

## MATH 546 — Spring 2023 — Notes about EXAM 2

- (1) Exam 1 is Wednesday, March 1, 2023. The exam covers the entire course from the first lecture until the statement and proof of Cayley's Theorem. In particular, the exam covers pages 4-20 of the class notes, Homework problems 1-18, 28, 29, 30, 35, 36, 37, and questions 3.11 and 3.12 from the class notes. (The exam does not cover question 3.5 from the class notes.)
- (2) Be sure to MASTER all of the assigned homework.
- (3) Be sure to MASTER all of the quizzes.
- (4) The material on the old MATH 546 exams which is covered on your exam 2:
  - Exam 1's:
    - 1993: 1, 3, 4, 5.
    - 1994: 1, 2, 3, 4, 5, 6, 7.
    - Spring 2001: 3, 4, 5, 6, 7, 8.
    - Summer 2001: 3, 4, 5, 6, 7, 8, 9.
    - Summer 2002: 3, 5, 6, 7, 8.
    - Spring 2004: 2, 3, 4, 5, 6, 7, 8.
    - Fall 2004: 2, 3, 4, 5, 7, 8.
    - Spring 2010: 1, 2, 3, 4, 5
    - Fall 2011: 1, 2, 3, 4, 5
    - Fall 2022: all.
    - Spring 2023: all.
  - Exam 2's:
    - 1993: 3, 4, 5 (In 4 and 5,  $S_A$  is the group of invertible functions from  $A$  to  $A$ . The operation is composition.)
    - 1994: 1, 2, 3, 5, 6.
    - Spring 2001: 1, 2, 3, 4, 5, 7.
    - Summer 2001: 1, 3, 4, 5, 6, 7, 8, 9, 10.
    - Summer 2002: 3, 4, 5, 6, 7, 8, 9, 10.
    - Spring 2004: 1, 2b, 3, 4, 5, 6, 7.
    - Fall 2004: 3, 4, 5, 6, 7, 8.
    - Spring 2010: 1, 2, 3, 4, 5, 6.
    - Fall 2011: 1, 2, 3, 4, 7, 8.
    - Fall 2022: all.
  - Exam 3's:
    - 1993: 1, 2, 3, 4.
    - 1994: 3, 4, 5, 6, 7.
    - Spring 2001: 4, 5, 9. (In these problems  $S_A$  and  $\text{Sym}(A)$  both are the group of invertible functions from  $A$  to  $A$ . The operation is composition.)

- Summer 2001: 1, 2, 3, 5a, 6, 9.
- Summer 2002: 1, 2, 3, 4, 5, 6.
- Spring 2004: 1, 3, 5, 6, 7.
- Fall 2004: 2, 3.
- Spring 2010: 1, 3, 5, 7.
- Fall 2011: 2, 3, 4, 5, 6, 7, 8.
- Fall 2022: all.
- Exam 4's:
  - Spring 2001: 1, 2, 3, 4, 7, 10.
  - Summer 2001: 8, 9, 10.
  - Summer 2002: 1, 2, 3, 5, 6, 8.
  - Spring 2004: 2, 3, 4, 5, 6, 9, 10
  - Fall 2004: 5, 6, 7.
- Final Exams:
  - 1993: 2, 3, 4.
  - 1994: 2, 3, 4, 5, 6, 7 8c, 11, 12.
  - Spring 2001: 2, 3, 5, 9, 10, 11, 14, 15, 16, 18.
  - Summer 2001: 1, 2, 3, 5, 11, 17, 18, 20.
  - Summer 2002: 1, 3, 5, 6, 7, 10, 11, 14, 18.
  - Spring 2004: 1, 3, 4, 5, 6, 10, 12, 13, 14, 16, 17.
  - Fall 2004: 1, 10, 11, 13.
  - Spring 2010: 3, 5, 7, 10.
  - Fall 2011: 8, 11.
  - Fall 2022: 1, 2.