

Multiple Choice Answers

Q15: B

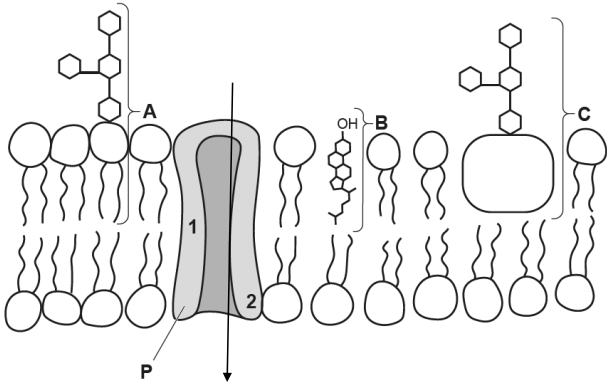
Q16: B

Q17: B

Multiple Choice Answers

Q17: A

Q20: A

1(a)	A glycolipid ; B cholesterol ; C glycoprotein ;
1(b)	 1 arrow through protein ; 2 direction of arrow correct ;
1(c)	<i>any three from:</i> fluidity (of membrane) increases ; unsaturated fatty acids have double bonds ; (double bonds) cause the fatty acid chain to, kink / bend / AW ; unsaturated fatty acids cannot lie as close together as saturated fatty acids A ora or <i>ref. to</i> increased distance between phospholipids / AW ; <i>ref. to</i> weakening the hydrophobic interactions between, fatty acid chains / cholesterol ;
1(d)	<i>any one from:</i> position 1 has amino acids with, hydrophobic / non polar / AW, R-groups ; position 2 has amino acids with, hydrophilic / polar / ionic / AW, R-groups ; A <i>ref. to</i> amine and carboxyl groups as appropriate

1(a)(i)	1 correct concentrations (0.5, 0.25, 0.125, 0.0625) <u>and</u> % at least once ; 2 shows transfer of 10 (cm ³) to each beaker from the previous beaker ; 3 shows 10 (cm ³) of water added to each beaker ;
1(a)(ii)	1 heading for independent variable: percentage concentration of glucose (before heading for dependent variable) <u>and</u> no units in body of table ; 2 heading for dependent variable: time / seconds <u>and</u> no units in body of table ; 3 records a time for each concentration ; 4 time for highest concentration of glucose is shorter than for the lowest concentration of glucose ; 5 records time in whole seconds ;
1(a)(iii)	records a time for R1 and S1 ;
1(a)(iv)	correct estimate for R1 and S1 based on candidate's results ;
1(a)(v)	1 R1 has, more glucose molecules / a steeper concentration gradient, than S1 ; 2 faster rate of diffusion ;
1(a)(vi)	calculates average rate of diffusion for R to two significant figures ;
1(a)(vii)	1 use standard glucose concentrations with narrower intervals ; 2 stated concentrations each side of the estimate for R1 ;
1(a)(viii)	systematic <u>and</u> no effect ;
1(b)(i)	1 x-axis: type of sugar <u>and</u> apple and pineapple <u>and</u> bars labelled glucose, fructose, sucrose <u>and</u> y-axis: mass of sugar / g per 100 g fruit ; 2 scale on x-axis: even width of six bars <u>and</u> scale on y-axis: 2 g per 100 g to 2 cm <u>and</u> labelled at least every 2 cm ; 3 correct plotting of all six bars ; 4 horizontal and vertical lines joined precisely ;
1(b)(ii)	shows 5.2 minus 1.9 divided by 5.2 <u>and</u> multiplied by 100 or 1.9 minus 5.2 divided by 1.9 <u>and</u> multiplied by 100 ;