| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

| | | ME – SEMESTER III (NEW) – EXAMINATION – WINTER-2016 | |
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| Sul | Subject Code: 2733104 Date:25/1 | | 6 |
| Sul | bject | Name: BIODYNAMICS | |
| Tir | ne:02 | :30 pm to 05:00 pm Total Marks: | 70 |
| Inst | ruction | | |
| | 1. 2. | Attempt all questions. Make suitable assumptions wherever necessary. | |
| | 3. | Figures to the right indicate full marks. | |
| Q.1 | (a) | Define and discuss the Angular Velocity, Angular Acceleration, Angular Momentum. | 07 |
| | (b) | Discuss your observations for the Physical Properties of Skeletal Muscle. | 07 |
| • | (a) | Discuss your observations for the Joints of the Human Body | 07 |
| | (b) | Explain the Moment of Momentum About a Stationary Point. | 07 |
| | | OR | |
| | (b) | Explain the Moment of Momentum About the Center of Mass | 07 |
| Q.3 | (a) | Derive and discuss the Equations of Static Equilibrium. | 07 |
| | (b) | Explain the Contact Forces in Static Equilibrium. | 07 |
| O 2 | (a) | OR Discuss your observations for the Example from Weight Lifting | 07 |
| Q.3 | (a) (b) | Discuss your observations for the Example from walknig | 07 |
| 0.4 | | | |
| Q.4 | (a) (b) | Discuss with diagram the Multiple Muscle Involvement in Flexion of the Elbow Write a technical note on Musculoskeletal Tissues. | 07 07 |
| | (6) | OR | 07 |
| Q.4 | (a) | Discuss with diagram the Multiple Muscle Involvement in Extension of the | 07 |
| | (1.) | Elbow. | 0= |
| | (b) | Write a technical note on Biarticular Muscles. | 07 |
| Q.5 | (a) | In context of biodynamics discuss the Throwing Motion. | 07 |
| | (b) | Explain the Principle of Impulse and Momentum in brief. | 07 |
| Q.5 | (a) | OR In context of biodynamics discuss the Hitting Motion. | 07 |
| V. | (a) (b) | Explain the Elasticity of Collision in brief. | 07 |
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