

Code No RT21355

R13**SET - 1****II B. Tech I Semester Supplementary Examinations, May/June - 2017****PROPERTIES AND STRENGTH OF MATERIALS**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **THREE** Questions from **Part-B**
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PART -A

1. a) What are the varieties of lime and write their uses? (4M)
- b) What are the uses of plywood? (4M)
- c) What are the alloys of copper and nickel? (3M)
- d) Define Young's modulus. Write the relation between stress, strain and Young's modulus. (4M)
- e) What are the different end conditions of a column? (3M)
- f) Write the difference between propped cantilever and cantilever? (4M)

PART -B

2. a) What are the properties, varieties and uses of different bricks? (12M)
- b) What are the different rocks? What are their uses? (4M)
3. a) What are the different types of distemper? Write the properties and uses of distempers. (12M)
- b) What is the use of glass? (4M)
4. a) What are the characteristics and uses of Aluminum? (10M)
- b) What are the different heat treatment methods of steel? (6M)
5. Write the relation between slope, deflection and radius of curvature (16M)
6. Derive the equation of buckling for one end hinged and other end fixed. (16M)
7. a) What is a welded joint? Explain the types of welded joints with neat sketches. (10M)
- b) Explain design of base width of dams. (6M)