

**End Term Examination (December 2018)**

**School:** School of Engineering

**Program:** B.Tech (Biomedical Engg.)

**Course:** Biomechanics and Rehabilitation Engineering

**Course code:** BME301

**Semester:** V

**Max Marks:** 50

**Duration (mins) :** 120

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**Answer any Five questions.**

**Each question carries 10 marks.**

**Q1.** Define elasticity.

Explain

- (a) Hook's law
- (b) Newtonian and non-Newtonian fluid

**Q2.** Explain different body fluids different flow.

**Q3.** Short note on:

- (a) Hagen-Poiseuille Law
- (b) Visco-elasticity

**Q4.** Explain the rheological properties of blood.

**Q5.** Briefly explain different mechanical properties of bone. Give an explanation for stress-strain behaviour of bone under load.

**Q6.** Short notes on:

- (a) Sliding element theory of skeletal muscle
- (b) Limb prosthesis

**Q7.** Short notes on:

- (a) Rehabilitation Engineering
- (b) Amputation