (METS-3: 161);

c) True, (METS-3: 161)

2.5 Read the following three statements:

a) The prevention of future quality problems is a key responsibility of new product development teams.

b) Quality function deployment is a formal method for transforming customer requirements into technical requirements.

c) For a process to be at Six Sigma it must have fewer than 3,4 defects per 1 000 opportunities for error.

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

[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.

Answer: [1];

a) Correct, (METS-3: 165).

b) Correct, (METS-3: 166).

c) False. It must be less than 3,4 defects per million. In essence it means that very few errors should occur (METS-3: 168).

2.6 Read the following 3 statements:

a) Deming's rule of thumb is that 94% of all variations are due to special causes and 6% are due to common causes.

b) Variation in product quality owing to an incorrect tool setting falls under the category, "variation due to common causes".

c) A badly worn machine that causes variation in the output of a manufacturing process is an example of a common cause of variation.

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

[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.

Answer: [5];

a) False, it is the other way around (METS-3: 169).

b) False, this is an example of a special cause (METS-3: 170).

c) False, this is a special cause (of variation) because it can be assigned to a specific source (a specific machine in this example). If this specific machine is replaced (or improved) then the variation in the output should disappear (METS-3: 170).

2.7 Read the following 3 statements:

a) The ability of a process to produce acceptable quality characteristics is called process performance.

b) A process is in control when all common causes of variation have been removed.

c) The process chart and Pareto analysis are two examples of tools that can be used to improve processes.

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

[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.

Answer: [2];

a) Correct, this is a definition for process performance (METS-3: 169).

b) False. When all special causes of variation have been removed (METS-3: 171).

c) True, these are two examples of quality improvement tools (METS-3: 171, 172).

2.8 Read the following three statements:

a) The cost of quality (COQ) can be thought of as the cost of achieving conformance to quality standards plus the cost of non-conformance.

b) Costs related to rework, scrap, inspection, warranty claims and testing are examples of the cost of quality.

c) Failure costs are costs associated with evaluation and either correcting or replacing defective products, components or materials that do not meet quality standards.

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

[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.

Answer: [3];

a) Correct, (METS-3: 178).

b) Correct, (METS-3: 178).

c) Correct, (METS-3: 178).

2.9 Read the following 3 statements:

a) The quality control department at an organisation should solely be held responsible for quality.

b) The cost of quality (COQ) can be thought of as the cost of achieving conformance to quality standards plus the cost of non-conformance.

c) A process improvement team is a team of employees at shop-floor level who is responsible for quality in their work area.

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

[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.

Answer: [1];

a) False;

b) True;

c) True (METS-3: 164).

2.10 Read the following 3 statements:

a) A process is a repetitive set of interacting activities that uses resources to transform a defined set of inputs into outputs that are of value to a customer.

b) Costs related to rework, scrap, inspection, warranty claims and testing are examples of failure costs.

c) *Kaizen* is the Japanese word for process variation.

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

[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.

Answer: [4];

a) True (METS-3: 168);

b) False (METS-3: 178), They are examples of the cost of quality (COQ) covering all three areas of costs (prevention, appraisal and failure) and not only failure;

c) False, kaizen means “(continuous) improvement”;