Centre of Preparatory Studies (CPS)

Math Unit

Math Pre Level (FPM 100)

Student Name										
Student ID										**Date: 20/11/2024**
Section										**Duration: 1 hour – 30 minutes**
Instructor/s	**Muhammad Siddique, Tareq Mefleh Al khshpan, Waqar Ahmad Khan, Wesam Al Karadsheh, Amal AlShanfari, Soniyamol Vazhemaliyil**									

General Instructions

- Place your DU ID card on your desk throughout the examination period.
- Read the task instructions carefully.
- Use only a blue or black pen. (Pencil is allowed only for writing tasks)
- Not allowed to use programmable calculators and/or smart-watches/phones or any other smart devices inside the exam hall.
- Must abide by DU's Academic Integrity Policy (AIP)- Policy No. DU-AC-007

⚠️

Dhofar University's Academic Integrity Policy (AIP) is intended to foster hard work, honesty, and responsibility. It strictly prohibits all forms of academic misconduct, including cheating and collusion, plagiarism, and impersonation. By signing below, I agree to abide by the AIP.

تهدف سياسة النزاهة الأكاديمية بجامعة ظفار إلى تعزيز العمل الجاد والأمانة والمسؤولية و تحظر تمامًا جميع الأشكال التي تخالف النزاهة الأكاديمية، بما في ذلك الغش والتواطؤ والسرقة الأدبية والإنتحال. بالتوقيع أدناه ، أوافق على الالتزام بسياسة النزاهة الأكاديمية.

Signature of the student _____

Marking Grid					
Question 1		10	Question 2	15	Question 3
				Total	40

Marked by: _____	**Moderated/ Checked by:** _____
Signature: _____ **Date:** _____	**Signature:** _____ **Date:** _____

<u>Question 1</u>: Circle the correct answer.   (10 Marks)

1. Reduce to the lowest form: $\frac{x-4}{2x-8}$

   A. $\frac{1}{2}$ B. $\frac{1}{2x}$ C. $\frac{x-1}{2}$ D. 1

2. Reduce to the lowest form: $\frac{x+y}{x+y}$

   A. $2x + 2y$ B. $x + y$ C. 1 D. 0

3. Reduce to the lowest form: $\frac{x^2-9}{2x+6}$

   A. $\frac{x-3}{2x}$ B. $\frac{x+3}{2}$ C. $\frac{x+3}{x-3}$ D. $\frac{x-3}{2}$

4. Reduce to the lowest form: $\frac{x^2+7x+6}{2x+12}$

   A. $\frac{1}{2}$ B. $-\frac{1}{2}$ C. $\frac{x+1}{2}$ D. $\frac{x-1}{2}$

5. Find two consecutive integers whose sum is 13?

   A. 3 and 10 B. 6 and 7 C. 16 and -3 D. No solution

6. Express inequality $x > 5$ in interval notation?

   A. $(5, \infty)$ B. $(-\infty, 5)$ C. $[5, \infty)$ D. $(-\infty, 5]$

7. The inequality $x - 1 < 1$ is true for $x =$

   A. $x = 3$ B. $x = 2$ C. $x = 0$ D. $x = 4$

8. The solution for inequality $-x + 1 > 1$ is:

   A. $x < -2$ B. $x < 0$ C. $x > 0$ D. $x < 2$

9. Find two consecutive integers whose sum is **more** than 5?

   A. 2 and 3 B. 2 and 4 C. 3 and 4 D. 8 and 10

10. If $2y \geq 6$,   which of the following statements is true?

    A. $y > 3$ B. $y \geq 3$ C. $y < 3$ D. $y \leq 3$

2

<u>Question 2</u>:   (15 Marks)

a) Solve equation and find the value of x.   (3 marks)

$$10x + 1 = 4x + 13$$

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b) Solve the equation and find the value of x.   (4 marks)

$$\frac{x+3}{3} - \frac{x-1}{5} = \frac{3}{5}$$

_____

c) Solve the equation and find the value of x.   (4 marks)

$$\sqrt{9x - 1} = \sqrt{9 - x}$$

_____

d) Ali got **20** marks in FA (*formative assessment*) and **18** marks in the midterm. How many marks does he need in the final exam to reach a total of **50** and pass?   (4 marks)

<u>Question 3</u>:   (15 Marks)

a) Solve inequality for x, graph the solution set and express in the interval.   (3 marks)

$$3x + 5 > 2x - 1$$

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b) Solve inequality for x, graph the solution set and express in the interval.   (4 marks)

$$\frac{11x - 3}{5} \leq 6$$

_____

c) Solve inequality for x, graph the solution set and express in the interval.   (4 marks)

$$\frac{x + 2}{3} - \frac{x}{4} < 1$$

_____

d) Omar obtained scores of 9 and 13 on his first two quizzes. What score does he need on his third quiz to get an average higher than 9?   (4 marks)

<div align="center">End of Final Exam – <mark>Model Paper</mark></div>

Name: _____

Note:

1. This scratch sheet will not be marked.

2. Do not detach it from the rest of exam papers.