

## QUIZ NO: 801

### TOPIC: REINFORCED CEMENT CONCRETE

**DATE: 29/02/2024**

**1. As per LSM, the maximum strain in the tension reinforcement should not be less than**

[A]  $f_y/E_s + 0.002$

[B]  $0.67f_y/E_s + 0.0035$

[C]  $f_y/1.15E_s + 0.002$

[D]  $0.36f_y/E_s + 0.0035$

**Answer: C**

**2. In a balanced section**

[A] Concrete will crush and steel will yield simultaneously

[B] Concrete will crush before steel yields

[C] Steel will yield before concrete crushes

[D] None of the above

**Answer: A**

**3. LSM stands for**

- [A] Load Safety Method
- [B] Load State Method
- [C] Limit Safety Method
- [D] Limit State Method

**Answer: D**

**4. As per LSM,**

**P: Concrete in tension zone is neglected in design**

**Q: Partial safety factor for reinforcement is 1.15**

**R: Plane sections normal to the axis remain plane even after bending**

- [A] Only P and Q
- [B] Only P and R
- [C] Only Q and R
- [D] All P, Q and R

**Answer: D**

**5. A balanced RCC section reinforced with mild steel will have it's limiting depth of neutral axis at a depth of**

- [A] 0.53 times the effective depth from extreme tension fibre
- [B] 0.46 times the effective depth from extreme tension fibre
- [C] 0.53 times the effective depth from extreme compression fibre
- [D] 0.46 times the effective depth from extreme tension fibre

**Answer: C**

**6. The design method adopted for the design of RCC structures as per IS 456-2000 is**

- [A] Working Stress Method
- [B] Ultimate Load method
- [C] Limit State Method
- [D] Unit Load Method

**Answer: C**

**7. The safest section is**

- [A] Balanced section
- [B] Under reinforced section
- [C] Over reinforced section
- [D] Any of the above

**Answer: B**

**8. For HYSD bar Fe-415 grade, the ratio of maximum depth of neutral axis to effective depth will be**

- [A] 0.53
- [B] 0.50
- [C] 0.46
- [D] None of these

**Answer: D**

9. In an under reinforced section,

**P: Maximum permissible stress of steel reaches first, before concrete**

**Q: Failure cracks will form as warning before collapse**

**R: Actual Neutral axis lies below critical Neutral axis**

**Which of the above statements are correct**

[A] Only P and Q

[B] Only P and R

[C] Only Q and R

[D] All P, Q and R

**Answer: A**

10. As per LSM, the maximum strain in the tension reinforcement should  
**not be less than**

[A]  $0.67f_y/E_s + 0.002$

[B]  $0.87f_y/E_s + 0.0035$

[C]  $0.87f_y/E_s + 0.002$

[D]  $0.67f_y/E_s + 0.0035$

**Answer: C**

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