| Ques | stion | | Marks |
|------|-------|---|-------|
| 1 | 1 | Mark is for AO2 (analyse) I E H C A B G D F | 1 |
| 1 | 2 | Mark is for AO1 (knowledge) Removing (unnecessary) details; | 1 |
| 1 | 3 | Mark is for AO1 (knowledge) Grouping by common characteristics // a hierarchical / 'kind-of' relationship; | 1 |
| 1 | 4 | Mark is for AO2 (analyse) (If there is a relationship between two cells is still represented but) if the relationship is because two cells are in the same row/column/two-by-two block is no longer represented // the nature of the link between the two cells is not represented; A. the location of a cell is not represented | 1 |
| 1 | 5 | All marks for AO1 (understanding) Adjacency matrix appropriate when there are many edges between vertices // when graph/matrix is not sparse; when edges frequently changed; when presence/absence of specific edges needs to be tested frequently; Max 2 marks A Alternative words which describe edge, eg connection, line | 2 |
| 1 | 6 | Mark is for AO1 (understanding) Directed (graph) // digraph; | 1 |

| Question | | Marks |
|----------|--|-------|
| 2 | One mark for AO1 (knowledge) and two marks for AO1 (understanding) | 3 |
| | AO1 knowledge Breaking a problem into smaller sub-problems; AO1 understanding Each of which solves an identifiable task; Each of which might be further subdivided; | |

| Question | | | Marks |
|----------|---|--|-------|
| 03 | 1 | Mark is for AO2 (analyse) | 1 |
| | | Statement 1 can't be correct because it means Statement 5 / Statement 6 is true which means Statement 1 is false; | |
| | | Statement 1 can't be correct because it would mean Statement 2 is correct which would mean all of the other statements have to be both correct and incorrect; | |
| | | Statement 1 can't be correct because it would mean Statement 4 is correct which means that Statements 2 and 3 have to be both correct and incorrect; | |
| | | Questions says only one of the statements is true so Statement 1 can't be true as that means more than one statement would be true; | |
| | | Max 1 | |
| 03 | 2 | Mark is for AO2 (analyse) | 1 |
| | | (Statement) 5; | |
| 03 | 3 | All marks AO2 (analyse) | 2 |
| | | Statement 3 can't be correct because Statement 1 is false; | |
| | | Statement 3 can't be correct because the question says only one of the statements is correct; | |
| | | Statement 3 can't be correct because that would mean Statement 2 would be a contradiction as this would mean Statement 3 would have to be incorrect; | |
| | | If Statement 2 is true then Statement 4 has to be false. As Statements 1 and 3 are false for Statement 4 to be false Statement 2 has to be false as well (otherwise one of the above would be true). This is a contradiction so Statement 2 can't be true; | |
| | | Statements 1, 2 and 3 are false so Statement 4 is false; | |
| | | If Statement 6 is true then 5 has to be false implying at least one of Statements 1 to 4 have to be true but they are all false so Statement 6 has to be false; | |
| | | Max 2 | |

| Question | | | Marks |
|----------|---|---|-------|
| 4 | 1 | Mark is for AO2 (analyse) | 1 |
| | | The colour is not yellow // the chosen shape was not the yellow circle // the colour is blue or pink; | |
| 4 | 2 | Mark is for AO2 (analyse) | 1 |
| | | The shape is not a square // the chosen shape was not the blue square // the shape is a triangle or circle; | |
| 4 | 3 | Mark is for AO2 (analyse) | 1 |
| | | Pink triangle; | |