

**OCR**

Oxford Cambridge and RSA

**Tuesday 19 June 2018 – Afternoon****A2 GCE MATHEMATICS (MEI)****4753/01** Methods for Advanced Mathematics (C3)**PRINTED ANSWER BOOK**

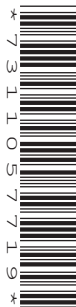
Candidates answer on this Printed Answer Book.

**OCR supplied materials:**

- Question Paper 4753/01 (inserted)
- MEI Examination Formulae and Tables (MF2)

**Other materials required:**

- Scientific or graphical calculator

**Duration:** 1 hour 30 minutes

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| Candidate<br>forename |  |  |  |  |  | Candidate<br>surname |  |  |  |  |  |
| Centre number         |  |  |  |  |  | Candidate number     |  |  |  |  |  |

**INSTRUCTIONS TO CANDIDATES**

These instructions are the same on the Printed Answer Book and the Question Paper.

- The Question Paper will be found inside the Printed Answer Book.
- Write your name, centre number and candidate number in the spaces provided on the Printed Answer Book. Please write clearly and in capital letters.
- **Write your answer to each question in the space provided in the Printed Answer Book.** If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the barcodes.
- You are permitted to use a scientific or graphical calculator in this paper.
- Final answers should be given to a degree of accuracy appropriate to the context.

**INFORMATION FOR CANDIDATES**

This information is the same on the Printed Answer Book and the Question Paper.

- The number of marks is given in brackets [ ] at the end of each question or part question on the Question Paper.
- You are advised that an answer may receive **no marks** unless you show sufficient detail of the working to indicate that a correct method is being used.
- The total number of marks for this paper is **72**.
- The Printed Answer Book consists of **16** pages. The Question Paper consists of **8** pages. Any blank pages are indicated.

**Section A (36 marks)**

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| <b>1(i)</b>  |  |
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2

| Function                  | Odd<br>(Yes/No) | Even<br>(Yes/No) | Periodic<br>(Yes/No): if Yes state the period |
|---------------------------|-----------------|------------------|-----------------------------------------------|
| $f(x) = \frac{x}{1-2x^2}$ |                 |                  |                                               |
| $g(x) = 1 + \sin 2x$      |                 |                  |                                               |
| $h(x) = 3e^{-2x^2}$       |                 |                  |                                               |

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| <b>3 (i)</b>  |  |
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| <b>3 (ii)</b> |  |
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| <b>5(i)</b>  |  |
| <b>5(ii)</b> |  |
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**6 (i)**

**6 (ii)**

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**8(ii)****8(iii)****(answer space continued on next page)**

8 (iii) (continued)

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| <b>9(i)</b>  |  |
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| <b>9(ii)</b> |  |
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9 (iii)

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| 9(iv) |  |
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