Q :) A cantilever beam ‘A’ with rectangular cross section is subjected to a concentrated load at its free end. If width and depth of another cantilever beam ‘B’ are twice that of beam ‘A’ then the deflection at free end of the beam ‘B’ as compared to that of ‘A’ will be [KPWD AE-2019]

A : 23.6%

B : 6.25%

C : 28%

D : 14%

Q:) A 4 hr. unit hydrograph of a basin can be approximated as a triangle with a base period 48 h and a peak ordinate of 200 m^3/s, then area of basin will be [KPWD AE-2019]

A : 468 km^2

B : 1728 km^2

C : 3184 km^2

D : 2356 km^2

Q:) The state of plane stress at a point is given by α_x = 200 MPa, α_y = 100 MPa and τ_{xy} = 100 MPa, the maximum shear stress is

[KPWD AE-2019]

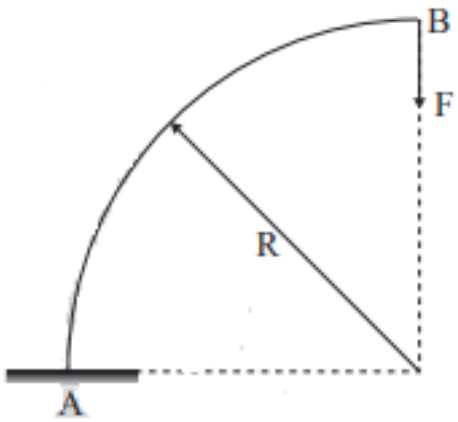
A : 180.3 MPa

B : 111.8 MPa

C : 223.60 MPa

D : 150.1 MPa

Q:) The strain energy stored in the quandrantal ring shown in the figure below will be [KPWD AE-2019]



A : $\frac{\pi F^3 R^2}{8 EI}$

B : $\frac{F^3 R^2}{8 EI}$

C : $\frac{\pi F^2 R^3}{8 EI}$

D : $\frac{F^2 R^3}{8\pi EI}$

Q:) The formwork including the props can be removed from beams, only after [TNPSC AE-2017]

A : 3 days

B : 7 days

C : 14 days

D : 21 days

Q:) An undertaking by a party, firm or person to do any work under terms a conditions is called as [TNPSC AE-2017]

A : tender

B : contract

C : arranging contract

D : all of these

Q:) On acceptance of the tender, the tenderer has to deposit ……. of the tendered amount on security money inclusive of the money already deposited. [TNPSC AE-2017]

A : 5%

B : 10%

C : 15%

D : 8%

Q:) The P. W. D. maintains the book(s) [TNPSC AE-2017]

A : Schedule of Rates

B : Road Metal Rate Book

C : either A : or B :

D : both A : and B :

Q:) The density of one litre of liquid that weights 9 N is: [DMRC JE-2020]

A : 1,024.23 kg/m^3

B : 927.43 kg/cm^3

C : 917.43 kg/m^3

D : 977.48 kg/m^3

Q:) The maximum permissible limit of organic solids present in the mixing water for concrete is: [DMRC JE-2020]

A : 500 mg/l

B : 200 mg/l

C : 3,000 mg/l

D : 2,000 mg/l

Q:) A hall of dimension 3.5 m length and 2.5 m breadth is finished by using 2.5 cm thick grey artificial stone floor. Then the total quantity of stone floor used is: [DMRC JE-2020]

A : 8.75 sq. m

B : 0.22 cu m.

C : 6.25 sq. m.

D : 8.75 cu. m.

Q:) The allowable average shear stress in an unstiffened web for beams made of steel of grade 250 N/mm^2 [PSPCL JE-2019]

A : 200 N/mm^2

B : 150 N/mm^2

C : 100 N/mm^2

D : 250 N/mm^2

Q:) Calculate the moment of inertia of a rectangular lamina with respect to X axis. Take 30 mm width along X axis and 60 mm depth along Y axis. The intersection point of X and Y axis lies on the centroid point of the given lamina. [PSPCL JE-2019]

A : 675000 mm^4

B : 450000 mm^4

C : 540000 mm^4

D : 360000 mm^4

Q:) The flexural strength of M20 grade concrete as per IS 456 : 2000 is: [PSPCL JE-2019]

A : 4.42 MPa

B : 3.83 MPa

C : 3.13 MPa

D : 4.94 MPa

Q:) Find the discharge over a cipolletti weir of length 2 m when the head over the weir is 1 m. Take co-efficient of discharge C_d = 0.62. [PSPCL JE-2019]

A : 3.66 m^3/s

B : 5.24 m^3/s

C : 2.54 m^3/s

D : 2.93 m^3/s

Q:) The strain at any point in the steel is equal to that in the adjoining concrete is known as _____. [DSSSB JE-2019]

A : stress capability

B : tension ability

C : compression ability

D : strain compatibility

Q:) Surface tension can be defined as ____. [DSSSB JE-2019]

A : The tensile force acting on the surface of a liquid in contact with a gas

B : The force acting on the surface a liquid in contact with ground

C : The shear force acting on the surface of a liquid in contact with a gas

D : The compressive force acting on the surface of a liquid in contact with a gas

Q:) In wall supported slab system, the thickness of floor slab generally from ____. [DSSSB JE-2019]

A : 20 mm – 30 mm

B : 300 mm – 400 mm

C : 10 mm – 50 mm

D : 100 mm – 200 mm

Q:) CGS unit of viscosity is ____. [DSSSB JE-2019]

A : (Dyne-sec^2)/(cm^2)

B : (Dyne-sec)/(cm^2)

C : (Dyne-sec)/(cm)

D : (Dyne-sec)/(cm^3)