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LNCT UNIVERSITY, BHOPAL

EnrolmentNo.

CS-105UC
B.TECH(CS/AIML) I & II SEMESTER EXAMINATION [JULY-2024]
CIVIL ENGINEERING & MECHANICS

Maximum Marks:70 **Time Allowed:3Hours**

Note:-Attempt all questions internal choice are given.

(SECTION –A)

1. Short Answer Type Question (Attempt Any Five) **[5x6=30]**

i. What do you understand by term "Workability of Concrete" Also explain properties of good quality bricks

ii. List out various building materials used in construction work . Also pointout a difference between concrete and mortar.

iii. List out various instruments used in surveying.

iv. How Remote sensing is work in the field of Civil Engineering? Explain clearly.

v. State and prove Varignon's theorem?

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

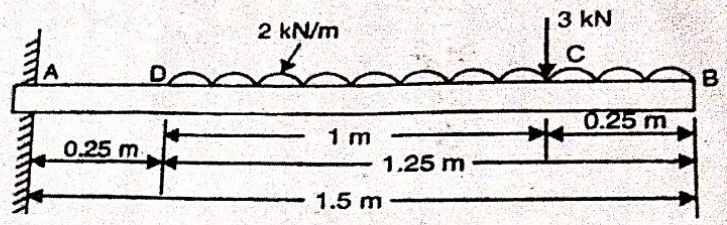
vii. write Short note on i)Smart cities ii) Intelligent Transportation System.

(SECTION-B)

2. Long Answer Type Questions (Attempt Any Four) **[4x10=40]**

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

ii. Draw the shear force and bending moment diagram of following cantilever beam as shown in fig.



iii. Eight readings were taken with a level in sequence as follows: 1.585, 1.315,2.305, 1.225, 1.325, 1.065, 1.815, and2.325. The level was shifted after thethird and sixth readings. The second change point was a bench mark of elevation175.975. Find the reduced levels of the remaining stations. Use the rise and fallmethod.

iv. Explain in brief: i)Foundation and its types b)Types of flooring

v. Explain plane table surveying and.EDM method of surveying.

vi. Explain engineering mechanics and it's classification. A lamp weight 10 N is suspended from the ceiling by a chain. It is pulled aside by a horizontal cord until the chain makes an angle of 60° with the ceiling. Find the tension in the chain and cord by applying Lami's theorem.
