

**BIOLOGY**  
Mark Scheme**LM6 - LIPID DIGESTION**

- Q1) a)** (Catalyse) Series of hydrolysis reactions that break ester bonds **(1)** to produce monoglycerides and fatty acids **(1)**
- b)** Smaller pieces have higher total surface area for enzymes to act on **(1)** so more enzymes can break down food at once **(1)** which speeds up breakdown **(1)**
- Q2) a)** Chylomicrons help transport lipids safely around the body **(1)**
- b)** Fatty acids and monoglycerides travel to the endoplasmic reticulum **(1)** where they are recombined into triglycerides **(1)** then travel to golgi apparatus **(1)** where cholesterol and lipoproteins are added to form chylomicrons **(1)**
- Q3)** A - False B - False C - True **(1 mark for each correct)**
- Q4) a)** Bile salts emulsify large lipid droplets and associate with them **(1)** to break them down into tiny micelles **(1)**
- b)** Large lipid droplets will not be broken down/emulsified **(1)** so total surface area is lower and less enzymes can act at once **(1)** Therefore breakdown of lipids is slower **(1)** and they cannot be absorbed into the epithelial cells **(1)**