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Q:) Which of the following materials falls under the category of rigid materials when checking the dampness of a material?
(SSC JE 23-09-2019 morning)

A : Cement concrete
B : Bitumen felts
C : Polythene sheets
D : Mastic asphalt

Ans.

Flexible – Polythene, Bitumen, felt
Semi Rigid → Mastic asphalt
Rigid – Brick, stone, Cement

Q:) Which of the following is NOT an advantage of using composite cement lime mortar over cement mortar?
(SSC JE 25-09-2019 morning)

A : High workability

B : High drying shrinkage

C : High water retention

D : Low drying shrinkage

Sukhi

B

Q:) The portions made by cutting standard bricks across their length are known as-
(Hariyana SSC JE Shift-I 10.04.2018)

A : Hearting

B : Perpends

C : ~~Ba~~ Bats.

D : Closers

Header

Queen.

King closer

width

length

Bat

Q:) The vertical joints between bricks either in longitudinal or cross directions are termed as- (Hariyana SSC JE shift-II 11.04.2018/M.P. Sub Engg. Draftman 1 Sep 2018 9.00 am)

A : Cross joints

B : Bed joints

C : Perpends

D : Backing

Q:) In case of rules for the deductions for brickwork, NO deduction shall be made of:

Civik ESIC JE 2019

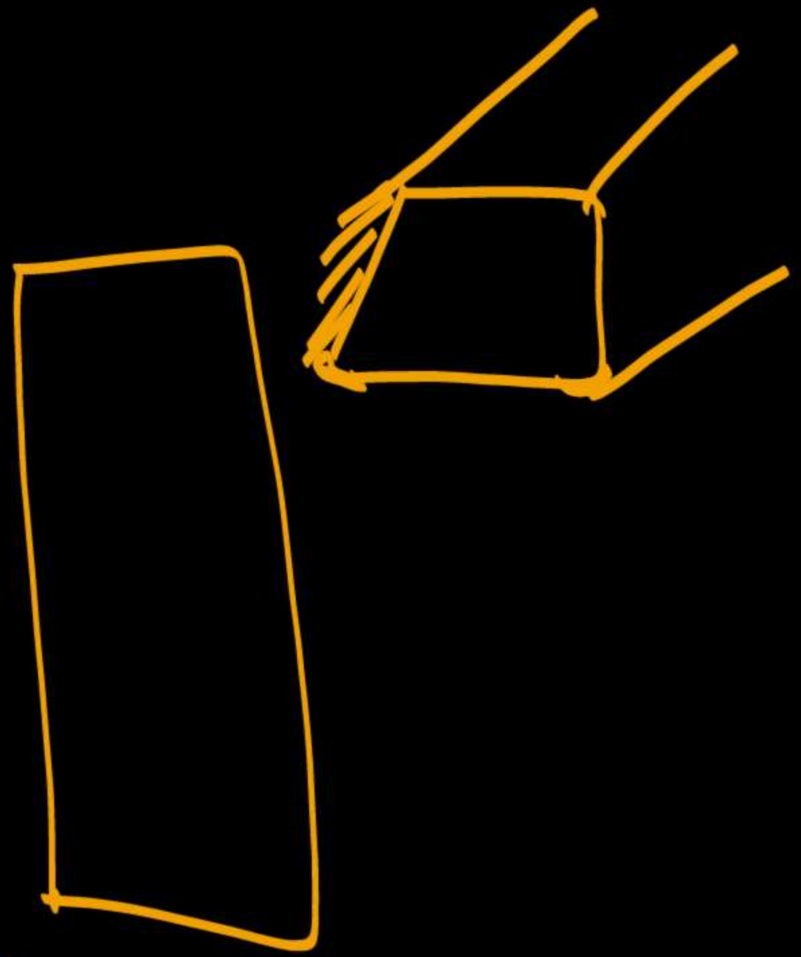
A : Openings upto 1.5 m^2

B : Openings upto 0.1 m^2

C : Openings upto 2 m^2

D : Openings upto 1.1 m^2

Brick work.



Wall plate

Bed → 0.05 m^2

Upto a depth of 100mm

Q:) A bull nose brick is not used for
(Rajasthan PCS 2018)

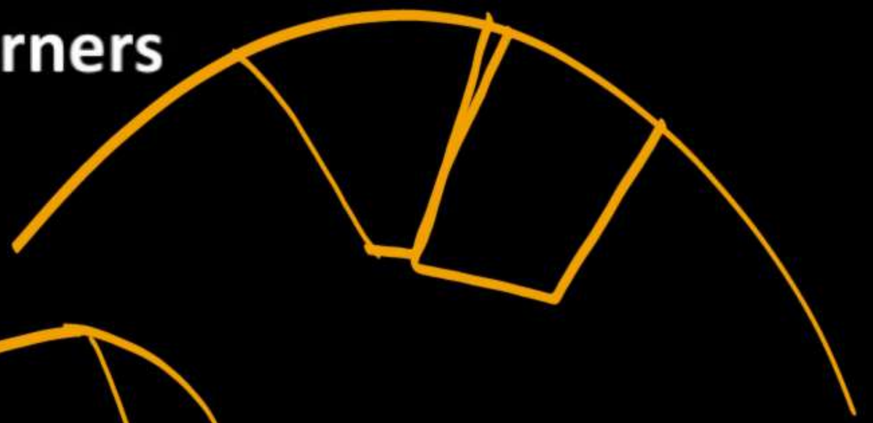
A : Rounding off sharp corners

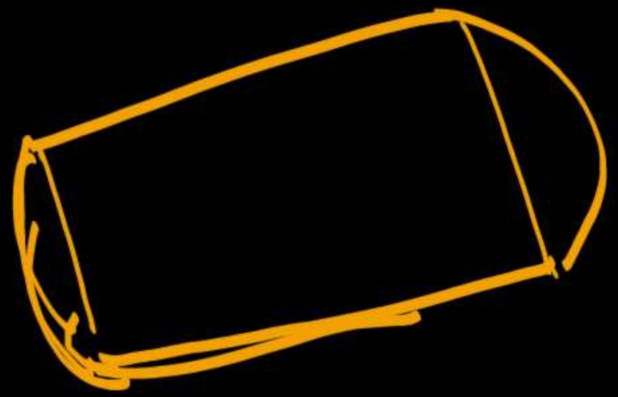
B : Pillars

C : Decoration purpose

D : Arches

D.





Rat trap ← [ ]

Q:) Diagonal bond is a pattern of bond in:
(M.P. Sub Engg. 4 Sep 2018 2.00 pm)

A : English bond
B : Flemish bond
C : Dutch bond
D : Ranking bond

Modified Part of English Bond

Q:) Ashlar stone masonry is measured in:
(DMRC 18.04.2018 4.20 pm)

A : Cum
B : kg
C : Running m
D : sq m

Rubble masonary.

Q:) Plastering is also called:
(SSC JE 27-01-2018 evening shift)
A : Pre-casting
B : Pargeting
C : Porting
D : Polishing

B

B.

Q:) What is the thickness (inches) of the one brick wall made up of ~~tranditional brick~~ Traditional Brick.
(SSC JE 27-01-2018 evening shift)

~~A~~ : 9

B : 10

C : 18

D : 20

$9'' \times 4\frac{3}{8}'' \times 2\frac{3}{4}''$

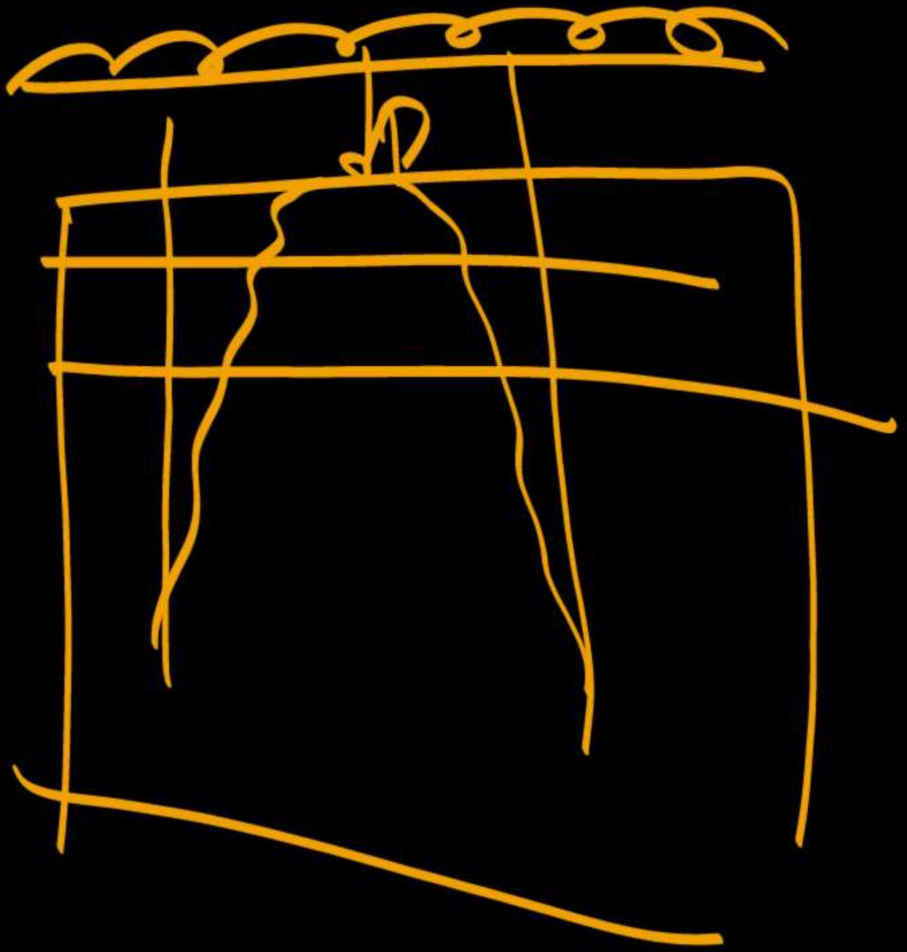
Q:) What is the value of allowable compressive stress under concentrated load in brick masonary as compared to uniform load conditions?(M.P. SUB ENG 3 april morning 2016)

