Roll No ....

BE-204 (GS)

B.E. I & II Semester Examination, June 2020
Grading System (GS)
Basic Civil Engineering and Engineering Mechanics

Time : Three Hours

*Maximum Marks : 70*

Note: i) Attempt any five questions.
       ii) All questions carry equal marks.

1. What are various properties of Cement? Explain in with salient points.

<div align="center">OR</div>

Define :
i) Plastering and Pointing
ii) Elements of building Construction.

2. a) State and prove Lami's theorem?
    b) State and prove Varignon's theorem?

3. Draw SFD and BMD for a simply supported beam of span 6m, subjected to a UDL of 5kN/m over its entire length.

4. List out various instruments used in surveying.

5. Find out the mass moment of inertia of a right circular cone of base radius R and mass M about the axis of the cone.

6. Draw Shear force and bending moment diagram for a cantilever beam loaded as shown in figure 1.0 below.
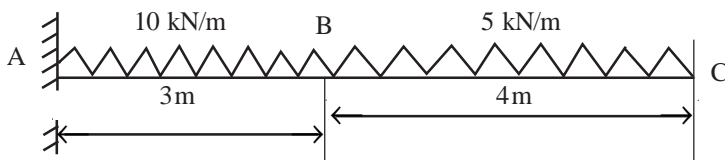
<div align="center">OR</div>

Enumerate the expression for a moment of Inertia of Triangular lamina about its base.

7. Define coplanar and concurrent forces. Also define free body diagram.

<div align="center">OR</div>

The following readings were taken by a 4m staff:
0.875, 1.225, 1.285, 1.425, 1.165, 0.785, 0.925, 1.225, 2.825, 0.895, 1.255, 1.685 and 0.915
The instrument was shifted after 5th and 9th reading. Enter the data in level book and calculate R.L. of all the points if first reading was taken on B.M. 100.00 apply check.

8. Write short notes on the following:(Any two)
    a) Raft or mat foundation   b) Marble flooring
    c) Purpose of dams   d) Linoleum flooring

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