**Review Worksheet ANSWERS: Pancreas and other endocrine glands**

1: Where are the hormones insulin and glucagon produced and what is their role in the body?

*Insulin and Glucagon are produced in the islet tissue (1) of the pancreas (1). They have a role in regulating blood sugar (1)*

2: Specialised cells within the pancreas produce insulin. What are these cells called?

*Beta cells (1)*

3: What happens in the following areas as a result of insulin release?

Blood glucose levels *fall (1)*

The liver *takes up glucose (1) and converts it to glycogen to be stored (1)*

Body cells *absorb glucose(1)*

4: What causes the pancreas to stop producing insulin?

*When blood sugar levels fall (1) to within homeostatic levels (1), the pancreas stops producing insulin due to negative feedback (1)*

5: What is the stimulus for glucagon production?

*Falling Blood Glucose levels (1)*

6: Where is glucagon produced?

*In the alpha cells (1) of the pancreatic islets (1) [or Islets of Langerhans]*

7: How does the liver respond to glucagon and what is the result?

*The liver responds to glucagon by converting glycogen to glucose (1) then releasing glucose (1) into the bloodstream.*

8: What is the most common age range of onset for Type 1 Diabetes and what is the common cause?

*The most common age range of onset for type 1 Diabetes is childhood (1). The most common cause is autoimmune destruction of the pancreatic tissue (1).*

9: What are some common symptoms of untreated Type 1 Diabetes?

*Extreme thirst (1), Excessive urination (1), Fatigue (1), Ketoacidosis (1) Weakness (1)*

10: List symptoms of Type 2 Diabetes

*Extreme thirst (1), Excessive urination (1), Weakness (1), Poor wound healing (1), Headaches (1), Dizziness (1)*

11: What lifestyle factors may contribute to the development of Type 2 Diabetes, and what changes should someone with Type 2 Diabetes make to their lifestyle?

*Lifestyle factors contributing to Type 2 Diabetes include obesity (1), high fat and sugar in the diet (1), and low levels of exercise (sedentary lifestyle)(1)*

12: What tests would you do to diagnose diabetes, and what results would you expect to find?

*A blood test or urine test (2), with findings of high glucose levels (1)*

13: Match the word with the correct definition *(1 mark each)*

