Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

Each answer shows the steps, then the **result**.

2.1

A: **hepatitic**

B: **cholestatic**

C: AST:ALT is 2.4, which suggests **alcohol**

2.2

NSAIDs block COX, so less prostaglandin is made

less mucus and bicarbonate protect the lining, so acid damages it

2.3

granulomas: **Crohn**

rectum and colon without gaps: **ulcerative colitis**

fistula: **Crohn**

2.4

any two of: heavy proteinuria (more than 3.5 g/day); low albumin; oedema; high cholesterol

3.1

(a) cirrhosis blocks blood flow through the liver, raising the portal pressure; veins at the lower oesophagus swell (varices) and burst

(b) the spleen enlarges with the high pressure and holds and destroys platelets

(c) the liver cannot make proteins: albumin and clotting factors, so liver function is poor

(d) high portal pressure, or low albumin (low oncotic pressure)

3.2

(a) **nephritic**: blood and red cell casts in the urine with high BP

(b) **post-streptococcal glomerulonephritis**

(c) immune complexes are trapped in the glomeruli, and they switch on and use up complement

3.3

(a) A: **coeliac disease**; B: **Crohn disease**

(b) flat villi absorb less iron and folate, which are taken up in the upper small bowel

(c) **anti-tTG** antibody

(d) B_{12} is absorbed in the terminal ileum; without it, tablets are not absorbed

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(e) the antibodies and damage only appear while gluten is eaten