

Mark schemes

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|-----|---|-----|
| 1. | A | [1] |
| 2. | A | [1] |
| 3. | D | [1] |
| 4. | B | [1] |
| 5. | C | [1] |
| 6. | C | [1] |
| 7. | D | [1] |
| 8. | D | [1] |
| 9. | C | [1] |
| 10. | D | [1] |
| 11. | D | [1] |
| 12. | A | [1] |
| 13. | D | [1] |
| 14. | D | [1] |
| 15. | C | [1] |

16. D
a repulsive force of $\frac{3}{4}F$ [1]
17. C
 10^{36} [1]
18. C
 $\frac{QV}{d}$ [1]
19. D
72 mm [1]
20. D
 $\frac{E}{9} \quad \frac{V}{3}$ [1]
21. C
No work is done moving an electron from **M** to **N**. [1]
22. B [1]
23. D [1]
24. D [1]