EXAM-STYLE CLASS TEST

MARKS	DURATION	QUESTIONS
30	45 minutes	3

Name: _____ Class: _____

Date: _____

MARK ____ / 30

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 $\sqrt{112}$ lies between which TWO integers? (1)

A) 11 and 12
B) 10 and 11
C) 55 and 56
D) 9 and 10

1.2 Which ONE of these numbers is IRRATIONAL? (1)

A) $\frac{22}{7}$
B) $\sqrt{16}$
C) 0,25
D) $\sqrt{20}$

1.3 Rounded to THREE decimal places, 3,04528 is ... (1)

A) 3,0453
B) 3,05
C) 3,046
D) 3,045

1.4 Rounded to THREE significant figures, 0,004936 is ... (1)

A) 0,00494
B) 0,004
C) 0,00493
D) 0,005

1.5 Which ONE of these is a NON-TERMINATING, RECURRING decimal? (1)

A) $\frac{1}{8}$
B) $\sqrt{2}$
C) $\frac{1}{3}$
D) 0,75

1.6 -3 belongs to which ONE of these sets? (1)

A) the whole numbers **B)** the integers

C) the natural numbers **D)** the irrational numbers

1.7 Which statement about $\sqrt{-9}$ is true? (1)

A) it equals 3 **B)** it equals -3

C) it is non-real **D)** it is irrational

1.8 A plank $3{,}7$ m long is cut into pieces $0{,}8$ m long. How many WHOLE pieces are cut? (1)

A) 5 **B)** $4{,}625$

C) 4 **D)** $4{,}6$

1.9 Without a calculator, the best estimate of $\sqrt{40}$ is ... (1)

A) $6{,}3$ **B)** 8

C) $4{,}5$ **D)** 20

1.10 A circle of radius 5 cm has area $78{,}539816...$ cm^2. Correct to TWO decimal places this is ... (1)

A) $78{,}53$ cm^2 **B)** $78{,}54$ cm^2

C) 79 cm^2 **D)** $78{,}5$ cm^2

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]

Answer the following questions WITHOUT the use of a calculator.

2.1 Determine between which TWO consecutive integers $\sqrt{112}$ lies. (3)

2.2 Consider the list: -7 ; $\sqrt{16}$; $\sqrt{5}$; $\frac{22}{7}$; π ; $0{,}272727...$ **(3)**

Write down ALL the IRRATIONAL numbers from the list.

2.3 Explain why $\frac{22}{7}$ is RATIONAL even though it is used as an approximation for the irrational number π. **(3)**

QUESTION 3 [11 MARKS]

Answer the questions below.

3.1 Round $3{,}14159$ off to THREE decimal places, and $0{,}04567$ off to THREE decimal places. **(3)**

3.2 Determine, without a calculator, between which two consecutive integers $\sqrt{54}$ lies, and state which of the two $\sqrt{54}$ is CLOSER to. Justify your answer. **(5)**

3.3 A learner rounds $12{,}996$ to TWO decimal places and writes $12{,}99$. Identify the error and give the correct answer. **(3)**

TOTAL: 30 marks

This question paper consists of 3 questions.

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