Transport in Animals and Absorption of Materials Mark Scheme

13.	D

4.			(A villus has) a thin wall a large surface area a good blood supply/many capillaries 2 • There are a large number of villi • So this also increases surface area/creates a large surface area **OR** makes absorption/ diffusion fast(er)/more 1	**3**	Not Acceptable - cells have thin walls/villus is one cell thick Acceptable - Villus wall is one cell thick Any 2 from 3 Both parts needed (If candidate includes information about any other biological system, then **maximum** mark available is 2)

9.	C
10.	B

9.	(a)	(i)	Alveolus/alveoli/air sac	**1**	
		(ii)	Large surface area Thin walls/walls are one cell thick Good/rich blood supply/dense capillary network Moist	**2**	Any two - one mark each. Thin cells/thin lining/alveolus is one cell thick is not acceptable. Large number of them/lots of them not acceptable.
	(b)		Dirt/dust/microorganisms are trapped in the mucus Cilia move these up and away from the lungs	**1** **1**	Germs - not acceptable (but would not negate an otherwise correct answer). Must imply direction away from lungs but not out of the lungs.

14	B

5.	(a)	(i)	*Type of blood vessel* vein (1) [shaded] artery (1)	2	Not acceptable: Specific name of vessel.
		(ii)	They have thinnest/thinner <u>wall</u>(s)	1	Answer must be comparative. Any reference to diameter of central channel negates a correct response.
	(b)		Coronary artery/arteries	1	

11.	A
12.	C

(c)		(Large) surface area /(rich) blood supply/(dense) capillary network	1	

14.	D
15.	A
17.	C

10.	(a)		Arteries: 2 and 5 **OR** Veins: 1 and 3	2	1 mark for each correct number. Accept descriptions in place of numbers.
	(b)	(i)	As the heart rate increases the volume of blood (pumped) increases until 100(bpm) and then decreases.	2	1 mark for correct description of increase and then decrease (without mention of 100(bpm)).
		(ii)	6·0 / 6	1	
	(c)	(i)	Higher/more in Q (than in P) **OR** Lower/less in P (than in Q) **OR** High in Q **and** low in P	1	Not acceptable: - P is deoxygenated and Q is oxygenated - absolute terms eg no oxygen.
		(ii)	Left ventricle	1	