        - (ii) Injecting insulin which will make the liver remove excess glucose from the digested food.
            - This is an inconvenient, but very effective way, of keeping the blood sugar level in check.
            - Insulin injections can greatly help diabetics in providing the necessary insulin but it can never be as successful as a properly functioning normal pancreas and diabetics can suffer from long-term health problems.
            - Diabetics can have a pancreas transplant which, if successful, can theoretically avoid the need for insulin, but there is always the danger tissue rejection and costly immunosuppressive drugs must be taken (with the added complication of serious side-effects).
- 2.10 Be able to explain how, in Type 1 diabetes, the level of physical activity and diet affect the amount of insulin required.
    - The amount of insulin injected depends on the person's diet and level of activity.
    - A healthy balanced diet, regular eating and regular exercise will both help to keep a diabetic in good health and minimise the amount of insulin needed.
- 2.11 Know that Type 2 diabetes is caused by a person becoming resistant to insulin.
    - The type 2 diabetes condition is when the pancreas doesn't make enough insulin or the person has become resistant to insulin so the body doesn't even respond appropriately to any insulin present, and both will cause the blood sugar level to rise.
- 2.12 Be able to explain how Type 2 diabetes can be controlled by diet and physical activity.
    - Type 2 diabetes can be controlled by eating a healthy balanced diet, regular eating, regular exercise and losing weight if necessary.
    - Some Type 2 diabetics take insulin to help control this diabetic condition.
- 2.13 Be able to evaluate the correlation between obesity (including calculations of BMI) and Type 2 diabetes.
    - Obese people (BMI > 30) do run the risk of developing type 2 diabetes and if their BMI is over 30, then action should be taken.
    - Body Mass Index (BMI) = (body mass in kg) / (height in m)^2
- 2.14 Be able to explain how plant growth substances (hormones) bring about:
    - a) positive phototropism in shoots
    - b) positive gravitropism (geotropism) in roots
- 2.15 Be able to explain how auxins bring about shoot curvature using cell elongation
- 2.16 You are expected to have investigated, and therefore have some knowledge of tropic responses e.g growing small plants from seeds under different light conditions and plant hormone experiments e.g. with auxin and shoot tips.
- 2.17 Be able to analyse, interpret and evaluate data from plant hormone experiments, including the action of auxins and gibberellins
- 2.18 **HT only**: You should have an understanding of the uses of plant hormones, including: