REGISTRATION NUMBER | | | | | | | | | | |

SRINIX COLLEGE OF ENGINEERING

1st INTERNAL EXAMINATION-2017-18

Subject-SA-1 Semester-4th Branch-**CIVIL**

Full Mark-**30** Time-**1.30Hrs**

ANSWER ALL QUESTIONS (PART-A) **[2×5]**

1. (**a) Fixed support has ___ numbers of restraints?**
   (i) 0 (ii) 1 (iii) 2 (iv) 3

   (b) The degree of static indeterminacy of a rigid jointed space frame is.

   (i) m+r-2j (ii) m+r-3j (iii) 3m+r-3j (iv) 6m+r-6j

   (c) Degree of kinematic indeterminacy of a pin-jointed plane frame is given by:

   (i) 2j-r (ii) j-2r (iii) 3j-r (iv) 2j+r

   (d) The number of independent equations to be satisfied for static equilibrium of a plane structure is:

   (i) 1 (ii) 2 (iii) 3 (iv) 6

   (e) Hinge support has ____ numbers of releases?

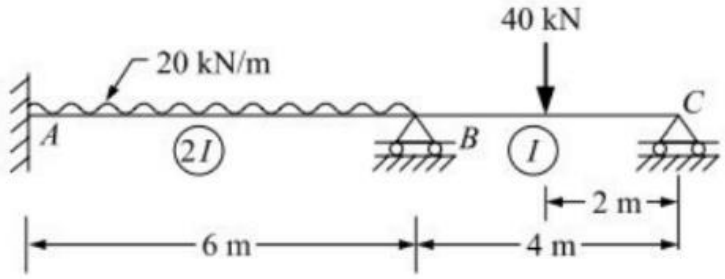
   (i) 1 (ii) 2 (iii) 3 (iv) 4

ANSWER ALL QUESTIONS (PART-B) **[2X5]**

2. **(**a) What is the effect of temperature on the members of a statically determinate plane truss?
   (b) What do you mean by static indeterminacy?
   (c) Differentiate the statically determinate structures and statically indeterminate structures?
   (d) Draw the BMD of a fixed beam of span L applied with udl w/m throughout the span?
   (e) What is the external static indeterminacy of a fixed beam?

ANSWER ANY TWO QUESTIONS (PART-C) **[10X1]**

3. A Fixed Beam Of Span 5m Carries A Uniformly Distributed Load Of 4kn/m Throughout The Whole Span. Analyzing The Beam By Applying Three Moment Method And Draw The BMD?
4. Analyze the continuous beam shown in figure and draw the BMD.



5. **Determine the reaction components for the propped cantilever subjected to UDL as shown in figure?**