1. A phagocyte engulfs and digests a pathogen in a process called _____.

   _____

2. The secondary immune response is slower and weaker than the first.

   ☐ True ☐ False

3. Monoclonal antibodies are:

   ☐ identical antibodies from one clone of cells

   ☐ a type of weakened pathogen

   ☐ a clone of white blood cells

   ☐ a random mix of different antibodies

4. A vaccine gives a person which kind of immunity?

   ☐ passive immunity

   ☐ no immunity at all

   ☐ active immunity

   ☐ temporary maternal immunity

5. Phagocytes such as macrophages and neutrophils are types of white blood cell.

   ☐ True ☐ False

6. T-helper cells in the immune response:

   ☐ form a protective wall around the infected tissue

   ☐ engulf and digest the pathogen before any other cell

   ☐ recognise the displayed antigen and switch on other immune cells

   ☐ release ready-made antibodies into the blood

7. The variable region of an antibody:

   ☐ breaks down pathogens with enzymes

   ☐ is made of carbohydrate

   ☐ is the binding site whose shape fits one specific antigen

   ☐ is the same in every antibody

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☐ True ☐ False

9. In phagocytosis, a phagocyte:

   ☐ makes antibodies that stick to the pathogen

   ☐ releases ready-made antibodies into the blood

   ☐ becomes a memory cell for the next infection

   ☐ surrounds the pathogen, takes it in, and digests it with enzymes

10. Long-lived cells that stay behind to give a fast secondary response are _____ cells.

    _____

1. **phagocytosis**

   Phagocytosis is part of the first line of internal defence – fast and non-specific.

2. **False**

   False. Memory cells from the first exposure react quickly, so the secondary response is faster and stronger. This is the basis of long-term immunity.

3. **identical antibodies from one clone of cells**

   Monoclonal = ”one clone” – all identical, so they all bind the same target.

4. **active immunity**

   A vaccine makes the body respond itself, so it builds active, long-lasting immunity.

5. **True**

   Yes – phagocytes are white blood cells; they are the first cells to respond to a pathogen.

6. **recognise the displayed antigen and switch on other immune cells**

   T-helper cells recognise the presented antigen and activate B-lymphocytes and other cells.

7. **is the binding site whose shape fits one specific antigen**

   The two tips of the Y are variable regions – each shaped to bind one specific antigen.

8. **False**

   False. Passive immunity gives ready-made antibodies that act fast, but no memory cells are made, so it is short-lived.

9. **surrounds the pathogen, takes it in, and digests it with enzymes**

   A phagocyte engulfs the pathogen into a vesicle and digests it with enzymes.

10. **memory**

    Memory cells let the body respond before you even feel ill the second time – the basis of immunity.

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