Ministry of Education

Sector:-Industry Development

Sub Sector:-Metals and Engineering

Occupation:-Metal Engineering Tech. Mgt. L _

V-v2

Knowledge Assessment

The assessment covers the following units of competence:

1. IND MTM5 01 0311 Manage Competitive Manufacturing Processes
2. IND MTM5 02 0311 Manage Technical Processes
3. IND MTM5 03 0311 Apply Quality Systems & Perform Advanced Statistical Quality Control
4. IND MTM5 04 0311 Interpret Product Cost in Terms of Customer Requirements
5. IND MTM5 05 0311 Facilitate Development of New Product
6. IND MTM5 06 0311 Determine Appropriate Measuring System for Specific Process
7. IND MTM5 07 0311 Develop and Document Specifications and Procedures
8. IND MTM5 08 0311 Analyze and Perform Control Requirements Solutions
9. IND MTM5 09 0311 Plan and Calculate Required Mechanical Systems Job
10. IND MTM5 10 0311 Manage Value Chain
11. IND MTM5 11 0311 Facilitate Continuous Improvement in Manufacturing
12. IND MTM5 12 0311 Introduce Competitive Manufacturing to Small and Medium Enterprise
13. IND MTM5 13 0311 Develop Communication Strategies to Support Production
14. IND MTM5 14 1012 Develop and Refine Systems for Continuous Improvement in Operations
15. IND MTM5 15 0311 Establish and Conduct Business Relationships
16. IND MTM5 16 0311 Practice Career Professionalism

Candidate Name	
Registration Number	
Name of Assessment Center	
Name of Training Provider	

Structure of Test

Section	No of questions	No of marks	Suggested time

A-Multiple choice questions	21	21	30min
B-Matching Type	15	15	20min
	Total	**36**	**50min**

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Multiple Choice Questions	/21
Matching Type	/15
Final Mark	**/36**

Nov 2014

Instructions

1. Write your **name**, **Registration** number, name of training provider and **Assessment center** name in the space provided.
2. You have 10 minutes reading time and opportunity to ask questions to the Assessor
3. All written responses must be in English.
4. At the end of the examination return this book to the assigned Accredited Assessor
5. You may use the following references in this test

- Non-programmable calculators

6. **Do not** bring the following items into the assessment venue

- Mobile telephones
- Written notes

SECTION A – MULTIPLE-CHOICE QUESTIONS

Instructions for Section A

a. There are twenty one [21] questions in this section.

b. Select the best answer for each question. Do this by encircling the letter that corresponds to your answer in the test package.

c. If you wish to change an answer, place an **X** mark through the letter you have circled and then encircle the letter of your preferred answer.

d. A correct answer scores 1, an incorrect answer scores 0. No marks will be given for a question if more than one answer is supplied.

1. What is the cutting speed in meter pre minutes for one pass over a 100mm length of 60mm-diameter rod when the RPM is 250?

A. 47.1 m/min
B. 4710 m/min
C. 0.753 m/min
D. 15 m/min

2. Manufacturing method that combines our organization, people and technology into an integrated and coordinated whole is:-

A. Virtual Manufacturing
B. Lean Manufacturing
C. Agile Manufacturing
D. Computer Aided Manufacturing

3. What step in production operations is involved in choosing a location for a business?

A. Product design
B. Purchasing
C. Planning
D. Quality control

4. A system which controls the functions of a machine tool using coded instructions processed by a computer.

A. CIM
B. CAD
C. CAM
D. CNC

5. Methods of production have been changing as a result of:

A. Lack of financing
B. Technology
C. A decrease in workers
D. A decrease in new businesses

6. An information revolution in manufacturing engineering refers to

A. The change in the production of goods.

B. The development of the assembly line.

C. The use of computers

D. The use of automation to produce goods

7. An element in a measurement system that is acquires a physical parameter and changes it in to a signal.

A. Actuator

B. Sensor

C. transducer

D. micro processor

8. One of the following doesn't include the OHS requirement:

A. Planning of activities

B. Work place and safety

C. Use of tools and equipment

D. Protective clothing and equipment

9. Obtaining raw materials is the

A. Quality controls function of the production process.

B. Product design functions of the production process.

C. Inventory control function of the production process.

D. Purchasing function of the production process.

10. Six Sigma implies

A. A statistical method

B. A trouble-shooting method

C. Teams are effective

D. defects per million in output

11. Cost of quality is really

A. A way to prioritize actions

B. Cost of production

C. Cost of sales

D. Cost of high-quality products

12. Original products, product improvements, product modifications, and new brands that a firm develops through its own research and development efforts are:

A. New products.

B. Concept products.

C. Altered products.

D. Supplemental products.

13. A worker operates a shear press. She/he notices that the metal sheets she/he is cutting have curled edges. Who should get the first "shot" at solving the problem?

A. the foreman

B. a member of the Quality Control department

C. the operator her/him self

D. the employee's supervisor

14. Who is responsible for prioritizing the product backlog?

A. Product Owner

B. Project Manager

C. Lead Developer

D. Business Analyst

15. ISO 9000 determines

A. If the company practices its written procedures

B. If vendors are performing well

C. Process capability

D. The kind of control chart to be used

16. Once a project is underway, the approach to planning is:

A. Plans should never be changed

B. It is normal to need to plan and re-plan as the project progresses

C. Plans should only be changed with full approval of all stakeholders

D. Plans are not required as Agile is incremental

17. Precision in production means

A. Workers are well-trained
B. Hi-tech equipment is used
C. Instruments are kept clean
D. Parts produced have little or no variation

18. Fishbone diagrams are drawn

A. To find customer needs
B. To find the cost of quality
C. To brainstorm causes of an effect
D. To screen workers' suggestions

19. A process is predictable if

A. We can forecast its output
B. It is always at the same level
C. It has no humans involved
D. The data can be plotted on a chart

20. Original products, product improvements, product modifications, and new brands that a firm develops through its own research and development efforts are called:

A. New products.
B. Concept products.
C. Altered products.
D. Supplemental products.

21. Which of the following tools is used to translate broad requirements into specific requirements?

A. A quality control plan
B. The theory of constraints (TOC)
C. A critical to quality (CTQ) tree
D. A process flowchart

SECTION B – MATCHING TYPE QUESTIONS

Instructions for Section B

1. There are fifteen [**15**] questions in this section.
2. Match column A with column B. Select the letter of the correct answer from column B and write your answer on the provided space.
3. If you wish to change your answer place an **x** mark on your previous answer and write your preferred answer
4. A correct answer scores 1, an incorrect answer scores 0. No marks will be given for a question if more than one answer is supplied

Column A	Column B
E_ 1 Degree of excellence.	A. Quality assurance
K_ 2. Lean manufacturing tools	B. Quality inspection
P__3. Use of machines supervised by people to replace	C. Range
R__4. The process of changing resources into goods	D. Variance
C__5. The difference between maximum and minimum	E. Quality
J__6. Keeping things for use in the future	F. Planning & Organizing
L__7. Defect in products	Work
I__8. Undertake Financial Risk Assessment	G. Directing
F__9. Avoiding backtracking ,work flow interruption or wastage	H. Quantity
Q 10. Predict future performance	I. Analysis & interpretation
S_11. A period of producing one particular product without adapting	skill
the production equipment	J. storage
M__12. Devices used to produce motion or action	K. Just in time
T__13. Blue print of product or project	L. Muda
N__14. The requirement of customer	M. Vertical integration
A__15. To confirm that calibration were complicated and performed	N. specification
properly	P. Automation

	Q. Control chart R. Production S. production run T. product specification