

T670(E)J29/T  
AUGUST 2004

NATIONAL CERTIFICATE

## ELECTRO-TECHNOLOGY N3

(11040343)

29 July (X-Paper)  
09:00 – 12:00



# DEPARTMENT OF EDUCATION

-2-

T670(E)J29/T

DEPARTMENT OF EDUCATION  
NATIONAL CERTIFICATE  
ELECTRO-TECHNOLOGY N3  
TIME: 3 HOURS  
MARKS: 100

Answer ALL the questions.

### INSTRUCTIONS

1. Full marks can be obtained by answering questions to the value of 100 marks correctly.
2. Make sure to substitute the correct value for the correct symbol and to copy the correct information from the question paper.
3. Number the answers clearly, correctly and keep the subsections of questions together, for example QUESTION 1.1, 1.2 etc. Rule off on completion of each question.
4. ALL the sketches and/or diagrams must be done in pencil. The sketches must be neat, reasonably large and fully labelled.
5. Unclear and illegible work will be strictly penalised.
6. Calculate the answers to THREE decimal numbers after the comma, for example 3,142.
7. Use the correct units for answers.

Formula sheets are attached.

### QUESTION 1

- 1.1 Name TWO methods which could be used to wind the armature of a direct-current machine and its application. (4)
- 1.2 Briefly explain the term pole pitch. (2)
- 1.3 Name FOUR methods which could be used to minimise the effects of armature reaction. (4)

[10]

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