UNIVERSITY MEDICINE • EXERCISE SHEET

7.7 Immunodeficiency and transplantation

Name: _____ Class: _____ Date: _____ **Total: 23 marks**

KEY WORDS immunodeficiency

Objective

Localise the failed arm from infections and time rejection types.

1 Key knowledge and worked examples

■ The map

Neutrophils → abscesses/fungi; C5–9 → Neisseria; T cells → opportunists; B cells → encapsulated from ~6 months ✓. Rejection: antibody minutes, T cells days, scarring months.

■ Worked example: the clocks

XLA presents after maternal IgG wanes (~6 months); SCID from birth; neutrophil defects neonatally ✓.

2 Practice

2.1 Recurrent Neisseria → which deficiency? [3]

2.2 At what age does X-linked agammaglobulinaemia typically present, and why? [3]

2.3 Which rejection type occurs minutes after reperfusion? [3]

3 Exam-style questions

3.1 A 7-month-old has had three episodes of pneumonia with encapsulated organisms since 5 months (fictional).

Localise the defect (B-cell arm; absent tonsils suggest no B cells). Explain the timing (maternal IgG waned ~6 months). State the confirmatory tests and the therapy. [7]

3.2 A renal transplant shows a rising creatinine at day 12 with biopsy T-cell infiltrate (fictional acute rejection).

Classify the rejection and the mechanism (T-cell mediated, days–weeks). Name one immunosuppressive and the 7.3 signal it turns down. State what a creatinine creeping up over MONTHS with proteinuria would indicate (chronic). [7]