SANT GADGE BABA AMRAVATI UNIVERSITY

BACHELOR OF ENGINEERING SEMESTER VI (CGS) EXAMINATION S-2020

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

Department Of Mechanical Engineering

Academic Session:2019-2020 **Semester : VI**

Unit : I,II,II,IV,V,VI **Date 27/10/2020**

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) Explain the Thick film Lubrication Details.**3 marks**

b) Derive expression For whirling speed of the shaft.**3 marks**

c) Derive an expression for natural frequency of the free longitudinal vibrations by using equilibriummethod?**1 marks**

d) Explain Effect of Partial Balancing of Reciprocating Parts of Two CylinderLocomotives.**1 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**

Q.2nd

a) Derive Expression For Natural Frequency of torsional vibration.**3 marks**

b) Explain i) Rolling Friction ii) Performance of Bearing .**3 marks**

c) Explain the D'Alemberts Priciple**1 marks**

d) Explain 1] Tractive Effect 2] Swaying couple 3] Hammer blow **1 marks**

e) Explain the Gyroscopic Effect on Naval Sheep.**1 marks**

f) Explain in Details Static and Dynamic Balancing.**1 marks**

Q3rd

a) Derive Expression for two rotors System **1 marks**

b) What is the difference between piston effort, crank effort and crank-pin effort.**1 marks**

c) Explain the Gyroscopic Effect on Airplane.**1 marks**

d) Explain the method of balancing of different masses revolving in the same plane.**1 marks**

e) Explain Type of Vibration in details. **3 marks**

f) Explain the effect of Inertia Constraint on Torsional Vibration .**3 marks**

Q.4th

a) What is Principal of Virtual Work and give its Significance.**1 marks**

b) Explain Equivalent Dynamic System.**1 marks**

c) Derive Expression for Stability of four Wheeler while taking turn.**3 marks**

d) Explain Dunkurleys Method in details. **1 marks**

e) Why is balancing of rotating parts necessary for high speed engines?**1 marks**

f) Explain Transmissibility in Details. **3 marks**