The and elongation wear resistance (manjaiah and

Literature, Russian Literature

The inner framework of the human body is theskeletal system which comprised many bones of the different role of thephysical structure. The bone issubject to deterioration due to human bodily processes, injury and disease. Another major disease that is faced by the aged and sometimes the young peopleis arthritis, it courses impairment to the life of those affected and it couldlead to unbearable pain and immobility.

Apart from people that are affected bydisease, agile and young people like sports men and women often needreplacements due to fracture and excessive strain. Researchers in biomedical Engineering face aconsiderable undertaking in their effort to see a solution to the replenishmentof damaged tissues caused by these life-threatening diseases. Thecomplex problems faced in bioimplants has been their contact with thebiological environment of various physico-chemical nature and interaction withtissue and bone(Manivasagam etal., 2010). Acceptability by the human bodywithout immunological rejection in the body and a good response with tissuecells is an important requirement for choice of biomaterial. The materialsshould have mechanical properties like tensile strength, hadness and lowmodulus of elasticity corrosion resistance and elongation wear resistance (Manjaiah and Laubscher, 2017). Inthis respect, the need for collaboration between specialists likemechanical engineers, material scientists, metallurgists, orthopaedists, and soforth, with track records of experience is of paramount to achieve worthyresults in research, development and execution of the extracted knowledge intopractice. However, developments in the field of biomedical Engineering have ledto continuous renewed interest in

biomaterial requirement to resolve theproblems of failed hard tissues such as hip joints, knee joints, dental implants, etc.

, by using metallic biomaterials like, Cobalt based alloys, stainlesssteel, titanium alloys, TiNi shape memory alloys which are known to be mainmetallic materials as suitable replacement for hard tissues(Geetha et al., 2009; Niinomi, 2003). In recent years, there has been an increasing interest in titanium and titanium alloys amongmetallic biomaterials because of their properties of low elastic modulus, corrosionresistance, wear resistance, high specific strength and good biocompatibility (Niinomi, 2002; Temenoff and Mikos, 2008) which makes them suitablemetals for biomedical applications.