EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
31	50 minutes	3

Name: _____ Class: _____

Date: _____

MARK ____ / 31

INSTRUCTIONS AND INFORMATION

1. Answer **ALL** the questions in this question paper.
2. Answer QUESTION 1 by **circling** the letter (A–D) in the answer grid at the end of that section.
3. Show **ALL** calculations clearly.
4. Show all units where applicable.
5. Number the answers correctly according to the numbering system used in this question paper.
6. A non-programmable calculator may be used, unless stated otherwise.
7. Write neatly and legibly.

QUESTION 1 [10 MARKS]

Four options are given as possible answers to the following questions. Choose the correct answer and circle the letter (A–D) in the grid at the end of this section. If you want to change your choice, put a cross through the wrong letter and circle your new choice.

1.1 Solve for x: $x(x-5)=0$ (1)

A) 5 only **B)** 0 or 5
C) 0 only **D)** -5 only

1.2 Solve for x: $(x+3)(x-2)=0$ (1)

A) 3 or -2 **B)** -3 or 2
C) -3 or -2 **D)** 3 or 2

1.3 Solve for x: $x^2-9=0$ (1)

A) 3 only **B)** 9 or -9
C) 3 or -3 **D)** 0

1.4 Solve for x: $x^2+5x+6=0$ (1)

A) -2 or -3 **B)** 2 or -3
C) -2 or 3 **D)** 2 or 3

1.5 Before factorising to solve, the equation must first be written with ... (1)

A) x on the left **B)** no brackets
C) ZERO on one side **D)** a positive x^2 term only

1.6 Solve for x: $x^2=4x$ (1)

A) 0 or 4 **B)** -4 or 4
C) 2 only **D)** 4 only

1.7 Solve for x: $2x^2 - 8 = 0$ (1)

A) 2 only **B)** 4 or -4

C) 16 **D)** 2 or -2

1.8 A rectangle has length $(x + 2)$ and area 15. If the breadth is x, the equation written in the form needed to solve it by factorising is ... (1)

A) $2x + 2 = 15$ **B)** $x + 2 = 15$

C) $x^2 + 2x = 15$ **D)** $x^2 + 2x - 15 = 0$

1.9 For that rectangle, the value of x is ... (1)

A) 3 **B)** 5

C) -3 **D)** -5

1.10 How many solutions does $x^2 + 4x + 4 = 0$ have? (1)

A) three **B)** two different ones

C) none **D)** one (a repeated root)

ANSWER GRID — CIRCLE YOUR ANSWERS FOR QUESTION 1

1.1	A	B	C	D
1.2	A	B	C	D
1.3	A	B	C	D
1.4	A	B	C	D
1.5	A	B	C	D
1.6	A	B	C	D
1.7	A	B	C	D
1.8	A	B	C	D
1.9	A	B	C	D
1.10	A	B	C	D

QUESTION 2 [9 MARKS]

Solve for x.

2.1 $(x - 2)(x + 6) = 0$, and hence solve $x(x - 2)(x + 6) = 0$. (3)

2.2 $x^2 + 5x + 6 = 0$ **(3)**

2.3 $x^2 - 7x + 10 = 0$ **(3)**

QUESTION 3 [12 MARKS]

Answer the questions below.

3.1 Solve for x: $x^2 - 3x = 0$ **(3)**

3.2 Solve for x: $x^2 - 25 = 0$ **(3)**

3.3 Explain why you may NOT divide both sides of $x^2 = 4x$ by x. **(3)**

3.4 Simplify: $(12x^3 - 8x^2 + 4x) \div 4x$ **(3)**

TOTAL: 31 marks

This question paper consists of 3 questions.

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