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| Question |  | E Answers | Marks | Additional Guidance |
| :---: | :---: | :---: | :---: | :---: |
| 2 | (a | (has been through) capillaries (in organs/named organ(s)) ; <br> (has been through) an organ / named organ (beforehand) ; <br> lost oxygen to, (named respiring) tissues / (named) organs / cells / AW ; | 2 |  |
|  |  |  |  |  |
|  | (b) | oesophagus ; <br> stomach ; <br> gall bladder ; <br> duodenum ; <br> ileum ; <br> pancreas; <br> colon / large intestine / rectum ; | 4 | Accept small intestine as alternative to duodenum and ileum |
|  |  |  |  |  |
|  | (c) | glucose, amino acids ; (named) vitamin(s) / (named) mineral(s) ; in solution / soluble / in the plasma; transported from, small intestine / duodenum / ileum site of absorption ; to liver ; | $\max 3$ |  |
|  | (d) | to max 4 <br> (when a) high glucose concentration, glucose converted to glycogen ; <br> low glucose concentration, glycogen converted to glucose ; ref to correct role of, insulin / glucagon ; <br> makes plasma proteins ; excess amino acids, deaminated / described ; <br> to $\max 3$ alcohol, broken down / respired / metabolised; named toxin, broken down ; R toxin unqualified | $\max 5$ |  |



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| 3 | (a) | $\begin{aligned} & \hline \text { A } \\ & \text { B } \\ & \text { C } \\ & \text { D } \end{aligned}$ | left atrium ; mitral / bicuspid / atrioventricular, valve ; semi-lunar valve / pocket valve / aortic valve ; right ventricle; | [4] | reject if correct and incorrect answers given for each <br> A atria <br> A auricle A 'oracle' / 'oricle' <br> A if given the plural <br> A if given the plural, A 'half-moon' valve |
|  | (b) | $\begin{array}{\|l\|} \hline \mathbf{E} \\ \mathbf{F} \end{array}$ | (superior / anterior) vena cava; aorta ; | [2] |  |
|  | (c) | $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | coronary ; <br> fatty deposit in (wall of) artery ; <br> blocks, artery / restricts, blood flow ; <br> restricts, oxygen / nutrient, supply ; <br> blood clotting occurs ; | [1] [max 2] | R cardiac A phonetic spellings ignore incorrect name for MP1-4 <br> A atheroma / plaque $\mathbf{A}$ cholesterol / LDL / fatty acids A arteriosclerosis / described <br> A 'narrows' artery <br> $\mathbf{R}$ if 'to body' ignore high blood pressure |
|  | (d) |  | rt not pumping blood / keeps blood circulating; od is oxygenated; oon dioxide is removed from blood; | [max 2] | A blood not pumped to the lungs A exchange of oxygen and carbon dioxide for two marks ignore 'to keep patient alive' / 'supply heart with blood' |
|  | (e) | $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \\ & 5 \\ & 6 \\ & 7 \\ & 8 \\ & 9 \end{aligned}$ | ```ref. to (cardiac) muscle ; ref. to myogenic / heart has own pacemaker ; septum (divides heart into two); two (separate) ventricles / AW ; ventricle(s), contract / pump ; increase blood pressure; right ventricle has thin(er) wall / left ventricle has thick(er) wall ; so low(er) pressure / higher pressure ; (in context) to lungs / to rest of body; (in context)``` | [max 4] | R'push' <br> A bigger, R tougher A muscle <br> A 'to whole body' for LV if blood to lungs described |
|  |  |  |  | I: 15] |  |

