Centre for Preparatory Studies (CPS)

Math Unit

Math for Computer Science (FPMC 101A)

<p align="center">Midterm Exam – <mark>Model Paper</mark></p>

<p align="center">Term 1 Fall, 2024-25</p>

Student Name											
Student ID										**Date: 21/10/2024**	
Section	1									**Duration: 1 hour 30 minutes**	
Instructor/s	Dr.Wajdi Hamza Alredany										

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		5	Question 3	10
Question 2		5	Question 4	10
			Total	30

Marked by: _____

Signature: _____ **Date:** _____

Moderated/ Checked by: _____

Signature: _____ **Date:** _____

Question 1: Classify each number as a rational" Q " or irrational " H " number.

(5 Marks)

-1	
0.6666	
0	
$\dfrac{3}{4}$	
π	

_____

Question 2: Fill the blanket with the best answer: **(5 Marks)**

Commutative (Addition):	$3 + 4 = \underline{\quad}$
Commutative (Multiplication):	$2 \times \underline{\quad} = 3 \times 2$
Associative (Addition):	$(3 + 4) + 7 = 3 + (4 + \underline{\quad})$
Associative (Multiplication):	$(6 \times 5) \times 4 = 6 \times (5 \times \underline{\quad})$
Commutative	$11 + 5 = \underline{\quad}$

_____

Question 3: Perform the indicated operation, then simplify: (10 Marks)

a) $-4\frac{1}{2} + 1\frac{2}{3} =$ (2 Marks)

_____

b) $\frac{1}{2} \div \frac{-1}{3} =$ (2 Marks)

_____

c) $(xy^2 - 2y - 5) - (2xy^2 + 9y + 4) =$ (3 Marks)

_____

d) $(x + 1)(x - 2) =$ (3 Marks)

_____

Question 4: **Factor the following expressions: (10 Marks)**

  a) $x^2 - 144 =$ **(3 Marks)**

_____

  b) $x^2 + 144 =$ **(1 Mark)**

_____

  c) $y^2 - 2y + 1 =$ **(3 Marks)**

_____

  d) $y^2 + 3y + 2 =$ **(3 Marks)**

_____

End of Model paper Midterm Exam

SCRATCH SHEET

Name: _____

Note:

1. This scratch sheet will not be marked.

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