Student ID	Index No.

MDIS Tashkent

MANAGEMENT DEVELOPMENT INSTITUTE OF SINGAPORE IN TASHKENT

Course : **Foundation**

Module Title : **Mathematics**

Module Leader : **Mr Tan Chee Kian**

Assessment : **Assignment 1**

Due Date : **27 March 2020**

Weighting within Module : **10%**

Instructions:

1. This paper consists of **FIVE (5)** pages including this cover page.
2. Answer **ALL** questions.
3. Write legibly in the spaces provided in the question paper.
4. Unless stated otherwise, all answers are to be corrected to **one (1) decimal place**.
5. The **Total Marks** of this assignment are **50**.

Question	Marks
1	
2	
3	
TOTAL	

Answer ALL questions [Total: 50 marks]

Question 1 [20 marks]

(a) Evaluate $(4x-2)(3x+2)-(2x-3)^2$. [4 marks]

(b) Solve $4x^2-4x-15=0$. [4 marks]

(c) Solve $9m^2-64=0$. [4 marks]

(d) Simplify the expression, giving the answer in simplest terms:

$$\frac{2x^2-x-10}{3x^2-16x-12} \div \frac{x^2-4}{15x^2-x-6}$$ [8 marks]

Question 2 [20 marks]

Given that $\boldsymbol{A} = \begin{bmatrix} 4 & 0 & 7 \\ 2 & 1 & 0 \\ 5 & 0 & 6 \end{bmatrix}$ and $\boldsymbol{B} = \begin{bmatrix} -3 & 7 & -5 \\ 5 & 9 & 2 \\ 4 & -6 & 3 \end{bmatrix}$.

(a) Find $3A + 2B$. [6 marks]

(b) Find $A \times B$. [6 marks]

(c) Find A^{-1}. [8 marks]

Question 3 [10 marks]

Use Gauss-Jordan method to solve this set of simultaneous equations:

$3x - 2y + 5z = 30$

$2x + 5y - 3z = 1$

$5x - 3y - 4z = -11$

END OF PAPER