FACULTY OF ENGINEERING AND BUILT ENVIRONMENT
DEPARTMENT OF QUALITY AND OPERATIONS MANAGEMENT

MODULAR WRITTEN ASSESSMENT

SUBJECT:	QUALITY ASSURANCE 2A
CODE:	QAS22A01/ QAS22A2
DATE:	17 JULY 2019
TIME ALLOWED:	3 HOURS
TIME:	08:30 – 11:30am
TOTAL MARKS:	100

ASSESSORS:	Miss M. Motebele
MODERATOR:	Mr M. Madonsela
NUMBER OF PAGES:	5

INSTRUCTIONS:

1. This is a closed-book assessment.

2. Read the questions carefully and answer only what is asked.

3. Answer all questions in the answer book. Indicate the correct answer as per the instructions.

4. Number your answers clearly.

5. Write neatly and legibly on both sides of the paper in the answer book, starting on the first page.

6. Structure your answers by using appropriate headings and subheadings.

7. The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

QUESTION 1

Quality management is focused not only on product and service quality, but also on the means to achieve it. Discuss the three spheres of quality when classifying quality as a concept. [10]

QUESTION 2

Power means many different things to different people. For some, power is seen as corrupt. For others, the more power they have, the more successful they feel. For even others, power is of no interest at a. Identify and discuss these forms of power respectively in quality management. [5]

QUESTION 3

Service companies are holding a major share in the market for the whole world, and there is a growing demand for services in the world economy. However, service quality is very important issue because it allows companies to differentiate themselves from their competitors, this leads to enhance the satisfaction among customers and employees.

Define and discuss the service quality dimensions. [10]

QUESTION 4

Explain the position of leadership in quality management. Critically describe the characteristics of an effective leader regarding ensuring the quality of daily usage products in the present economic circumstances [10]

QUESTION 5

5.1 Computer aided design	[2]
5.2 Geometric modelling	[2]
5.3 Engineering analysis	[2]
5.4 Design review	[2]

QUESTION 6

State the significance of Customer Relationship Management [10]

QUESTION 7

Explain the measures to be taken by a manufacturing organisation to handle customers' complaints in order to retain their customers [10]

QUESTION 8

FMEA is a key six sigma tool that enables action planning based on risk and must always be referred to when executing practical problem solving. Mention the benefits of FMEA. [5]

QUESTION 9

Distinguish the difference between service and manufacturing [10]

QUESTION 10

Total quality Management and the costs of quality Total Quality Management (TQM) is an organizational approach which aims to get things 'right first time' across the entire business.

PAF paradigm translates quality costs into three broad categories, which are then subdivided into other categories. The three categories are prevention, appraisal, and failure cost. Prevention costs are those associated with preventing defects and imperfections from occurring. Appraisal costs are associated with the direct costs of measuring quality. Failure costs are roughly categorized into two areas of costs: internal failure costs and external failure costs. Internal failure costs are those associated with online failure, whereas external failure costs are associated with product failure after the production process.

Company A, Johannesburg, wishes to assess their quality performance. In order to do so they have gathered the following quality-related costs. You are hired as a consultant to evaluate these costs and to make recommendations to management.

They incurred the following quality cost:

Defective products   @5,276

Product redesign   @16,422

Quality training   @14,500

Process engineering:

Corporate   @125,678

Plant   @39,124

Engineering scrap   @17, 265

Receiving inspection   @35,765

Line 1 inspection   @42,234

Line 2 inspection

Spot-checking   @63,766

Non-engineering scrap   @125,274

Consumer adjustments   @623,980

Lost goodwill   not evaluated

Total Appraisal cost   @195,332

Answer using the format below:

ANNUAL QUALITY COSTS

Failure costs	R
TOTAL	
Appraisal costs	R
TOTAL	
Prevention costs	R
TOTAL	

Calculate the following:

4.1   Total failure costs   [3]

4.2   Total appraisal costs   [3]

4.3   Total prevention costs   [3]

4.4	Grand total	[1]
4.5	Ratio of appraisal to failure costs	[2]
4.6	Ratio of prevention to failure costs	[2]
4.7	Ratio of prevention and appraisal to failure costs	[2]
4.8	Proportion of total quality costs	[3]
4.9	Interpret the results of the calculations	[3]
		[22]