



Malaysia-Japan International Institute of Technology
UNIVERSITI TEKNOLOGI MALAYSIA

SMJE 4263 - COMPUTER INTEGRATED MANUFACTURING
ONLINE TEST 1

DURATION: 1 HOUR
DATE – 29 APRIL 2022
TIME: 16:00 – 17:00
TOTAL MARKS: 20 MARKS

Note:

- This test comprises 20% of your total course marks.
- This test question consists of 4 pages including the front page.
- Your complete answers must be sent to this mail <zool@utm.my> not later than 17:05.

Name:	
IC. No.:	
Matric No.:	
Section:	
Lecturers:	Assoc Prof Ir Dr Zool Hilmi Ismail

QUESTION	CO	TAXO	MARKS
1(a)	CO1	C4	/5
1(b)	CO2	C4	/5
2	CO3	C5	/10
TOTAL			/20

QUESTION 1

- (a) While attending as an Engineer in Training at food production industries, you are required to **distinguish** between various types of manufacturing system classification schemes,

[5 marks]

(CO1 / PO1 / C4)

- (b) Then, you need to **highlight** the situation where each type of classification schemes is needed. Moreover, your supervisor wants you to provide some illustrations for the conventional Manufacturing System.

[5 marks]

(CO2 / PO2 / C4)

Answer for Question 1:

QUESTION 2

A single engine production plant will operate 240 days per year using a single 8-hour shift each day. Sale requirements are 100,000 units per year. The product consists of two major components: A and B. The operations required to produce each component are given in Table Q2 below. Equipment utilization is expected to be 96% during each 8-hour shift. You are required to further **examine** the required number for the machine of each operation type, assuming that a product layout will be used.

[10 marks]

(CO3 / PO4 / C5)

Table Q2

Components	Operation	Machine	Production Time	Fraction defect rate
A	1	Lathe	7.0 min/pc	3%
	2	Milling	12.0 min/pc	6%
B	3	Lathe	4.0 min/pc	4%
	4	Drill	4.0 min/pc	3%

Answer for Question 2:

