

MA1506 Mid Term Test

General Information

1. Date: Wednesday, 2 March 2011.
2. Time: From 8:30pm to 9:30pm in the evening.
3. Venue: Please check module website on IVLE.
4. Format: 10 Multiple choice questions based on Chapter 1 and Tutorials 1, 2, and 3.
5. This is a close book test and **NO** help-sheets are allowed. One formulae sheet (see the attached sample) will be attached to the question paper for your use.
6. There is enough blank space and 13 blank pages on the back of each sheet in the question paper for you to do your calculations. Rough papers are not provided and you are **NOT** allowed to bring other papers into the test halls.
7. You must bring your matriculation card, 2B pencils, erasers and your calculators to the test. **Only non graphing calculators are allowed.** Note: Students are not allowed to borrow calculators from each other during the test.
8. Sitting plan: Please check module website on IVLE.

9. Anyone taking the test at a wrong venue will risk having the answer sheet misplaced and end up getting a zero for the CA marks.

During the Test

10. All examination rules must be strictly followed during the test. In particular, **do not start writing before you are told to do so. Do not talk to each other during the test. Stop writing immediately after the chief invigilator announces that the test has ended.** Anyone caught breaking any examination rules will be referred to the Registrar's Office to face **disciplinary** action.

11. The answer to each question must be shaded properly with 2B pencils (the whole circle corresponding to the answer must be **COMPLETELY** shaded and must be shaded **dark enough** so that the computer can detect it) and if you change your answer later, you must make sure that the old answer is properly erased. Otherwise the computer will mark it wrong and no appeal on this will be entertained.

If you miss the Test

12. Anyone misses the test without a valid MC or a written permission from the module coordinator will get a **zero** for the CA mark.

13. Anyone misses the test with a valid MC or a written permission from the coordinator must take the make-up test which will be arranged at a later time. Please bring along your valid MC or your written permission from the coordinator for admission to the make-up test on that day.

Note: Students who have taken the main test are NOT allowed to take the make up test regardless of having valid MC or not.

14. As students taking the make-up test will have more time for their preparation, please note that the make-up test will be **proportionally more difficult** than the mid term test. The make-up test will cover the same material as the mid term test. The make up test questions are not multiple choice. The students will need to find the answer to each question and then write the answer in a box following the question but they do not need to show the details of their solutions.

15. Anyone misses both the mid term and the make-up tests but have valid excuses for both dates will have to take a second make-up test to be arranged at a later time. The second make-up test will have all essay type questions and the students must show details of their solutions to each question. The second make-up test will cover the same material as the mid term test, it will have more **challenging** questions and **short proofs** may be required.

After the Test

16. Answers to the mid term test will be posted on the IVLE website on 3 March.

17. Your answer sheets will be graded by a computer. It is **VERY IMPORTANT** that you **shade your matriculation number correctly** on the answer sheet. If you fail to shade your matriculation number correctly on the answer sheet and we cannot find it later, you will get a **ZERO** for your CA.

18. We will post your results on the website after the computer has finished grading and recording the marks.

19. In our experience so far, the computer has not made any mistakes. However, we still had some students making mistakes in shading the answer sheet in the last semester. The common mistakes that we have observed are: (a) shade the matriculation numbers wrongly or enter the NUSNET userid instead of the matriculation number; (b) shade only part of the circle but not the whole circle or the circle is not shaded dark enough; (c) shade two answers for the same question; (d) forget to shade the answer for some of the question; (e) claim to have gotten the correct answer but shaded the wrong circle on the answer sheet. Please be extra careful to avoid these and any other mistakes.

Updates

21. Please check the module website frequently for any updates or last minute changes to the information contained here.

Formulae Sheet

1. Integrating factor for $y' + Py = Q$ is given by

$$R = \exp\left(\int P dx\right).$$

2. The variation of parameters formulae for $y'' + py' + qy = r$:

$$u = \int \frac{-ry_2'}{y_1y_2' - y_2y_1'} dx$$

$$v = \int \frac{ry_1'}{y_1y_2' - y_2y_1'} dx .$$