

SANT GADGE BABA AMRAVATI UNIVERSITY
BACHELOR OF ENGINEERING SEMESTER VI(CGS) EXAMINATION S-2020(backlog)

H.V.P.Mandal's College of Engineering and Technology, Amravati
Department Of Mechanical Engineering

Academic Session:2019-2020

Semester : VI

Unit : I,II,III,IV,V,VI

Date 22/12/2020

Subject Name : Theory Of Machines-II

Subject Code : 6ME 04

Max Marks 20

Note: Solve any 2 questions out of 4 questions.

All Questions Carry Equal Marks.

Q.1st

- a) Derive Expression For Natural Frequency of torsional vibration. **2marks**
- b) Explain i) Rolling Friction. **2 marks**
- c) Explain the D'Alemberts Principle. **2 marks**
- d) Explain 1] Hammer blow. **2 marks**
- e) Explain the Gyroscopic Effect on Naval Ship. **1 marks**
- f) Explain in Details Static and Dynamic Balancing. **1 marks**

Q.4th

- a) Derive Expression for two rotors System **2 marks**
- b) What is the difference between piston effort, crank effort and crank-pin effort. **2 marks**
- c) Explain the Gyroscopic Effect on Airplane. **2 marks**
- d) Explain the method of balancing of different masses revolving in the same plane. **2 marks**
- e) Explain Type of Vibration in details. **1 marks**
- f) Explain the effect of Inertia Constraint on Torsional Vibration . **1 marks**

Q.3rd

- a) What is Principle of Virtual Work . **2 marks**
- b) Explain Equivalent Dynamic System. **2marks**
- c) Derive Expression for Stability of four Wheeler while taking turn. **2 marks**
- d) Explain Dunkerleys Method in details. **2 marks**
- e) Why is balancing of rotating parts necessary for high speed engines? **1 marks**
- f) Explain Transmissibility in Details. **1 marks**

Q 4th

- a) Explain the Thick film Lubrication Details. **2 marks**
- b) Derive expression For whirling speed of the shaft. **2 marks**
- c) Derive an expression for natural frequency of the free longitudinal vibrations by using equilibrium method? **2 marks**
- d) Explain Effect of Partial Balancing of Reciprocating Parts of Two Cylinder Locomotives. **2 marks**
- e) Derive an expression for stability of two wheeler while taking turn. **1 marks**
- f) Draw and explain Klien's construction for determining the velocity and acceleration of the piston in a slider crank mechanism. **1 marks**