

Q : If the permissible compressive stress in stress in concrete in bending for M-20 grade of concrete is 7 N/mm² then modular ratio will be:

[UK Combined AE Paper-I,2012]

A : 18.66

B : 13.33

C : 10.98

D : 9.33

Q : If E_c and E_s are modulus of elasticity of concrete and steel respectively, then the modular ratio (m) will be

[Uttarakhand JE 2016]

A : $\frac{E_c}{E_s}$

B : $\frac{E_s}{E_c}$

C : $\frac{E_c + E_s}{E_s - E_c}$

D : $\frac{4E_c}{E_s}$

Q : To prevent sulphate attack in concrete for preparing concrete mix, water pH must be within:

[SSC JE 2014, Evening]

A : 5-7

B : 6-9

C : 7-10

D : 4-6

Q : According is IS 456, nominal mix concrete can use upto which of the following grade:

[RRB SSC Secundrabad (shift-I), 02.09.2015]

A : 10

B : 15

C : 20

D : 25

Q : Modular ratio is denoted by:

[(UKPSC AE (Paper-I)2007/UPSSSC JE 2015 SSC JE 2009),(SSC JE 2 March 2017 Evening Shift)]

A : $m = \frac{280}{3\sigma_{cbc}}$

B : $m = \frac{280}{5\sigma_{cbc}}$

C : $m = \frac{2800}{3\sigma_{cbc}}$

D : $m = \frac{300}{3\sigma_{cbc}}$

Q : The estimate flexural strength (MPa) of a concrete having a measured compressive strength of 64 MPa would be (as per IS 456)

YouTube CHANNEL [UP RVNL AE 2016]

A : 7.2

B : 6.4

C : 5.6

D : 4.8

Q : Tetrapods are to be designed to kept on the stress of Arabian sea. It is expected that these structures would be face high tides for 70% of the time and low tides for the remaining 30% of the time. The exposure class to be considered for these structures per IS 456 would be:

[LMRC AE 2017 I-Shift]

A : Severe
C : Extreme

B : Very Severe
D : Moderate.

Q : For concrete of grade M-50, short-term modulus of elasticity will be nearly

[HPSSSB JE 31 April 2017]

A : 20000 N/mm²
C : 50000 N/mm²

B : 35000 N/mm²
D : 75000 N/mm²

Q : The tensile strength of concrete to be used in the design of reinforce concrete members.....

[(SSC JE 2 March 2017 Morning Shift),(UPSSSC JE 2015/SSC JE 2011),(SSC JE 2013)]

A : $0.2f_{ck}$

B : $0.1f_{ck}$

C : $0.7\sqrt{f_{ck}}$

D : 0

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JEREXAM

Q : Which of the following is not a valid assumption in working stress method for reinforced concrete design?

[Chhattisgarh professional exam, board 2016]

A : Plane section remains plane before and after bending

B : Bond between steel and concrete is perfect

C : Tensile strength of concrete cannot be ignored

D : Concrete is elastic.

Q : What will be the estimated value of modulus of elasticity (GPa) for a concrete of compressive strength 25 MPa?

[Coal India 2016]

A : 30

B : 25

C : 27.5

D : 32.5

Q : What will be the minimum yield strength (MPa) of Fe500 steel used as a reinforcement in concrete?

[Coal India 2016]

A : 250

B : 415

C : 550

D : 500

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Q : Consider the following statement regarding characteristic strength of concrete: "The test resist of the sample shall be the average of the strength of x specimens. The individual variation should not be more than $\pm Y\%$ of the average." What shall be the values of X and Y?

[UPSSSC JE 31-07-2016]

A : 5, 15 respectively

B : 5, 5 respectively

C : 3, 5 respectively

D : 3, 15 respectively.

Q : The minimum grade of reinforced concrete in sea water as per IS 456-2000 is:

[(SSC JE 2010)(ESE 2005,2012)]

A : M 15

B : M 20

C : M 30

D : M 40

Q : The characteristic strength of concrete is defined as that strength below which not more than...of the test results are expected to fall:

[(SSC JE 2010), (Chhattisgarh professional exam board 2016)]

A : 0.1

B : 0.05

C : 0.15

D : 0.2

Q : Minimum thickness of main steel members, not exposed to weather is:

[SSC JE 2010]

A : 4.5mm

B : 6.0mm

C : 8.0mm

D : 8.5mm

Q : Ductility of which of the following is the maximum?

[(SSC JE 2010), (SSC JE 2014, Evening)]

A : Mild steel

B : Cast iron

C : Wrought iron

D : Pig iron

Q : For reinforced concrete members totally immersed in sea water, the additional cover thickness recommended by the code is:

[SSC JE 2005, ESE 2012]

A : 25 mm

B : 30 mm

C : 35 mm

D : 40 mm

Q : Ultimate load method of designing a RCC structure w.r.t. elastic theory method is:

[UPPCL JE 2016]

A : More economical

B : More costly

C : Equal in cost

D : Not comparable in costing.