A : Same as

B : Less than

C : 25% more than

D : 50% more than



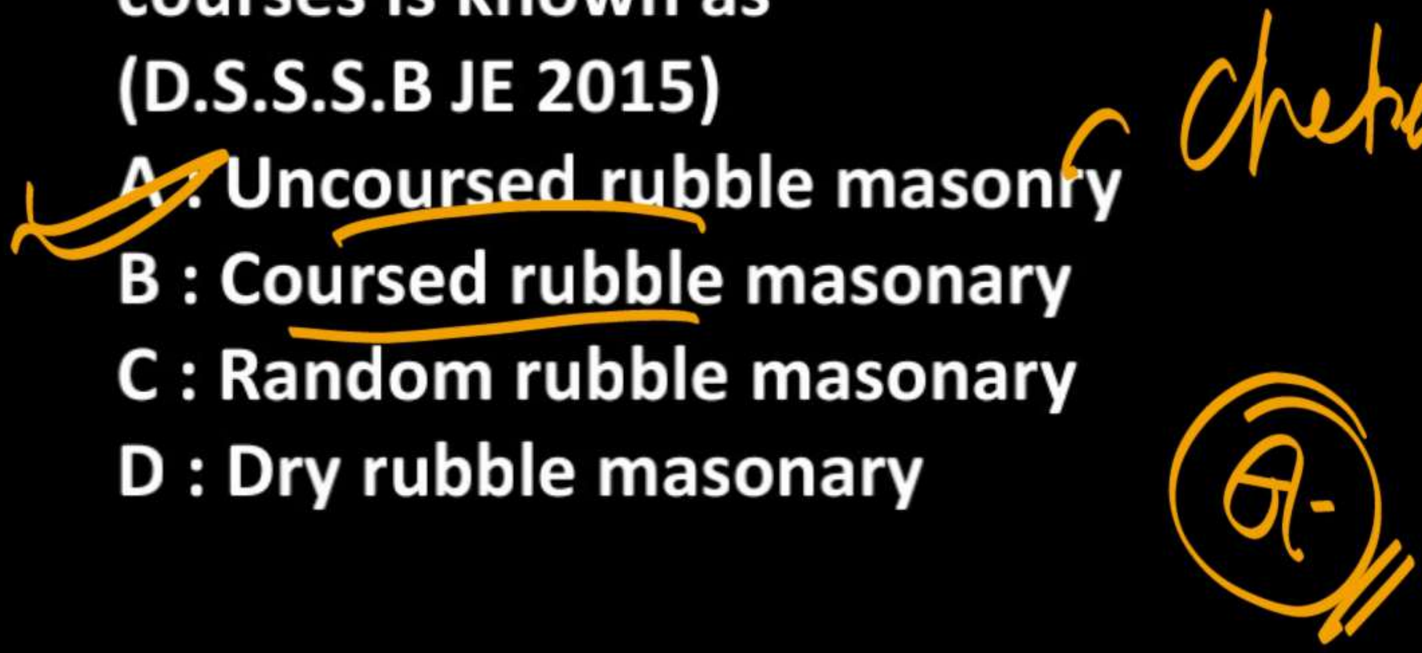
Q:) The type of masonry in which the stones of irregular size and shapes are used and there are no regular courses is known as
(D.S.S.S.B JE 2015)

A : Uncoursed rubble masonry

B : Coursed rubble masonary

C : Random rubble masonary

D : Dry rubble masonary



Seal Coat

Q:) Main purpose(s) of [redacted] is/are
(HPSSSB JE 31 april 2017)

A : To seal the surface against ingress of water

B : To develop skid resistance texture

C : To enkieven the existing dry surface

D : All of teh above

D..

12mm thickness Seal Coat.

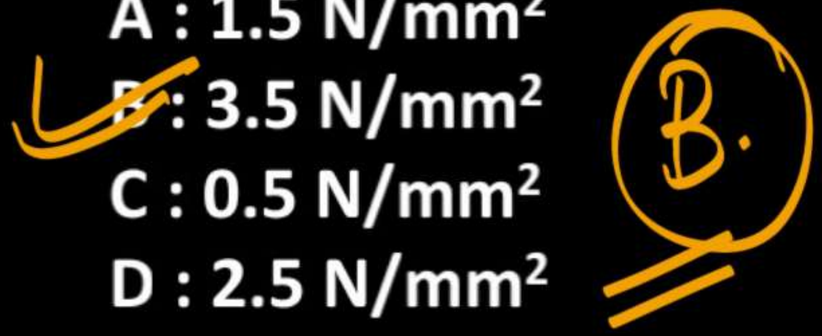
Q:) As per IS 2185 (part 1) : 2005, what is the minimum average compressive strength for open and closed cavity load bearing masonry units?
(SSC JE 23-09-2019)

A : 1.5 N/mm^2

B : 3.5 N/mm^2

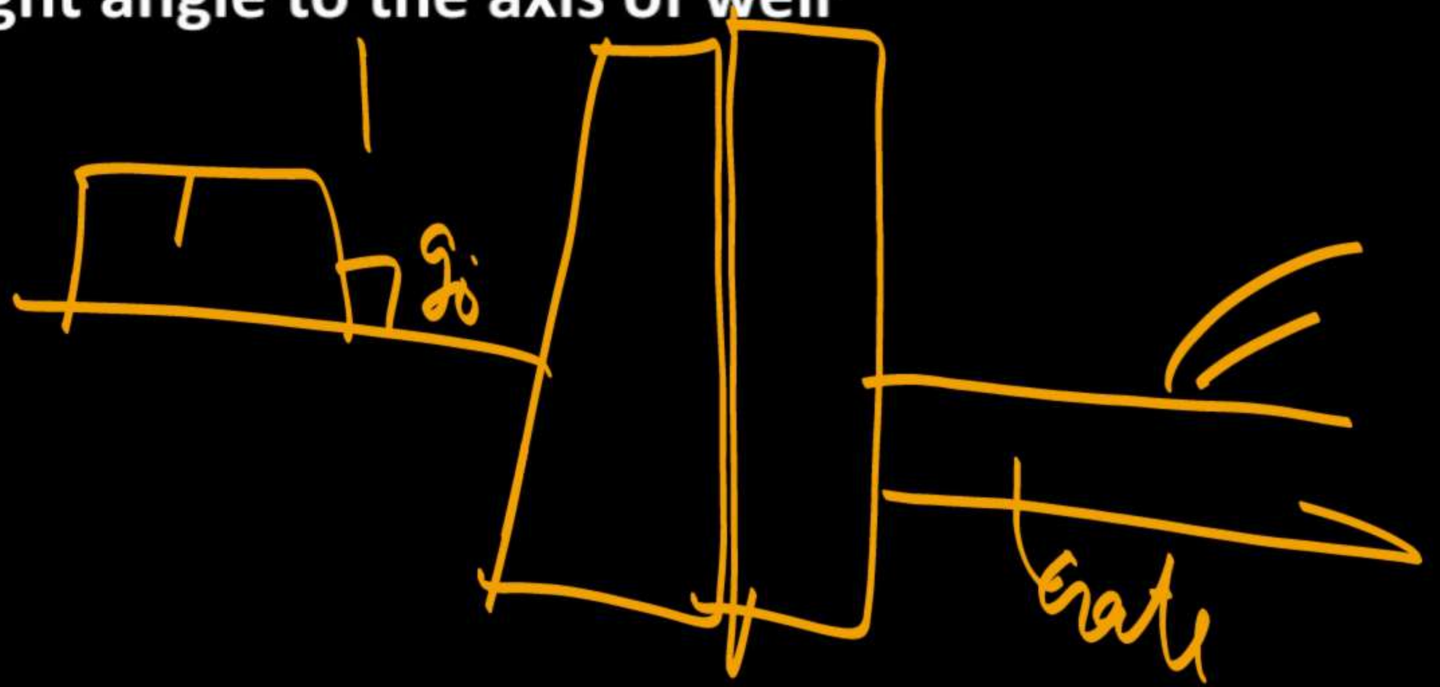
C : 0.5 N/mm^2

D : 2.5 N/mm^2



Q:) A divide wall is provided-
(RRB JE CBT-II 29-08-2019 evening)
A : At an inclination to the axis of weir
B : Parallel to the axis of weir and upstream of it
C : Parallel to the axis of weir and downstream of it
D : At right angle to the axis of weir

D.



height.

Q:) The short ~~hight~~ wall constructed above roof slab in open terrace is called as

(RRB JE CBT-II 28-08-2019 morning)

A : Partition wall

B : Plinth wall

C : Parapet wall

D : Boundary wall

No load Bearing capacity.

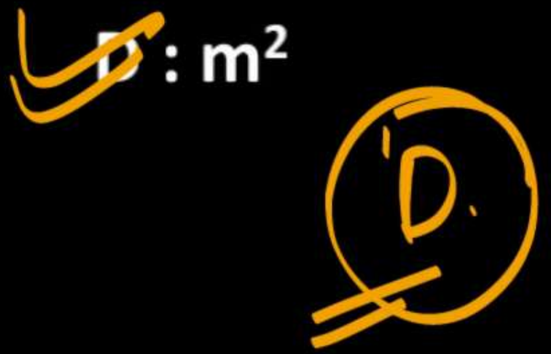
Q:) A thin partition wall is measured in:
(DMRC JE 12-04-2018, 12:15 pm)

A : m^4

B : m^3

C : m

D : m^2



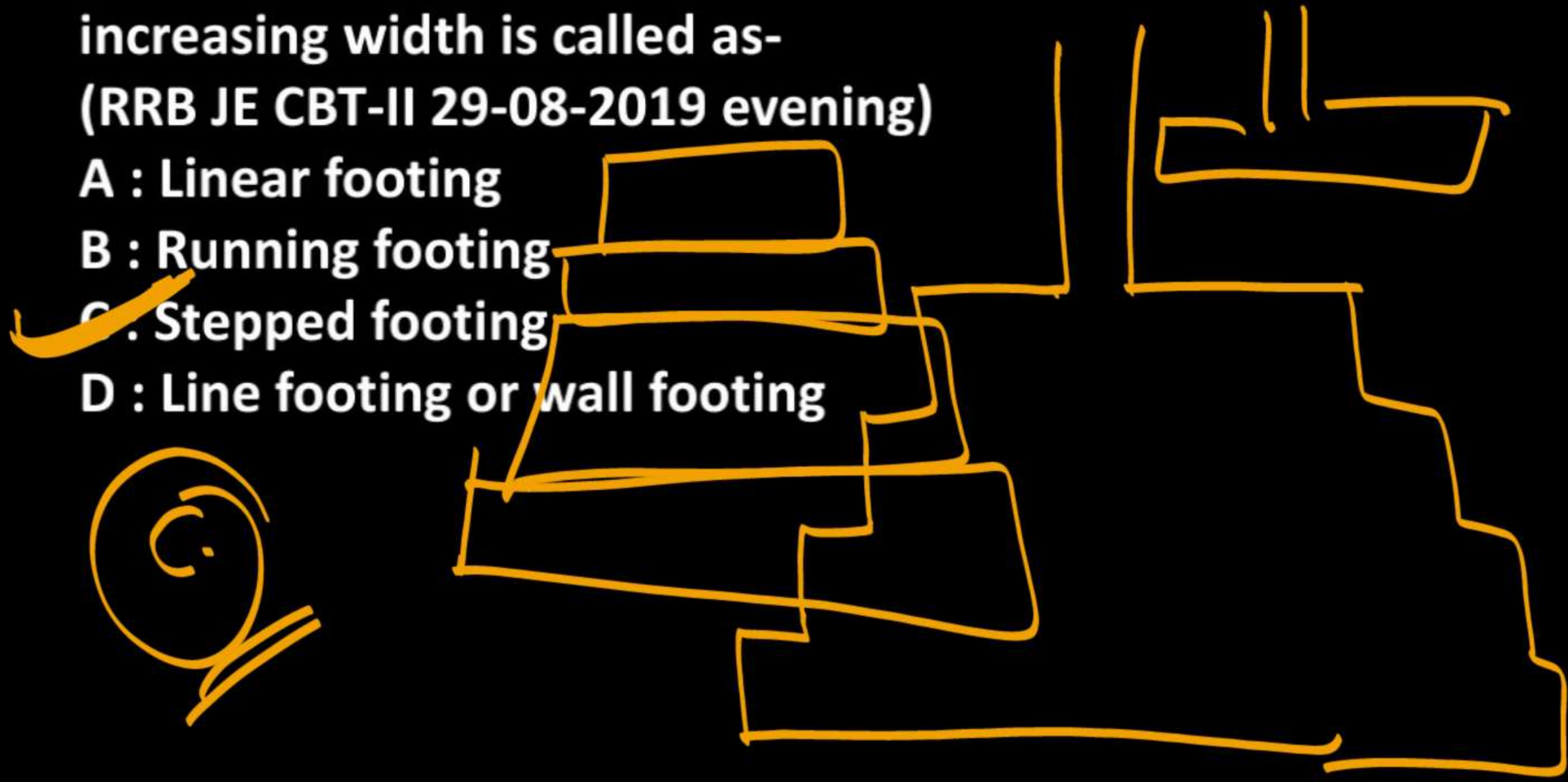
Q:) The old type of wall foundation consisting of multiple steps of bricks or stone layers of gradually increasing width is called as-
(RRB JE CBT-II 29-08-2019 evening)

