

7.5 Hypersensitivity

Name: _____ Class: _____ Date: _____

Total: 23 marks

KEY WORDS hypersensitivity

Objective

Classify hypersensitivity by clock and mechanism, and match treatment.

1 Key knowledge and worked examples

■ The four clocks

I IgE/mast cells/minutes; II IgG on cells/hours; III complexes/days; IV T cells/48–72 h ✓.

■ Worked example: two patients

Bee-sting collapse at 8 minutes → I, adrenaline IM. Nickel eczema at 72 h → IV, topical steroid ✓.

2 Practice

2.1 Which type is a tuberculin skin test? [3]

2.2 Which antibody class drives type I? [3]

2.3 Serum sickness is which type, and why days? [3]

3 Exam-style questions

3.1 A patient develops fever, rash and arthralgia 8 days after receiving a foreign serum (fictional).

Classify the reaction (III) and explain the days-scale (complexes form as antibody appears, then deposit). Predict the complement findings. State the treatment principle. [7]

3.2 A transfusion of A-positive blood to an O-positive recipient (fictional).

Explain the mechanism (pre-formed anti-A IgM → type II, immediate intravascular haemolysis). Predict the timeline and the urine/serum findings. Contrast with a delayed haemolytic reaction. [7]
