EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
33	50 minutes	3

Name: _____ Class: _____

Date: _____

MARK ____ / 33

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 $\sqrt{144} = \ldots$ (1)

A) 12 **B)** 72
C) 14 **D)** 1 728

1.2 $\sqrt[3]{-27} = \ldots$ (1)

A) non-real **B)** -9
C) 3 **D)** -3

1.3 $\sqrt{-4}$ is ... (1)

A) 2 **B)** -2
C) non-real **D)** -16

1.4 $(-5)^2 + (-2)^3 = \ldots$ (1)

A) 17 **B)** 33
C) -17 **D)** -33

1.5 $\sqrt{64} - \sqrt[3]{64} = \ldots$ (1)

A) 12 **B)** 4
C) 0 **D)** -4

1.6 Which one of the following is a perfect square AND a perfect cube? (1)

A) 81 **B)** 64
C) 16 **D)** 36

1.7 Between which TWO consecutive integers does $\sqrt{50}$ lie? (1)

A) 24 and 26 **B)** 6 and 7

C) 7 and 8 **D)** 8 and 9

1.8 $(-1)^{100} = \ldots$ (1)

A) 100 **B)** -100

C) -1 **D)** 1

1.9 A cube has a volume of 125 cm^3. The length of one side is ... (1)

A) 41,67 cm **B)** 11,18 cm

C) 5 cm **D)** 25 cm

1.10 -2^4 and $(-2)^4$ differ because ... (1)

A) the brackets decide whether the MINUS is also raised to the power **B)** brackets never matter

C) they are actually equal **D)** one is a cube

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 [10 MARKS]

Calculate the following WITHOUT using a calculator.

2.1 $(-5)^2 - (-4^2)$ (4)

2.2 $\sqrt[3]{-27} + \sqrt{64}$ **(3)**

2.3 $(-3)^2 - 4 \times (-2)$ **(3)**

QUESTION 3 [13 MARKS]

Calculate the following, showing the order in which you worked.

3.1 $(-20 + 8) \div (-3) - (-5)$ **(4)**

3.2 $\sqrt{36} + 2(7 - 3)^2$ **(4)**

3.3 Explain the difference between $(-3)^2$ and -3^2. **(2)**

3.4 Explain why $\sqrt{-25}$ has no answer in the real numbers, but $\sqrt[3]{-27}$ does. **(3)**

TOTAL: 33 marks

This question paper consists of 3 questions.

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