A : Linear footing

B : Running footing

C : Stepped footing

D : Line footing or wall footing



Q:) The IS code recommends that the tilt for a well foundation should NOT exceed:
(Civil ESIC JE 2019)

A : [illegible]
B : [illegible]
C : [illegible]
D : 1/20

1/80
1/60
1/40

Q:) The common name for all doors, windows and such units are called as:
(RRB JE CBT-II 29-08-2019 evening)

A : Ventilators

B : Furniture

C : Shuttering

D : Joinery

Q:) The cheapest way to prevent the fomation of diagonal bottom corner cracks in windows can be prevented by
(RRB JE CBT-II 28-08-2019 morning)
A : Providing RCC frame all round the rectangular opening
B : Using concrete blocks for wall instead of bricks
C : Providing circular shaped window openings instead of rectangular opening
D : Providing sill beam

Q:) The height of sill level floor level is-
(Hariyana SSC JE Shift I 09-04-2018)

A : 700 mm to 800 mm

B : 750 mm to 900 mm

C : 700 mm to 850 mm

D : 750 mm to 850 mm

Q:) The chemical used in anti-treatment is-
(Hariyana SSC JE Shift-I 10.04.2018)

A : DDT

B : Chloroform

C : Chlorine

D : Acid

Q:) The window provided on the sloping roof of a building is called
(Rajasthan PSC 2018)

A : Dormer window

B : Bay window

C : Sky light window

D : Glazed window

Q:) The permissible limit of moisture content for doors is:
(DMRC JE 13.04.2018 shift-II)

A : 11-13%

B : 12-20%

C : 7-9%

D : 3-5%

Q:) The projections of head or sill of a door or window frame are...
(MP Draftman JE 08-07-2017 AM/MPVYAPAM Sub Engg. 09-07-2017)

A : Chocks
B : Stops
C : Transoms
D : Horns

Q:) In factory buildings, the horizontal beams spanning between the wall columns supporting a wall coverning are called

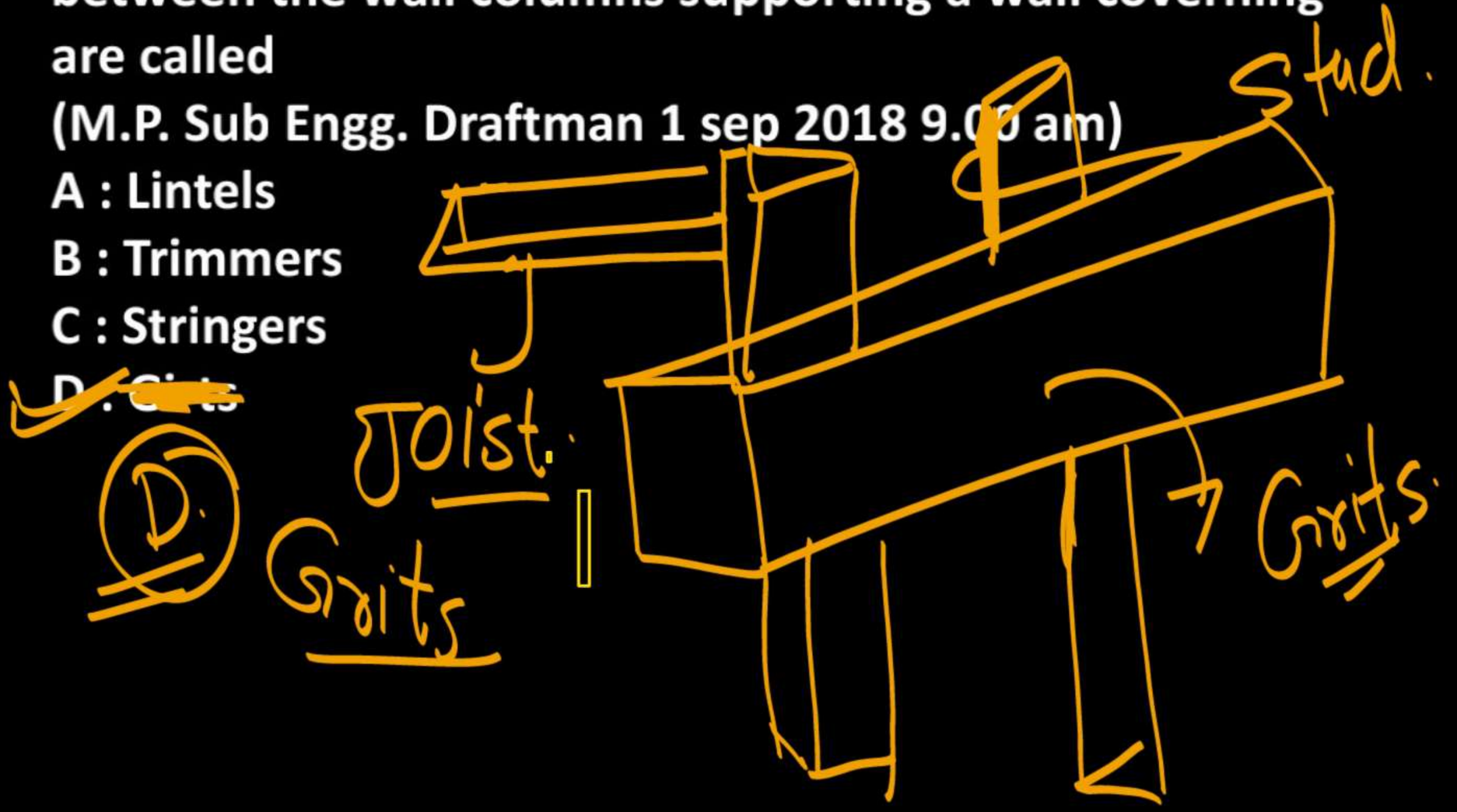
(M.P. Sub Engg. Draftman 1 sep 2018 9.00 am)

A : Lintels

B : Trimmers

C : Stringers

D : Girts



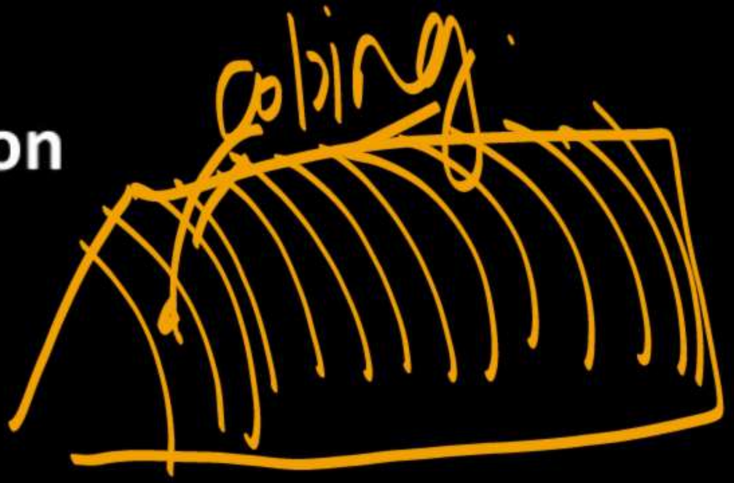
Q:) The function of coping is to serve as a
(Hariyana SSC JE 2015)

A : Covering to the wall to throw off water

B : Ornamental course between lintel level and roof level

C : Projection from a wall to support a structural member

D : Shade against solar radiation



Q:) In a two hinged parabolic arch an increase in termerature will-
(UTTRAKHAND AE 2013)

A : Decrease the horizontal thrust

B : Increase the bending moment

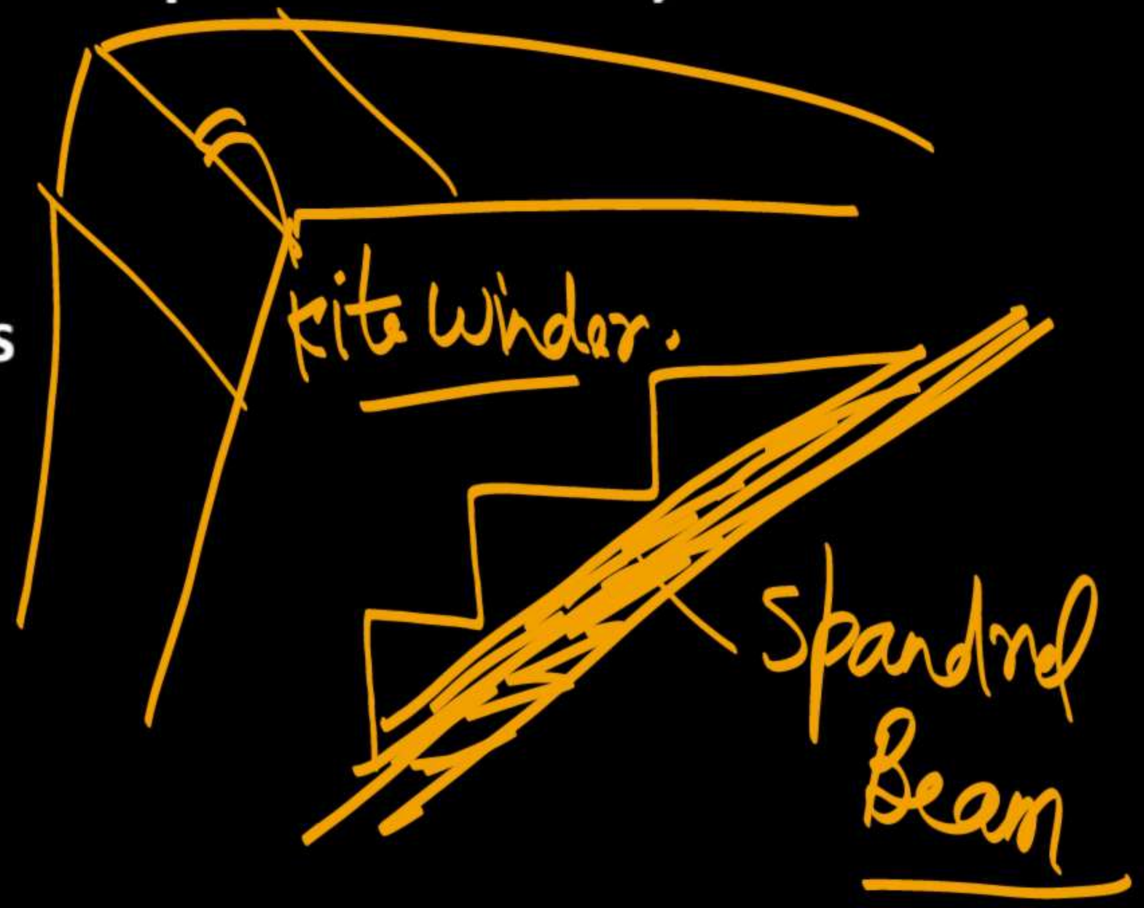
C : Increase the horizontal thrust

D : Make no change in horizontal thrust

Q:) The angular steps used for changing direction of stairs are called:
(M.P. Sub Engg. 04-Sep-2018 9.00 am)

A : Radia; steps
B : Spandril
C : Winders
D : Angular steps

C.