Q : Load factor is defined as the ratio of:

[FCI JE 2016]

A : Average load to maximum load

B : Average load to the reserve capacity

C : Reserve capacity to the installed capacity

D : Average load to the peak load

Q : Plain cement concrete is strong in taking:

[FCI JE 2016]

A : Tensile stress

B : Compressive stress

C : Shear stresses

D : Bending stresses

Q : The modulus of elasticity (E) of concrete is given by

[D.M.R.C. JE 2016]

A : $E = 1000 f_{ck}$

B : $E = 5700 \sqrt{f_{ck}}$

C : $E = 5700 m_g$

D : $E = 1000 \sqrt{f_{ck}}$

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Q : Steel corrodes in exposure of air and moisture and rust has:
[SSC JE 2014, Evening]

- A : Equal volume compare amount of steel rusted
B : Twice the volume of steel
C : 2.5 times the volume of steel
D : 0.5 times the volume of steel

Q : The modulus of elasticity of concrete in N/mm^2 can be assumed as follows where f_{ck} is the characteristic cube compressive strength of concrete in N/mm^2

[(Uttarakhand AE 2017), (UPPCL JE 2013)/(SSC JE 2012), (ESE 2006), (SSC JE CWC & MES 2011), (RRB JE Guwahati Yellow Paper 14.12. 2014)]

- A : $E = 1000 f_{ck}$
B : $E = 5700 \sqrt{f_{ck}}$
C : $E = 5700 mg$
D : $E = 1000 \sqrt{f_{ck}}$

Q : The concentration of organic solids in water to be used in reinforce cement concrete

[UPSSC JE 2015]

- A : 50 mg/L
B : 100 mg/L
C : 150 mg/L
D : 200 mg/L

Q : For R.R.C. construction the maximum size of coarse aggregate is limited to:

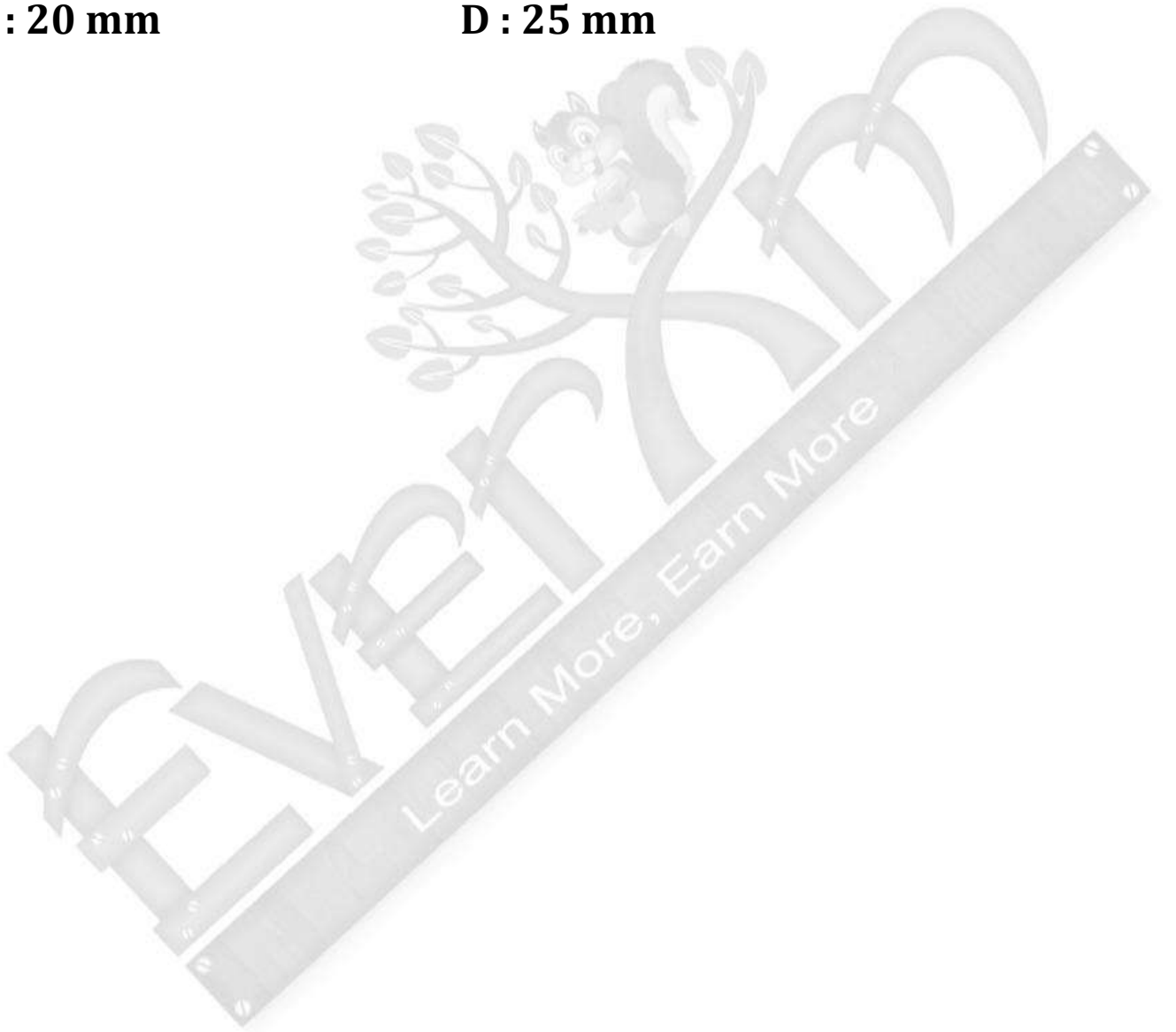
[SSC JE 2011]

A : 10 mm

B : 15 mm

C : 20 mm

D : 25 mm



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