**1.** (a) I. hepatic cells / hepatocytes / liver cells / liver tissue;

II. hepatic vein / blood cells;

III. sinusoids; 3

(b) storage of nutrients;
detoxification of poisons;
breakdown of hemoglobin;
production of bile pigments;
synthesis of plasma proteins;
synthesis of cholesterol; 2 max

(c) *Award* ***[1]*** *for two of the following.*cellulose / lignin / bile pigments / bacteria / intestinal cells
*Do not accept fibre.* 1

(d) insulin / glucagon / prolactin / somatotrophin
*Award other suitable examples.* 1

[7]

**2.** (a) *Award* ***[1]*** *for* ***three*** *of the following*

cellulose / lignin / bile pigments / bacteria / intestinal cells 1

(b) erythrocytes rupture when they reach the end of their life span / after 120 days;

absorbed by phagocytosis / Kupffer cells in liver from blood;

hemoglobin split into globin and heme groups;

iron removed from heme leaving bilirubin;

bilirubin released into alimentary canal in bile;

digestion of globin to produce amino acids; 4 max

[5]