Q:) In industrial buildings, to obtain a hard-wearing surface, the finishing provided above concrete topping is-
(UPRVUNL JE 2019)

A : Sand finish

B : Basalticfinishing

C : Granolithic finishing

D : Marble finishing

Granite flooring -

Q:) The common size of a floor tile is:
(NMRC JE 2017)

A : 200 × 200 × 20 mm

B : 225 × 225 × 22 mm

C : 150 × 150 × 18 mm

D : 160 × 160 × 20 mm

200 × 200 × 20mm.

(A)

Q:) The scaffolding in which two rows of standards are provided is known as:
(SSB Himachal pradesh 18-11-2018)

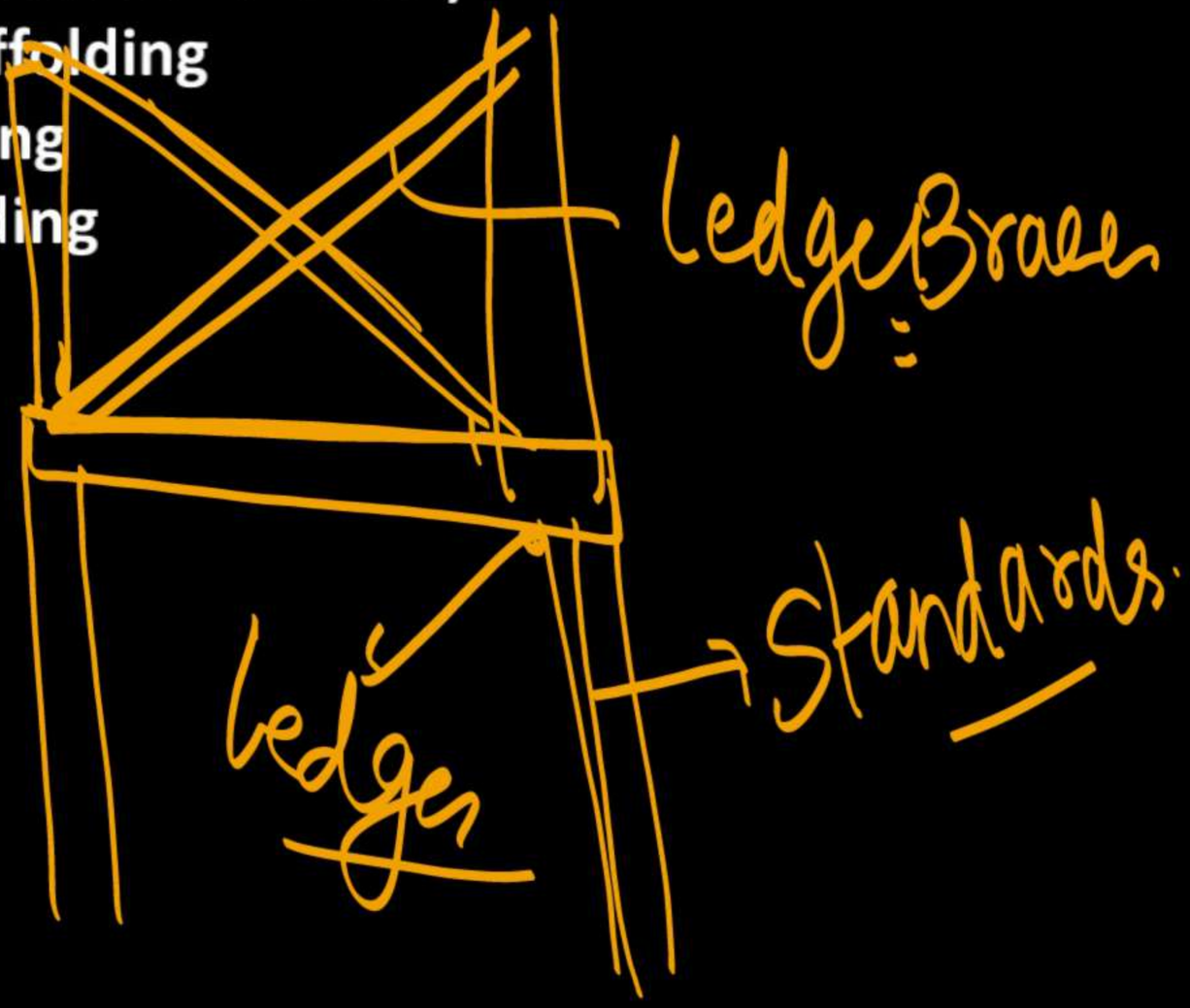
A : Brick layer's scaffolding

B : Double scaffolding

C : Mason's scaffolding

D : Both (B) & (C)

D.



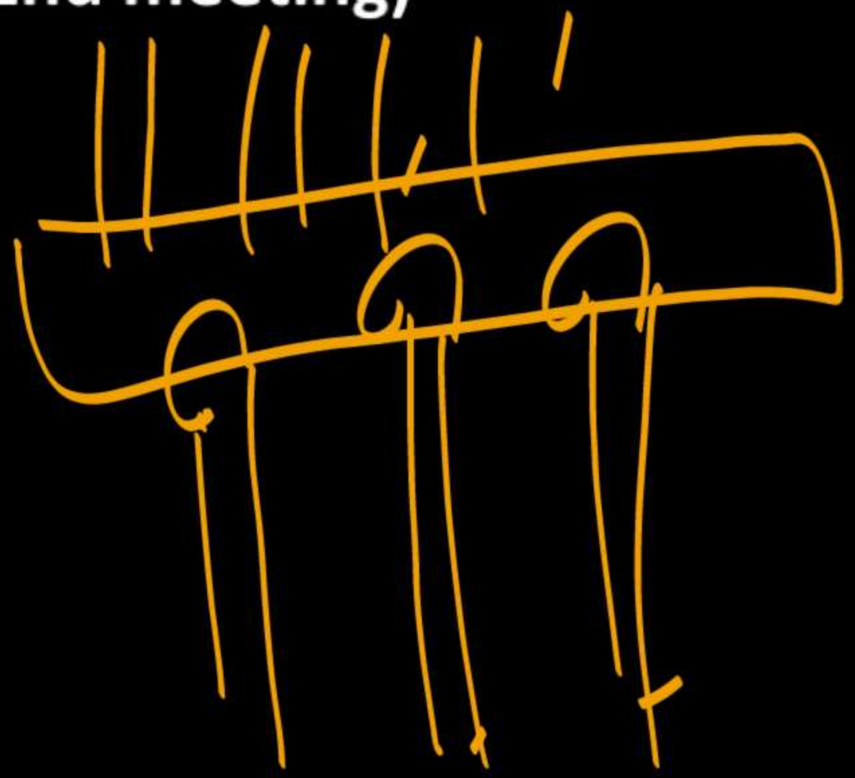
Q:) Which of the following is done in case of building new work underneath the existing structure without disturbing its stability?
(MP VYPAM 08-07-2017 2nd meeting)

A : Shoring

B : Underpinning

C : Flying shores

D : Scaffolding



Mangalore.

Q:) Manalore tiles belong to the category of
(RRB JE CBT-II 28-08-2019 morning)

A : Concrete tiles

B : Slate tiles

C : Burnt clay tiles

D : Mosaic tiles

Q:) A sloping roof having slope in four directions with a break in the slope is known as:

