

A level Biology A
H420/03 Unified biology

Question Set 13

1 The process of ultrafiltration in the kidney shares similarities with the formation of tissue fluid.

(a)* Describe the similarities and differences between ultrafiltration and the formation of tissue fluid. [6]

(b) A person's glomerular filtration rate (GFR) provides an indication of the health of their kidneys. The GFR is a measure of the volume of blood that can be filtered by the kidneys every minute.

GFR can be estimated by monitoring the blood concentration of creatinine, which is a breakdown product of creatine phosphate in muscles.

(i) Suggest **two** characteristics of a patient that must be taken into account when using this GFR measurement to diagnose kidney damage.

Explain why each characteristic must be considered.

1

2

[4]

(ii) If kidney damage is suspected, the patient's urine is likely to be tested for the protein albumin.

Explain why the presence of albumin in the urine indicates kidney damage.

[1]

Total Marks for Question Set 13: 11



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