| Question number | Answer | Accept | Reject | Marks |
| :---: | :---: | :---: | :---: | :---: |
| 1 (a) (i) <br> (ii) <br> (iii) | unsaturated <br> M1 - (unsaturated) colourless <br> I GNORE clear/transparent/looks like water <br> M2 - (saturated) orange <br> addition | no colour <br> yellow / brown and any combination | discoloured <br> any other colour either on its own or in combination with an accepted colour | 1 <br> 1 <br> 1 <br> 1 |
| (b) (i) <br> (ii) <br> (iii) | A <br> $C$ and $D$ <br> each colouring has a different mixture/combination/ patterns of dyes <br> IGNORE references to different heights / distances and solubilities. | $C, D$ <br> Spots / dots for dyes | $C$ or D | $\begin{aligned} & 1 \\ & 1 \\ & 1 \end{aligned}$ |
|  |  |  | Total | 7 |


| Question <br> number | Expected Answer | Accept | Reject | Marks |
| :---: | :--- | :--- | :--- | :---: |
| 2 (a) | bar drawn at height of 32 <br> bar drawn at height of 8 <br> bar drawn at height of 62-64 | 2 marks for all 3 <br> 1 mark for any 2 <br> correct heights at <br> vertical lines ending at <br> correct heights | 2 |  |
| (b) | M1 - capric AND palmitic solid | S |  |  |
|  | M2 - formic liquid | 1 | any other state <br> symbols | 1 |

