

Standard Grade Biology **Biotechnology**

2. Problems with Profit and Waste.

Checklist

Grade

At the end of this topic you should know:

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| (a) some examples of the damage caused to the environment by disposal of untreated sewage and give examples of diseases which may be spread by untreated sewage. | <input type="checkbox"/> | General |
| (b) the principal precautions to be taken during lab work with micro-organisms, and explain the importance of such precautions in biotechnological processes whenever relevant. | <input type="checkbox"/> | General |
| (c) the precautions which are taken during manufacturing processes with reference to resistant fungal and bacterial spores. | <input type="checkbox"/> | Credit |
| (d) the process of decay in terms of the energy requirements of micro-organisms. | <input type="checkbox"/> | General |
| (e) the part played by bacteria in the process of decay and recycling of carbon and nitrogen. | <input type="checkbox"/> | Credit |
| (f) the main process in the treatment of sewage is its breakdown by the action of decay micro-organisms to products harmless to the environment and describe how the oxygen required can be provided during sewage treatment. | <input type="checkbox"/> | General |
| (g) why a range of micro-organisms is needed to breakdown a range of materials in sewage. | <input type="checkbox"/> | General |
| (h) why complete breakdown of sewage is only possible in aerobic conditions. | <input type="checkbox"/> | Credit |
| (i) 2 examples of useful products and the waste materials from which they are gained through the action of micro-organisms and explain the economic importance of this technology. | <input type="checkbox"/> | General |
| (j) the advantages of up-grading waste in terms of increasing its energy or protein levels. | <input type="checkbox"/> | Credit |
| (k) that alcohol and methane are products of fermentation and the advantages of deriving fuel through fermentation rather than fossil sources. | <input type="checkbox"/> | General |
| (l) that under suitable conditions, micro-organisms can reproduce rapidly by asexual means, and that they may be harvested to provide protein rich food for animals or man. | <input type="checkbox"/> | General |

Homework

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End of Topic Test