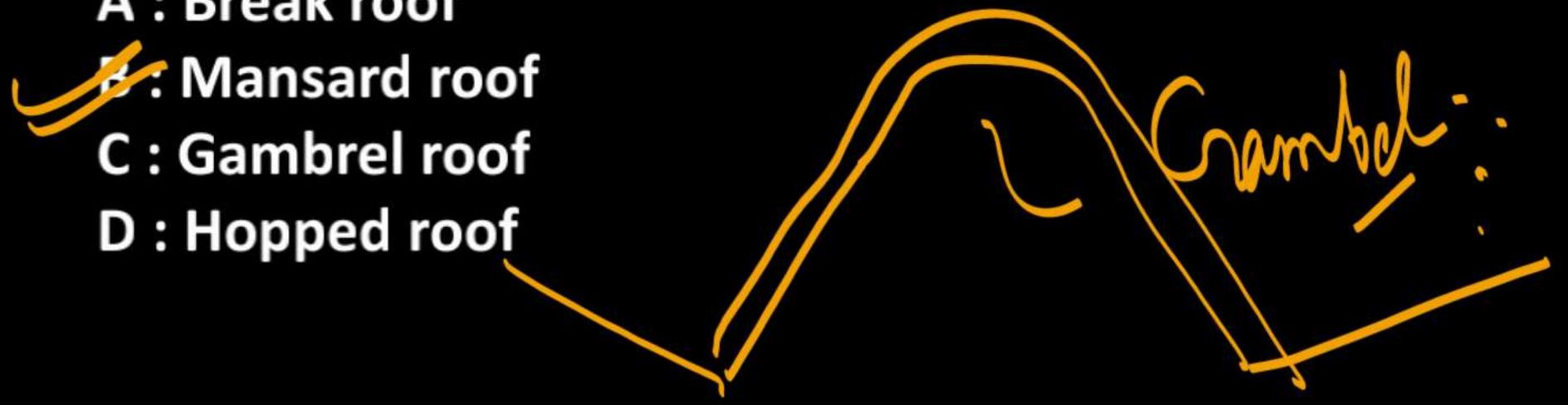
SSB Himachal pradesh 18-11-2018

A : Break roof

B : Mansard roof

C : Gambrel roof

D : Hopped roof



15 min Break ⇒ 09:50 PM

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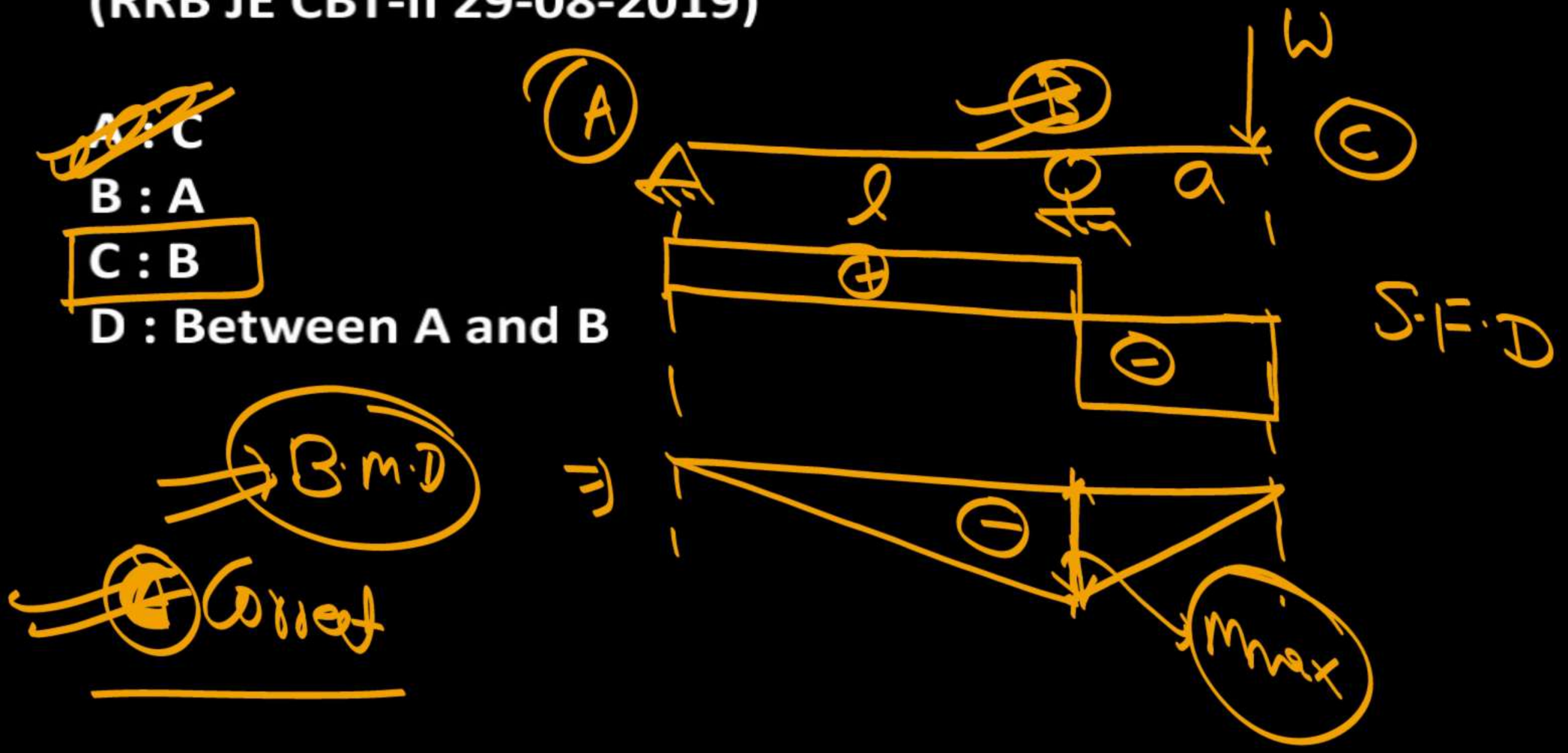
Q:) In a overhanging beam ABC, AB = L and BC = a, C being the free end. If it is subjected to a vertical load W at free at end, maximum moment occurs at-
(RRB JE CBT-II 29-08-2019)

~~A : C~~

B : A

C : B

D : Between A and B



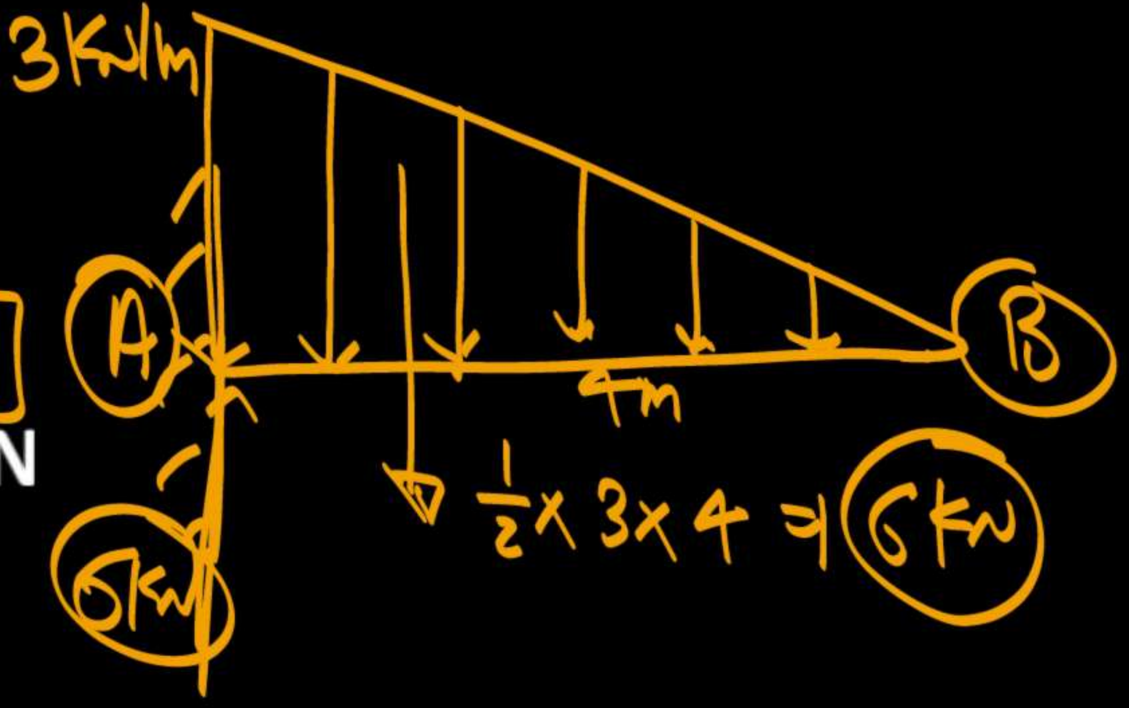
Q:) A cantilever beam of span 4 m carries a gradually varraying load, zero intensity at the free end to 3kN/m at the fixed end. Magnitude of shear force at the fixed end will be- (UPRVUNL JE 2019)

A : 8 kN

B : 9 kN

C : 6 kN

D : 12 kN



Q:) The three moment theorem is used for solution of which type of beam?
(Haryana SSC JE Shift-I 10.04.2018)

A : Continuous beam
B : Fixed beam
C : Cantilever beam
D : Overhanging beam

(A) Correct

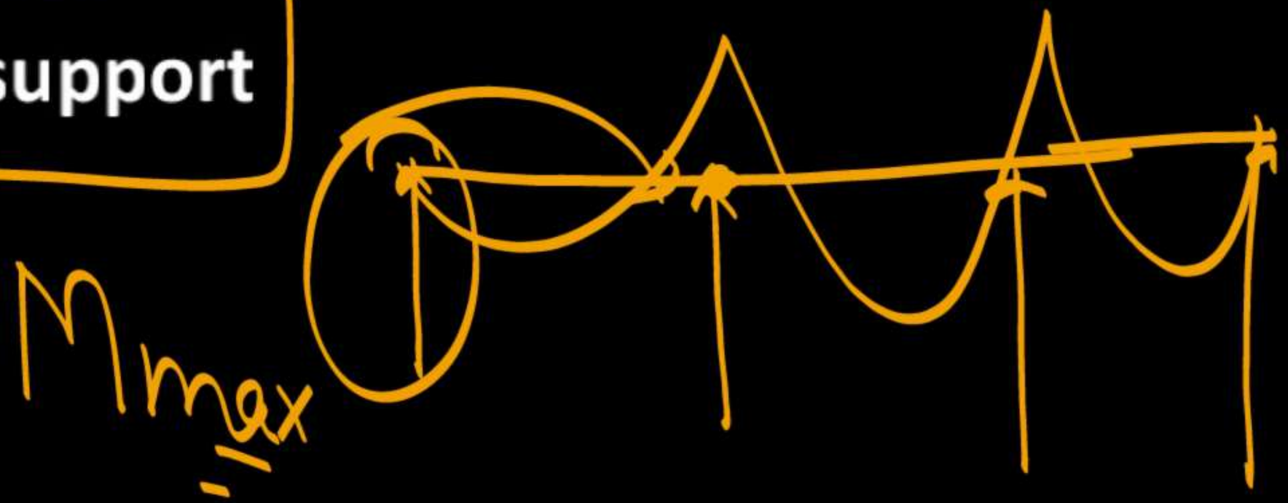
Q:) In a ~~either~~ one-way continuous slab having simple support at the ends, the maximum bending moment will act at the: (Civil ESIC JE 2019)

A : Support next to the end support

B : Mid of the interior span

C : Mid of the end span

D : End support



(A) Correct

Q:) Point of contra flexure in a beam occurs when the bending moment (BSPHCL JE Civil 29.01.2019 (Batch-2)

A : Is minimum
B : Is negative
C : Is maximum
D : Changes its sign

B.m (Diagram)

Point of inflection

Deflected shape

Q:) Consider the following statements: (NBCC JE 2017)

If the simply supported beam of uniform cross-section is subjected to a clockwise moment at the left support and an equal anticlockwise moment at the right support, then the:

1. B.M.D. will be in the shape of a rectangle
2. S.F.D. will be straight line coinciding with the base
3. Deflection curve will be in the shape of a circular arc

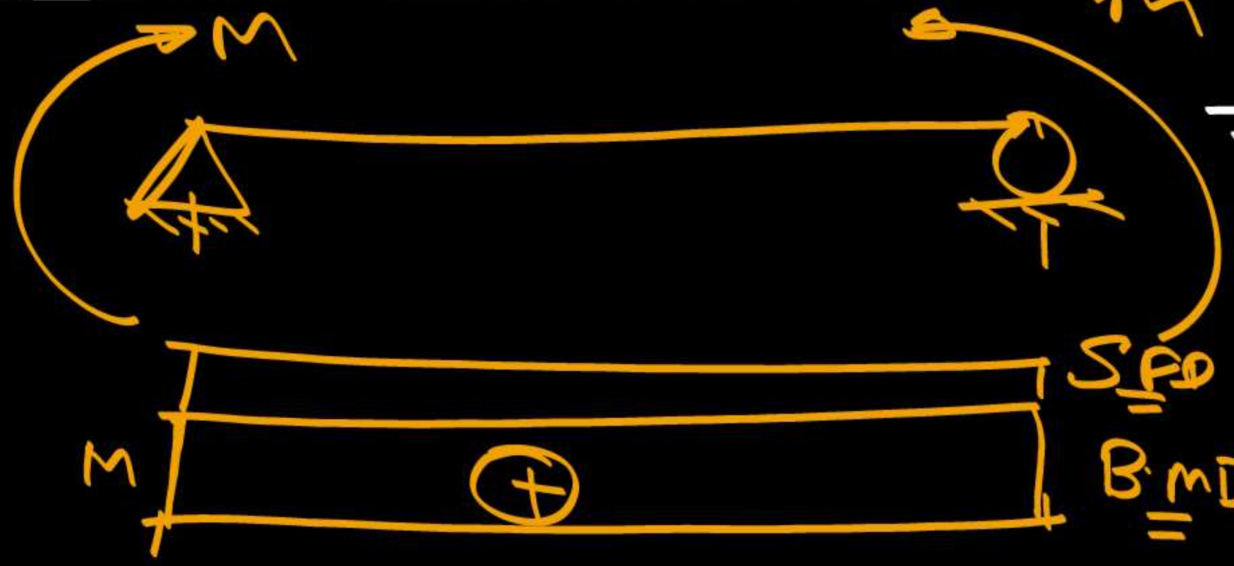
Of these statements

A : 1, 2 and 3 correct
B : 1 and 2 are correct
C : 1 and 3 are correct
D : 2 and 3 are correct

