Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY PE SEMESTER VILEYAMINATION SUMMER 2016

Subj	ect C	be - SEMESTER-VII EXAMINATION – SUMMER 2016 ode:170301 Date:16/05/2016	
•		ame:Biomechanics	
		0 PM to 05:00 PM Total Marks: 70	
Instru	ictions: 1 A	ttempt all questions.	
	2. N	Take suitable assumptions wherever necessary. igures to the right indicate full marks.	
Q-01	(A) (B)	Explain the characteristics of a pipe flow with neat diagram. Explain rheological properties of blood. Why blood is a non-newtonian fluid?	07 07
Q-02	(A) (B)	Explain morphology of muscle with detailed description of its functional unit. Explain the muscle contraction mechanism.	07 07
		OR	
	(B)	Explain gait cycle of human walking.	07
Q-03	(A)	What is Reynolds's number? Explain types of flow. What is the significance of Reynold's number in fluid mechanics.	07
	(B)	What is fahreus-lindquist effect? Also explain plasma skimming. OR	07
Q-03	(A) (B)	Explain the zonal distribution of blood in pulmonary circulation. Explain functional tasks of gait.	07 07
	(D)	Explain functional tasks of gait.	07
Q-04	(A) (B)	Explain starling's hypothesis for capillary filtration. Explain the characteristics of physiological fluids. Why the fluid flow analysis of physiological fluids is difficult as compared to the other fluids?	07 07
Q-04	(A)	OR Explain phases of cardiac cycle.	07
	(B)	Explain the structure and mechanism of mitral valve.	07
Q-05	(A)	Explain the work of breathing.	07
	(B)	Explain the mechanics of pulmonary ventilation. OR	07
Q-05	(A)	Explain the no-slip condition and the role of shear stress with neat diagram.	07
-	(B)	Define following terms: i. Gait stride ii. Cadence	07

Also explain the functional features of human locomotion pattern.

iii.

Velocity