Compare (similarities)

- Both responses use lymphocytes
- Both use specific protein receptors on their surface to bind to antigens on the surface of the pathogen/non-self cell
- Both involve the selection of the lymphocyte with the specific protein receptor for the antigen
- Both involve the sensitising of the lymphocytes which stimulates them to divide and form clones
- The clones differentiate into different cells by mitosis
- Memory cells are created from the initial clones in each case which respond rapidly to a second detection of the pathogen's antigens
- In both cases the production of plasma cells is stimulated either by the activation of B-lymphocytes in the antibody mediated system, or by T-helper cells in the cell mediated immune response
- Both systems are involved in the primary and the secondary response
- Macrophages are stimulated by both responses e.g. through marking by antibodies in the antibody mediated system or through helper T-cells in cell mediated immunity labelling cells with opsonins
- Suppressor T-cells affect both response systems

Contrast (differences)

- Antibodies are created directly by antibody mediated immunity whereas in cell mediated immunity the antibodies are not created directly but B-cells are stimulated to create them (via plasma cells)
- T helper cells release chemicals (cytokines) to stimulate B-plasma cells
- Plasma cells create antibodies to interact with pathogens whereas T-cells interact with the cell through the production of perforins and nitric acid /nitric oxide
- Antibody mediated immunity combats pathogens in the plasma or tissues but cell mediated immunity combats pathogens inside body cells e.g. viruses
- T-cell mediated immunity can attack cancerous cells and non-self transplanted organs whereas the antibody mediated immunity is not involved in that response