



GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

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Name of Examination : **Winter 2020** - (Preview)

Course Code & Course Name : **ME302 - Theory of Machines-II**

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Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#) [Print](#) [View Answer Key](#) [Close](#) **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

- | | |
|--|------|
| 1) A) Derive relation for velocity and acceleration for a convex cam with a flat faced follower | [08] |
| B) what is Undercutting in Cam | [02] |
| 2) A) What is meant by a self locking and self energized brake. | [04] |
| B) Explain Bevis Gibson Torsion Dynamometer | [06] |
| 3) A) Explain Turning moment diagram for Single Cylinder 4 stroke IC Engine | [05] |
| B) Describe energy stored in flywheel | [05] |
| 4) A) A rotor has a mass of 12 kg and is mounted midway on 24 mm diameter horizontal shaft supported at the ends by two bearings. The bearings are 1 m apart. The shaft rotates at 2400 rpm. If the Centre of mass of the rotor is 0.11 mm away from the geometric Centre of the rotor due of a certain manufacturing defect, Find the amplitude of the steady state vibration and Dynamic force transmitted to the bearing. Take $E = 200\text{GN/m}^2$ | [08] |
| B) list out various types of Vibration | [02] |
| 5) A) State Law of Gearing | [02] |
| B) Explain balancing of revolving several masses on several planes | [08] |
| 6) Explain in Detail Cycloidal & involutes profile teeth for Gears | [10] |

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