(A) Correct

$$\frac{M}{I} = \frac{\sigma}{y} = \frac{E}{R}$$

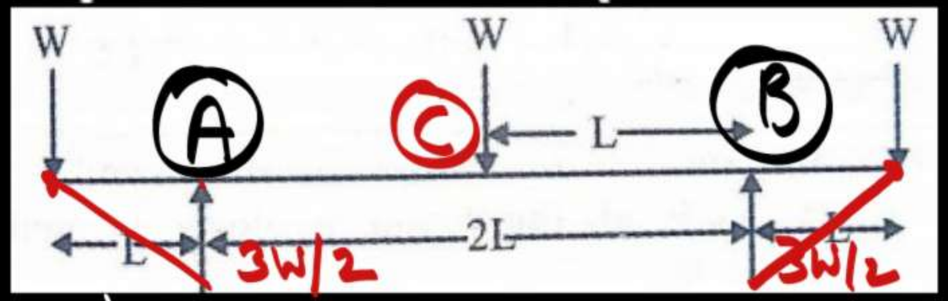
M M ⇒ Pure Bending Condition



RIF

⇒ Circular arc

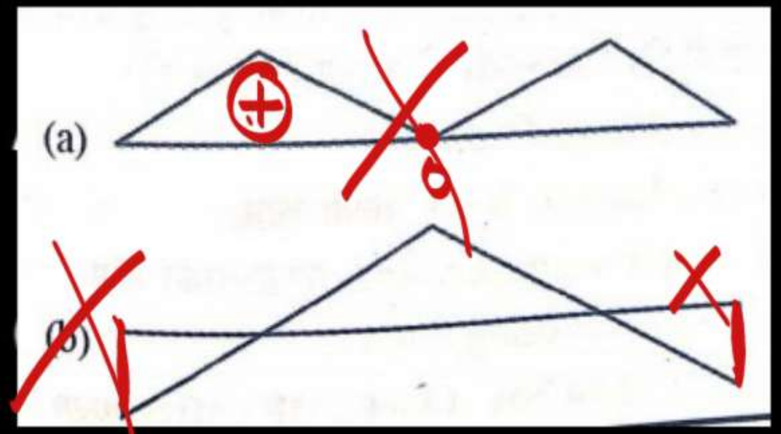
Q:) A loaded beam is shown in the given figure. The bending moment diagram of the beam is best represented as: (M.P. Sub Engg. 4 Sep 2018 9:00 am)

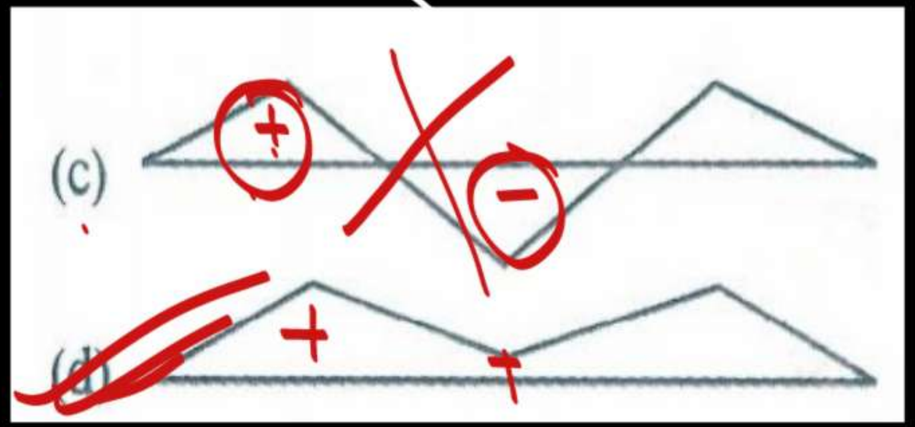


$M_C = -2W \times L + \frac{3W}{2} \times L$

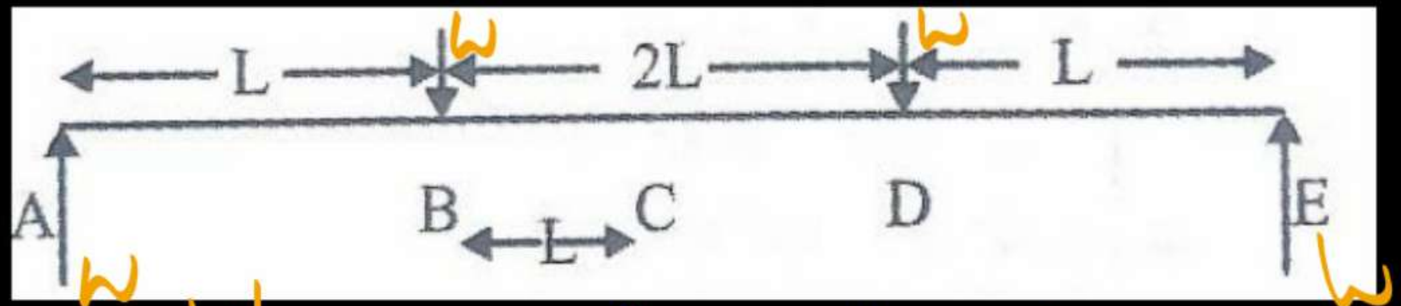
$= -\frac{W}{2} \times L$

$M_A = -W \times L$





Q:) Which portions of the loaded beam shown in the given figure is subjected to pure bending?
(M.P. Sub Engg. 4 Sep 2018 9.00 am)



A : AB

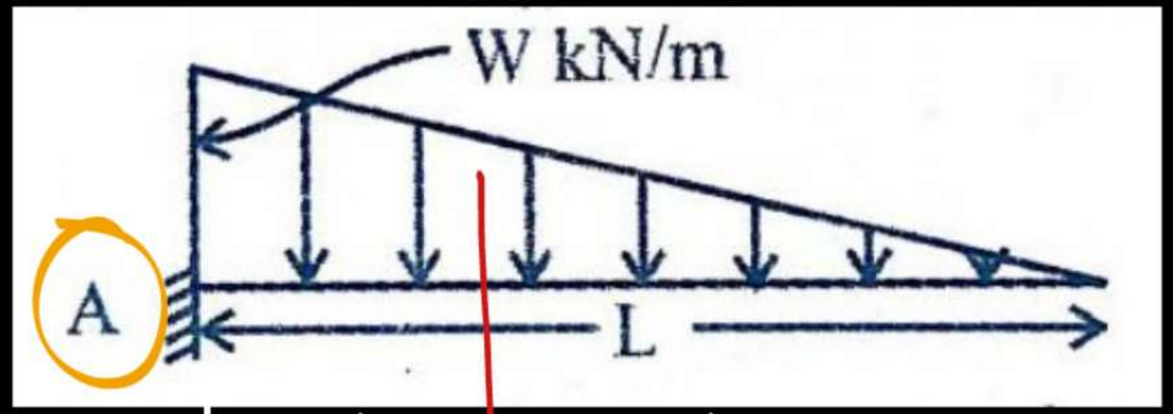
B : DE

C : AE

D : BD

→ Pure Bending

Q:) The maximum bending moment at 'A' for beam shown in the given figure is given by:
(M.P. Sub Engg. 4 Sep 2018 2.00 pm)



A : $wl^4/6$

B : $wl^3/6$

C : $wl^2/6$

D : wl/6

L/3 2L/3

$W = \frac{1}{2} \times w \times L$

Correct

$B.M_A = W \times \frac{L}{3}$

$\Rightarrow \frac{wL}{2} \times \frac{L}{3}$

$\Rightarrow \frac{wL^2}{6}$

Q:) What does the slope of a bending moment curve as a function of distance represent?
(DDA 24.04.2018 (First Shift)

A : The stiffness at that location

B : The shear force at that section

C : The load applied

D : The deflection

$$\frac{dM}{dx} \Rightarrow V$$

$$\int dM = \int V\,dx$$

(*) $M_2 - M_1 =$ Area under S.F.D B/w Points 1 & 2

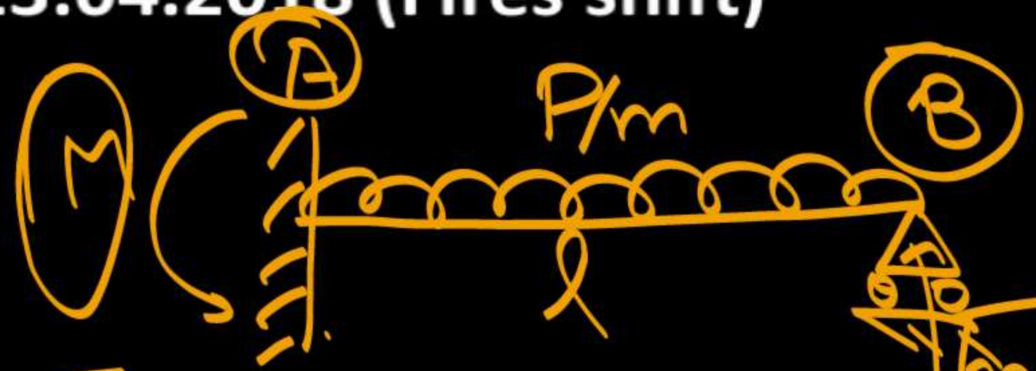
Q:) A propped cantilever beam of span L when loaded with a uniformly distributed load of intensity P will have a bending moment M at the fixed end, where M is:
(DDA JE 23.04.2018 (Fires shift)

A : $\frac{PL^2}{8}$

B : $\frac{PL^2}{12}$

C : $\frac{PL^2}{16}$

D : $\frac{PL^2}{24}$



$M = \frac{Pl^2}{8}$

$R_B = \frac{3}{8} Pl$

$\frac{3}{8} Pl$

$\Sigma M_A = 0$:

$-M - \frac{3}{8} Pl \times l + \frac{Pl^2}{2} = 0$

(A) Correct

Compatibility eqn $\Rightarrow$

$\frac{Pl^4}{8EI} = \frac{R_B l^3}{3EI}$

Q:) Under a beam loading condition, if the bending moment is constant over a certain span length, then the shear would be: (Coal India 2016)

A : Zero

B : Decreasing

C : Constant and a non-zero value

D : Increasing

$\frac{dM}{dx} = V$ → Constant

(A) Correct

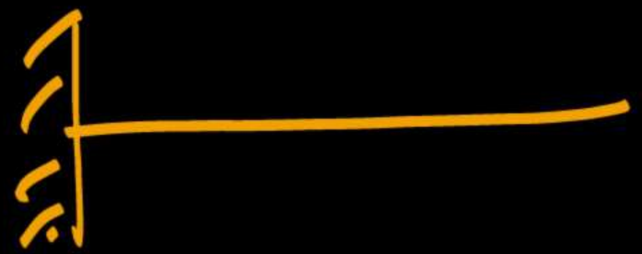
Q:) Which type of beam is supported only at one end by being built into a wall? (DFCCIL, 17-04-2016)

