

Q: ) The design shear force at the critical section in a rectangular beam of width 300 mm and effective depth 500 mm is 270 kN. The permissible shear stress in concrete on the basis of % of steel reinforcement is 0.4 N/mm<sup>2</sup>. Which of the following statement is correct? Take  $\tau_{cmax} = 1.6$ N/mm<sup>2</sup> [UPSSSC JE 2016]

- A : The shear reinforcement shall be designed for a shear force 30kN.
- B : The shear reinforcement shall be designed for a shear force of 210 kN./210 kN
- C : The shear reinforcement shall be designed for a shear force of 270 kN
- D : The beam section must be redesigned.

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Q: ) The minimum area of tension reinforcement (A<sub>s</sub>) of steel "P" in a singly reinforced beam of width "b" and effective depth "d" is [RAJASHTAN JE 2015]  $A: 0.85 bd/f_v$ B: 0.85 bd  $C: 0.5 \text{ bd } f_y$  $D: bd/f_v$ 

Q: ) If the area of tensile steel reinforcement is doubled, the moment of resistance of the beam increases only by about:

B:0.22

C:0.32

D:0.42

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- Q: ) Size of RCC section depends on\_\_\_\_. [ BECIL NMRC JE 2019 ]
- A : Codal provisions
- B : Grade of concrete
- C : Grade of steel and concrete
- D : Grade of steel

- Q: ) The spacing of stirrups in a beam: [SSC JE 2016]
- A : Depends on the size of the beam
- B : Decrease near the support
- C : Increase near the support
- D : Is the same everywhere

- Q: ) The spacing of stirrups in a beam: [ LMRC (ASST, MANAGER) 2016 ]
- A : Depends on the size of the beam
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- C : Increase near the support
- D : Is the same everywhere

Q: ) As per IS 456-2000 standard, the average permissible bond stress ( $\tau_{bd}$ ) for bars in M25 grade of concrete is: [SSB HIMACHAL PRADESH 2018] A:0.8 B:0.9 C:1 D:1.1

## Q: ) In simply supported slab, alternate bars are curtailed at

- [DDA 2018]
- A :  $(1/5)^{th}$  of the span
- B : (1/6)<sup>th</sup> of the span
- $C: (1/7)^{th}$  of the span
- D: (1/8)<sup>th</sup> of the span

Q: ) The lap length in compression shall not be less than p times the diameter of the rebar, where p is [ SSC JE 2017 ]

- A: 32 **W. Everexam.org** B: 24 **10 b.: 8595517959**
- C:12
- D : 20

- Q: ) Torsion resisting capacity of given reinforce concrete section..... [ SSC JE 2017 ]
- A : Decrease with decrease in stirrups spacing
- B : Decrease with increases in longitudal bars
- C : Does not depend upon stirrups and longitudal steels
- D : Increase with the increases in stirrups and longitudal steels.

Q: ) If  $\phi$  is the diameter of a bar in tension, a standard hook is equivalent to the anchorage value of straight length given by [SSC JE CWC & MES 2011 (UPPCL JE 2013)] A:8φ B:12φ C:16¢ D:24φ

Q: ) The following statements (S1,S2,S3) [SSC JE 2019] S1 These beams are deeper when compared to a balanced beam section S2 The failure of the beam takes place due to failure of steel S3 these beams undergo large deflections at failure Choose the correct statements.

 $A:S1 \mbox{ and }S2$ 

B: S2 and S3

C:S1 and S3

D : S1,S2 and S3

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Q: ) As per 456:2000, the minimum beam with required for a reinforced concrete beam, for 2 hours of the fire exposure is: [SSC JE 2019]

- A: 250 mm
  - B:200 mm
  - C : 150 mm
  - D : 300 mm

Q: ) A cantilever beam of size 0230  $\times$  400 mm has a clear span of 2.5 m and is supported on a 400  $\times$  400 mm column. The effective span of the cantilever is [ RRB JE CBT -II 2019 ]

- A:2.7m ob.: 859551795
- B:2.9 m
- C : 2.615 m
- D:3.3 m

Q: ) The slenderness ration of a beam of square cross-section of 20 cm side and 500 cm long is, [ NBCC JE 2018 ]

- C:96.66
- D:66.66

Q: ) For which of the following deformations are RCC deep beams primarily designed? [ DDA 2018 ]

- B : Shear and bending
- C : Bending
- D : Shear

Q: ) A simply supported RC beam having clear span of 5 m and support width 300 mm has the cross section as shown in Fig. What is the effective span of beam as per IS-456? [UK COMBINED AE PAPER – 1 2012]



Q: ) The load on a lintel is assumed as uniformly distributed, if the masonry above it, is upto a height of\_\_\_\_\_. [ M.P SUB ENG 2016 ]

- A : The effective span
- B: 1.25 time the effective span
- C: 1.4 times the effective span
- D: 2.4 times the effective span

- Q: ) Cover in reinforcement is essential to\_\_\_\_
- [MP DRAUGHTSMAN-B 2016]
- A : Not to be seen by others what reinforcement provided
- B : To protect form external harmful substances
- C : Aesthetic view
- D : If not embedded, may bend due to compression.

Q: ) The bearing of a lintel is [ JHARKHAND SSC JE 2016 ]

A : 10 cm B:15 cm C: 20 cm D: 30 cm Q: ) In a continuous beam, the moment coefficient of the innermost support for the dead load is: [ LMRCL (ASST.MANAGER) 2018 ]

- A: 1/12 W. Everexam.org B: 1/0 D.: 8595517959
- C:1/9
- D:1/24

Q: ) Steel beam theory is the method used to analyze and in the design of a design of: [ DFCCIL CIVIL JE 2018 ]

- A : Doubly reinforced section
- B : both singly & doubly reinforced section
- C : Singly reinforced sections
- D : Column structure only