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| 01.1     | any one from:  
- amount / concentration of antibiotic  
- size of discs  
- (incubation) temperature  
- incubated for same time / 3 days  
- type of agar | do not allow type of antibiotic  
ignore number of antibiotics  
allow type of paper  
ignore number / position of discs  
allow left / kept for same time  
ignore references to bacteria or petri dishes | 1 |
| 01.2     | D       |                   | 1   |
| 01.3     | C       |                   | 1   |
| 01.4     | B       | both had a large clear area around the disc  
or killed a lot of both bacteria | no marks if wrong antibiotic  
allow a description of this, eg B had the 2nd largest clear area with E.coli and the largest clear area on S.aureus | 1 |
| 01.5     | resistant |                   | 1   |
| 02.1     | 5 (years) |                   | 1   |
| 02.2     | lab tests on cells / tissues / animals and clinical trials in humans | allow 1 block of lab tests and 3 blocks of clinical trials  
or number of phases | 1 |
| 02.3     | (healthy volunteers) any one from:  
- too great a risk for ill person / patient  
- patient might be taking another drug  
- side effects easier to see (low dose) any one from:  
- to reduce any risk  
- to look for side effects | ignore references to the immune system  
allow to avoid harm | 1 |

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This resource sheet may have been changed from the original.
| 02.4 | placebo and drug tested neither patients nor doctors know (who has taken placebo or drug) (so) avoids bias or (therefore) controls for psychological effects or (so) can tell if drug works rather than placebo effect | allow fake drugs / sugar pills this full statement would gain 2 marks | 1 |
|      | GCSE Biology only | any six from: | 6 |
| 03   | mouse is injected with antigen / protein | • mouse is injected with antigen / protein • immune system is stimulated • produces lymphocytes • lymphocyte is combined with a tumour cell • to form a hybridoma cell • hybridoma cell divides • forms a clone of hybridoma cells • cells produce a specific antibody • many cells produce a lot of the antibody • antibody is purified | 1 |