A : Curvature beam

B : Cantilever beam

C : Overhanging beam

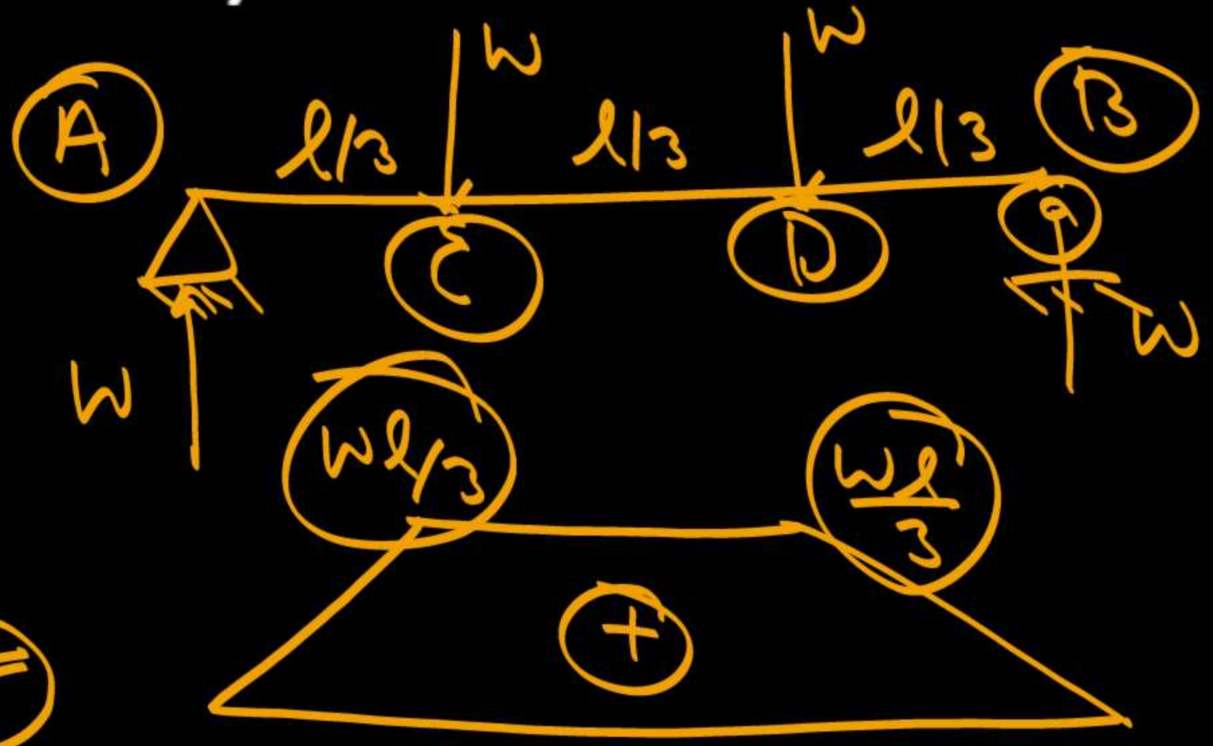
D : Centroid beam



Q:) A simply supported beam carries two equal concentrated loads W at a distance L/3 from the either support. The value of maximum bending moment anywhere in the section will be
(Haryana SSC JE 2015/UPPCL JE 2013 Uttara hand paper-I 2015)

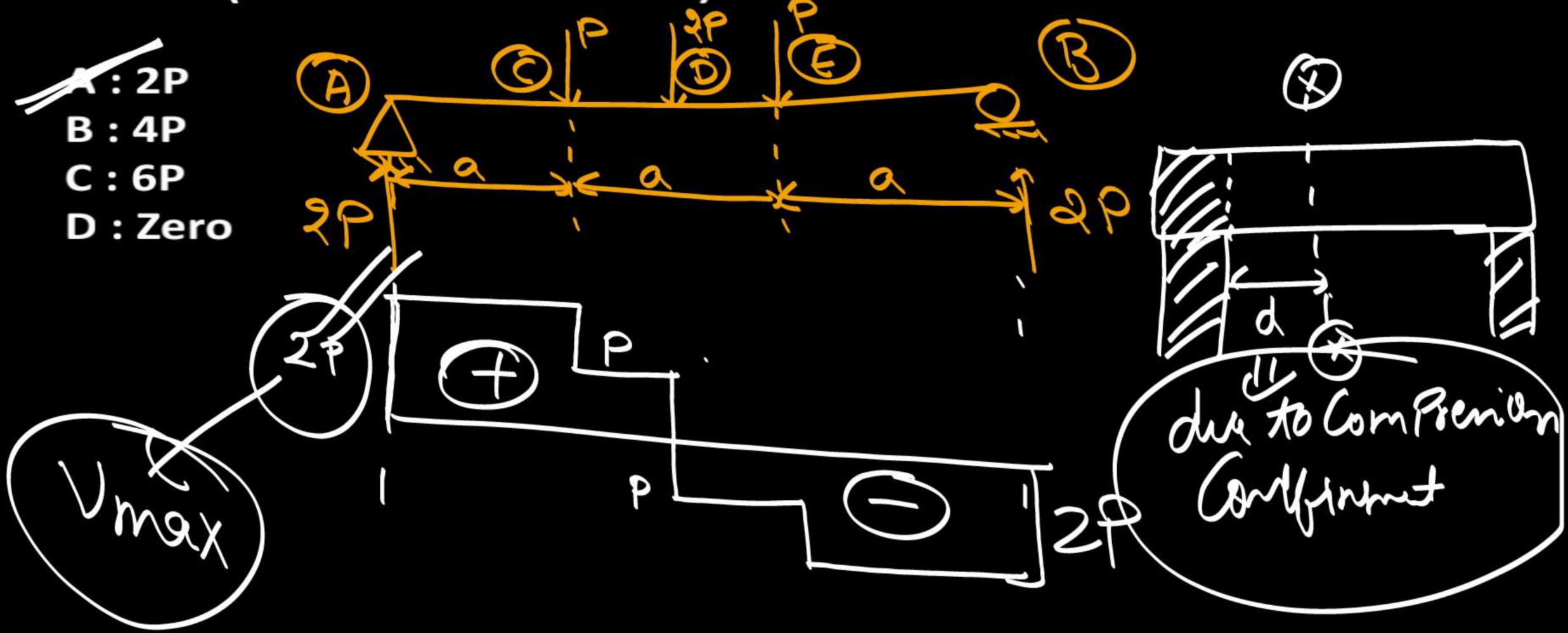
A : Wl/2
B : Wl/3
C : Wl/4
D : Wl/6

B Correct



Q:) A simply supported beam of length '3a' supported three loads separated by distance 'a'. The middle load is 2P, while the loads at distance 'a' from each support are P each. What will be the maximum shear force in the beam? (LMRC AE 2017 I-Shift)

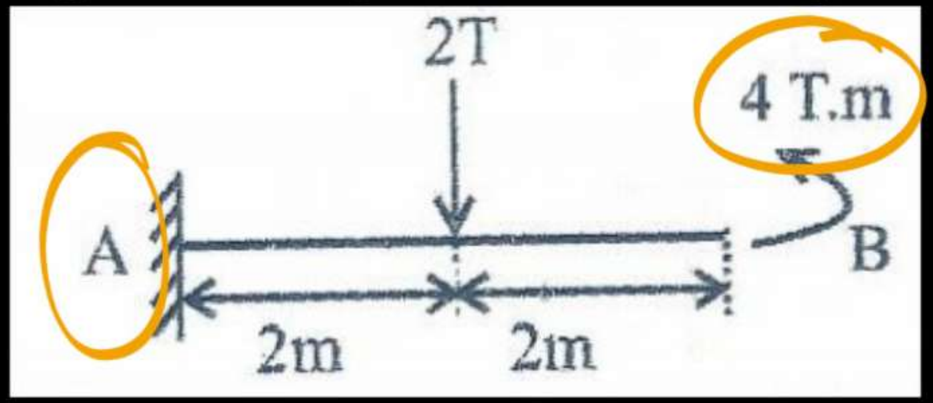
~~A~~ : 2P
B : 4P
C : 6P
D : Zero



Q:) A bending moment causing concavity upward will be taken as _____ and called _____. (UPPCL JE 2016)

A : Positive sagging
B : Positive hogging
C : Negative, sagging
D : Negative, hogging

Q:) The B.M. of a cantilever beam at A shown in the figure is. (DMRC 2015)

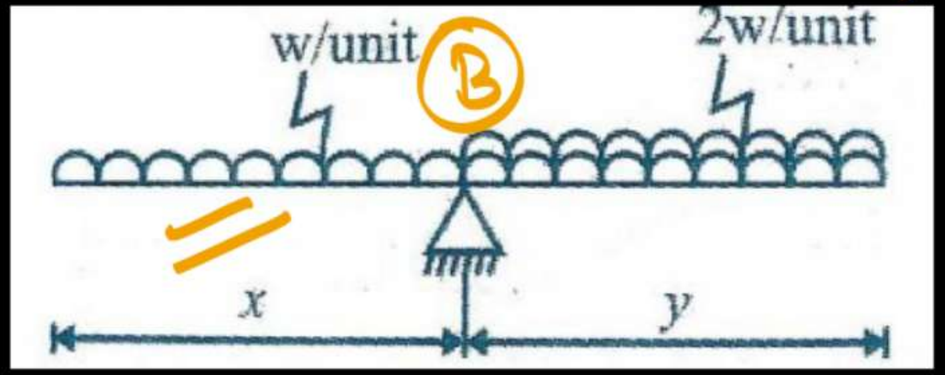


A : Zero
B : 8 T.m
C : 10 T.m
D : 16 T.m

$(BM)_A = +1 + 4 - (2 \times 2) = 0\ tm$

(A) Correct

Q:) In the following figure the beam will be stable when- (UPPCL JE 2013) ⇒ (Civil Service 1996)



$M_x - M_y = 0$:

(D) Correct

A : $\sqrt{2}x = y$

B : $2x = y$

C : $x = 2y$

D : $x = \sqrt{2}y$

Bending moment

$M_x = M_y$

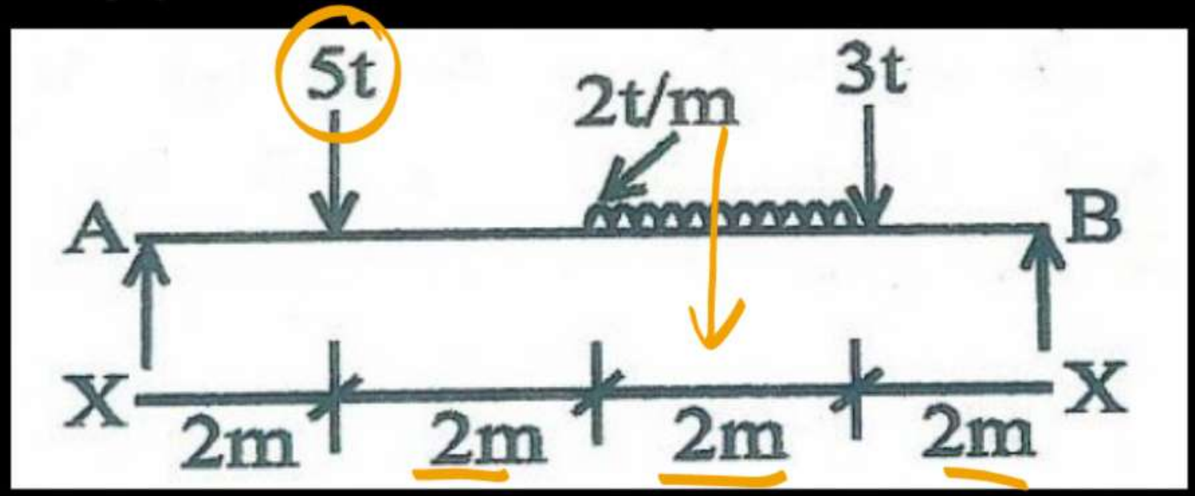
$\frac{wx^2}{2} = \frac{2wy^2}{2}$

$x^2 = 2y^2$

$x^2 = 2y^2$

$x = \sqrt{2}y$

Q:) The ratio of the reactions R_A & R_B of a simply supported beam shown below is: (DMRC 2015)



