**AS F211** questions by topic. Questions in ( ) are investigation questions related to topic

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| Module/Topic | Jan 09 | May 09 | Jan 10 | May 10 | Jan 11 | May 11 | Jan 12 | May 12 | Jan 13 |
| 1. Cells |  |  |  |  |  |  |  |  |  |
| Res, mag &stains |  |  | 1b | 2a |  | 4bi | 4a,b |  |  |
| Mag calcul’n | 1aiii |  |  |  | 5aii |  | 4cii |  |  |
| Electron mic |  |  | 1a | 2b |  |  | 4b,ci |  |  |
| Cytosk,flag/cilia |  | 4b |  |  | 5aiii |  | 2bi,6bi |  |  |
| Plant/animal cells |  |  |  | 4ai |  |  |  |  |  |
| Organelles | 1ai,ii |  | 2c | 1aiii |  | 1a | 4ciii,4d | 2a | 5b |
| Protein prod/sec | 1b |  |  |  |  |  | 6bii |  |  |
| Prok/euk cells |  | 4a |  | 1ai,ii | 5ai |  |  | 2b | 5a |
| Roles of membs |  |  | 3a |  |  |  | 6a |  |  |
| Fluid mosaic mod |  | 2a,ci(ii) | 3a | 3b,(c) |  | 2a |  |  | 3a,b |
| Cell signalling |  | 2b | 3b |  | 2c |  |  |  | 3c |
| Diff/Facilit’d diff | 2c |  |  |  |  | 2c |  |  |  |
| Active T/Endo/Ex | 2c |  |  | 3a |  | 2b,c | 6c |  |  |
| Osmosis | 2a,b |  |  |  | 6 | 2c |  | 4a |  |
| Cell cycle |  | 5b |  |  | 1c | 4c |  |  |  |
| Mitosis |  | 5a |  | 4bi | 1a,b,d | 4bii |  | 1a,b |  |
| Clones, meiosis | 3a,b | 5c |  | 3d,4bii |  | 4d |  |  | 2a,b |
| Cell specialisation |  |  |  | 4aii | 5b |  |  |  |  |
| Diff’n, tiss/organs | (3c) |  | 2ai,iii |  |  | 1b,4a | 2a,c | 1c | 2c |
| 2. Exchange and  Transport |  |  |  |  |  |  |  |  |  |
| Exch surfaces | 4a |  |  | 1b |  |  |  |  | 6b |
| Exch in lungs | 4b,c | 1bi | 6ai |  | 2a,b |  | 1ai,1b | 5b |  |
| Lung tissues |  | 1a,bii | 2aii | 1c |  | 1c | 1aii,iii |  | 6aii |
| Lung capacity | 4d |  | 6aii,b,c |  |  | 5a,(b) |  | 5a,c,d |  |
| Transp’rt systems | 5a |  |  |  | 3 |  |  | 3a | 1a |
| Heart structure | 5b | 6a |  |  |  | 3ai,ii,b |  |  |  |
| Cardiac cycle |  | 6b | 5bi,ii |  |  | 3aiii |  | 3b |  |
| Control of C cycle | 5c |  |  | 6a,b,c |  |  |  |  | 1b,c |
| Open/closed circ |  |  |  |  |  |  | 3bi | 3a |  |
| Blood vessels |  |  | 5a |  |  | 3b | 3bii | 3c,d |  |
| Blood, TF &lymph |  |  | 5biii |  | 2d | 3b | 3a |  |  |
| Carriage of O2 |  |  |  | 2c,d | 3 |  |  | 4b |  |
| Carriage of CO2 |  |  | 5c |  |  |  |  |  |  |
| Transp in plants |  |  |  |  |  |  |  |  |  |
| X and P distrib’n | 6a |  |  |  | 4a |  |  |  |  |
| X and P structure |  |  | 1c | 5c | 4b |  | 2c |  | 6ai |
| Water pot’l |  |  |  | 5a |  |  |  |  |  |
| Uptake&movem’t |  |  |  | 5b |  |  |  | 4c |  |
| Transpiration | 3a |  | 4a,b,(c) |  | 4c |  | 5a,bi |  | 4a,(b) |
| Xerophytes | 3b |  |  |  |  |  | 5bii |  |  |
| Translocation | 6b,c,d |  |  |  |  | 6a,b,c |  | 6a,b |  |