

Answers for support worksheet – Option A

- 1**
- a** A balanced diet is one that contains all the nutrients an individual needs in the right quantities. (1)
 - b** Essential amino acids cannot be synthesised in the body and must be taken in the diet. Non-essential amino acids can be synthesised by the body. (2)
 - c** Fibre is indigestible matter such as cellulose and chitin, which passes through the body and is egested with faeces. Fibre provides bulk in the intestine and prevents feelings of hunger; it slows the absorption of other nutrients and helps to prevent peaks in blood sugar levels. It also helps prevent colon cancer and constipation. (3)
- 2**
- a** Individuals with a high BMI have a greater risk of developing type II diabetes – the relative risk increases rapidly at a BMI greater than about 29. (1)
 - b** The BMI for Wasim is 32.7, while Peter's is 27.3. (4)
 - c** Both men are overweight but Wasim has a BMI indicating that he is obese and therefore in greater danger of developing type II diabetes. (2)
 - d** Reduce the level of processed foods and sugars in their diets, take more exercise and try to lose weight. (2)
 - e** More children than ever before are overweight and are developing type II diabetes so it is not correct to suggest its onset is always in adulthood. (1)
- 3**
- a** two from: to colour the food to make it more attractive, as a preservative, to improve the texture of the food, other suitable example (2)
 - b** three from: availability of cheap high-energy processed foods; large portion sizes; sedentary occupations; increased use of vehicles for transport, other suitable example (3)
 - c** (4)

Breast milk	Artificial milk
contains lactose	contains glucose
contains antibodies and hormones	contains no human antibodies or hormones
contains high levels of whey	contains low levels of whey
contains low levels of casein	contains high levels of casein

- d** Breast milk contains antibodies, which protect an infant against infection until his or her immune system has developed, while artificial milk does not offer such protection. Breast milk is delivered as required and does not require sterilised bottles or water – if artificial milk is delivered using equipment that has not been sterilised properly, the infant may be exposed to infections. (2)