

Digestion and Absorption

- 1) What is the difference between mechanical and chemical digestion? (2)
- 2) What is the role of microvilli? (1)
- 3) Draw a labelled diagram of a;
 - a. Villus? (3)
 - b. Epithelial cell of a villus? (4)
- 4) What is the function of each of the labelled parts in Q3 above? (5)
- 5) Describe the process of carbohydrate digestion in the alimentary canal? (4)
- 6) What are the differences between endopeptidases and exopeptidases? (3)
- 7) Describe the process of protein digestion in the alimentary canal? (4)
- 8) What are the roles of hydrochloric acid in the stomach? (2)
- 9) What are dipeptidases and where are they found? (2)
- 10) Where are pepsin and trypsin produced? What are their optimum pH values? Are there endo/exopeptidases? (3)
- 11) Which part of pancreatic juice neutralises the gastric acid? (1)
- 12) Where is bile produced and stored? (2)
- 13) What are bile salts, what do they contain and what is their function? (3)
- 14) What are micelles and why are they useful? (2)
- 15) Draw a typical labelled structure of a micelle? (4)
- 16) What is the mixture of micelles and water known as? (1)
- 17) Where are lipases produced, what is their function and where does fat digestion take place? (2)
- 18) Describe the process of fat digestion in the alimentary canal? (4)
- 19) Describe the process of absorption of monosaccharides and amino acids? (3)

- 20) Describe how fatty acids and monoglycerides are absorbed? (4)
- 21) Using a labelled diagram, show how each of the following molecules are absorbed from the lumen of the small intestine across the epithelial cells of the villi and into the blood capillary or lacteal; (4)
- Monosaccharides
 - Amino acids
 - Fatty acids and monoglycerides
- 22) What is co-transport? (1)
- 23) What is a lacteal? (1)
- 24) What is the role of lymph vessels? (1)
- 25) Where do the lymph vessels drain into? (1)
- 26) What are HDLs and LDLs, why are they significant and what are their roles? (3)

Total: /70