

1. **PIC** a programmable interface controller, a small computer complete with input, output and memory that can be programmed to perform simple tasks
2. **plasma spray** a technology used to apply coatings by bio-inserts by spraying powdered particles transformed into plasma, accelerated and deposited in a molten form onto implant surfaces
3. **prosthesis** an artificial part used to replace a damaged or diseased body part
4. **resorb** biological process of dissolving and assimilating tissue such as bone
5. **scaffold** a temporary structure that allows support for biological growth of bone or tissue
6. **sepsis** germs
7. **series circuit** a simple series connection provides only one pathway for current to flow; parallel circuits form multiple pathways or branches that enable a range of separate paths for current flow
8. **shape memory alloy** ability of a metal to return to change between two shapes on heating and cooling
9. **sintering** a healthy process used in powder metallurgy, involving the consolidation of metallic powder into a solid compact; temperatures below the melting point of the metal powders are used such that fusion takes place by a process of solid state diffusion
10. **stainless steel** iron base alloys of 13-30wt% Cr named for their resistance to discolouration or staining due to corrosion
11. **titanium** non-ferrous metal used extensively in industry due to its high resistance to corrosion and good strength-to-weight ratio; these properties along with excellent biocompatibility has seen titanium and its alloys used in biomedical applications
12. **torque** the moment of a force; a measure of a force's tendency to produce torsion and rotation about axis
13. **transcutaneous charging** allows for re-charging of implanted devices through the skin without direct contact about an axis
14. **truth table** used in digital electronics, this predicts the output of a circuit under all possible combinations of input and output conditions
15. **weld decay** a popular term for a defect that may occur as result of welding stainless steels; the region adjacent to the weld may reach a sufficiently high temperature to precipitate chromium carbides at the grain boundaries; the region adjacent to the grain boundaries are consequently depleted in chromium, resulting in a loss of corrosion resistance