$R_A = \frac{5\times 6}{8} + \frac{4\times 3}{8} + \frac{3\times 2}{8}$

$R_A = 6t$

$R_A + R_B = 5 + 4 + 3 = 12$

$R_B = 6t$

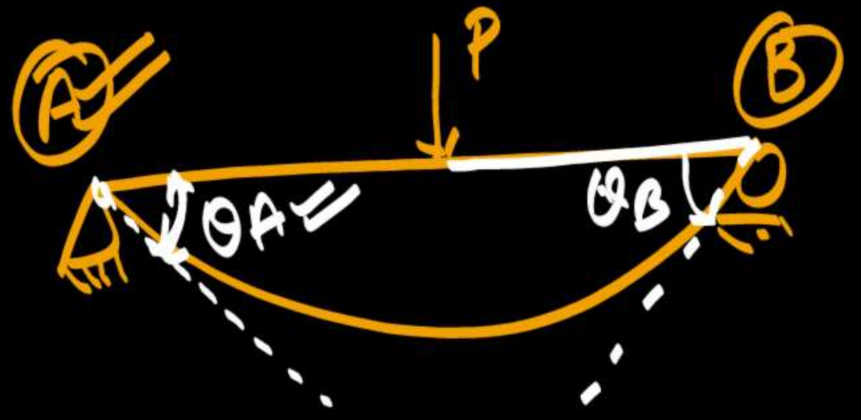
$\frac{R_A}{R_B} = \frac{6}{6} = 1$

A : 0.5

B : 0.4

C : 0.67

D : 1.00



Q:) Slope in the beam is defined as
(Jharkhand SSC JE 2016)

(A) Gone ↓ Slope Definition

A : Angle that the tangent to the elastic curve makes with the unbent beam axis

B : Angle that the perpendicular to the elastic curve makes with the unbent beam axis

C : Angle that the tangent to the elastic curve makes with the perpendicular beam axis

D : Angle that the perpendicular of the beam axis makes with the elastic curve of the beam

Q:) A homogeneous prismatic simply supported beam of length L, width B and depth D is subjected to a vertical point load P. The load can be placed anywhere along the span of the beam. The very maximum flexural stress developed in the beam is
(HPSSSB JE 31 April 2017)

A : $3PL/2BD^2$
B : $3PL/4BD^2$
C : $PL/2BD^2$
D : $2PL/BD^2$

(A) Ans

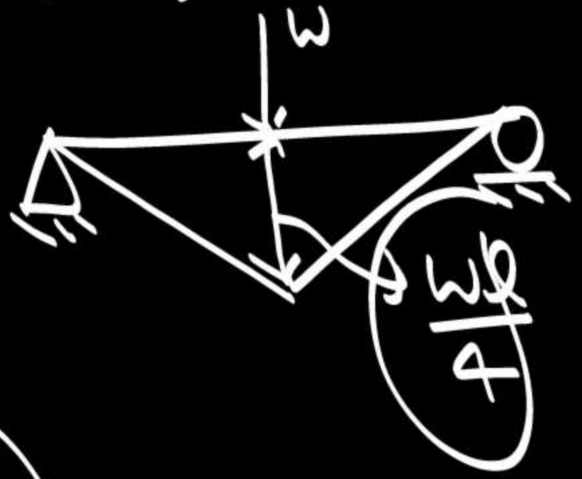
from flexural formula:

$$\frac{\sigma}{y} = \frac{M}{I} = \frac{E}{R}$$

$$\sigma = \frac{My}{I}$$

$$\sigma_{max} = \frac{\frac{Wl}{4} \times d/2}{\frac{bD^3}{12}}$$

$$= \frac{3PL}{2BD^2}$$



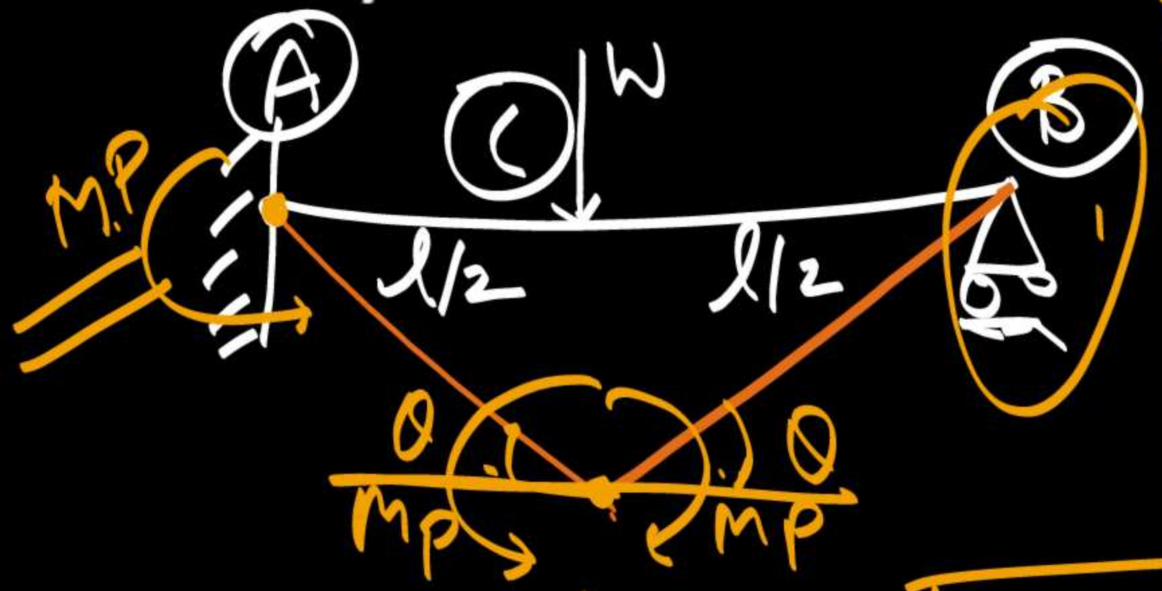
Q:) A propped cantilever beam of span L and constant plastic moment capacity M_p carries a concentrated load at the midpoint. Then the load at collapse point will be:
LMRCL (ASST. MANAGER) 15.05.2018

A : $2\frac{M_p}{L}$

B : $4\frac{M_p}{L}$

C : $6\frac{M_p}{L}$

D : $11.76\frac{M_p}{L}$



no. of plastic Hinge = D.S + 1 = 1 + 1 = 2

$3mp\theta = W \times \frac{l}{2}\theta$

$W = \frac{6mp}{l}$

(C) Correct

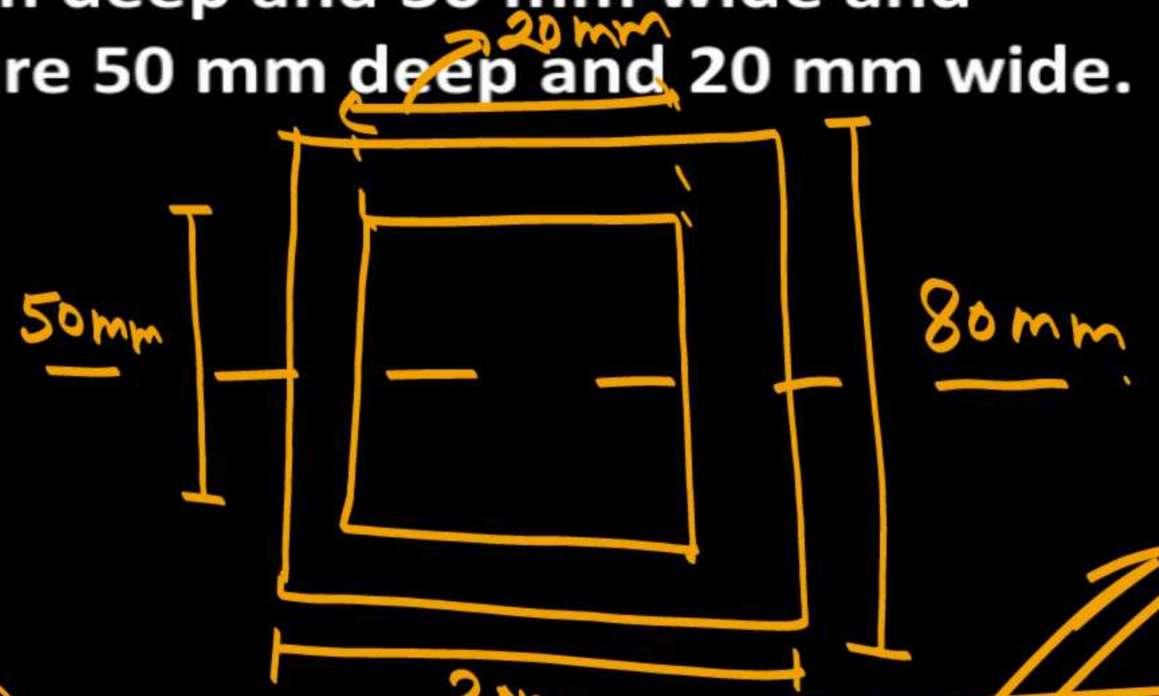
Q:) Find the moment of inertia of a rectangular hollow section about its centroid X-axis, if the external dimensions its centroid X-axis, if the external dimensions are 80 mm deep and 30 mm wide and internal dimensions are 50 mm deep and 20 mm wide. (UPRVUNL JE 2019)

A : 1071667 mm^4

B : 214334 mm^4

C : 535834 mm^4

D : 128667 mm^4



$$I_y \Rightarrow \frac{30 \times 80^3}{12} - \frac{20 \times 50^3}{12} \Rightarrow 1071667\ mm^4$$

Q:) The ratio of moment of inertia of a circular plate and that of a square plate for equal depth is
(SSB Himachal Pradesh 18.11.2018 (ESE 1995)

A : 4π/16
B : 2π/16
C : 3π/16
D : π/16

$$\frac{I_{circular}}{I_{Square}} = \frac{\frac{\pi}{64} d^4}{\frac{d^4}{12}} = \frac{3\pi}{16}$$

(C) Correct

Q:) An axially loaded bar is subjected to a normal stress of 173 MPa. The shear stress in the bar is: (NBCC JE 2017)

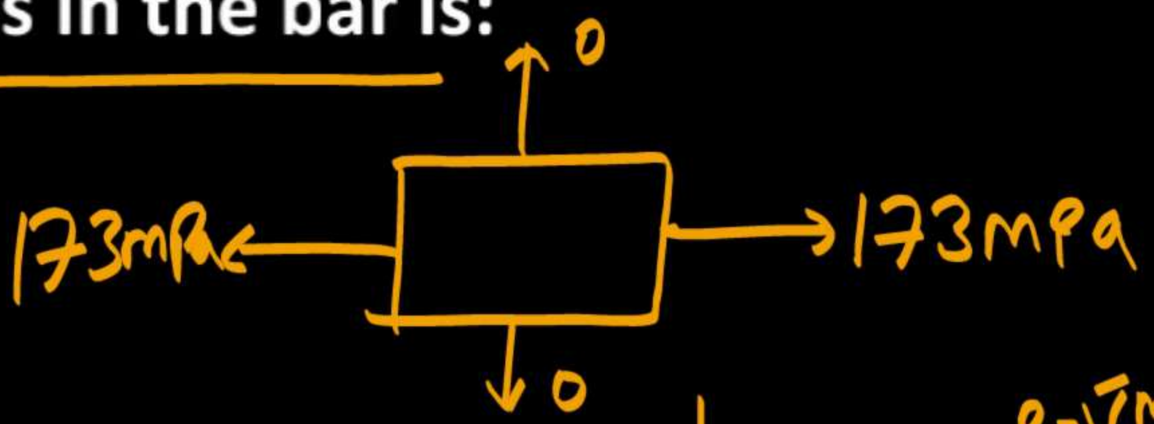
A : 75 MPa

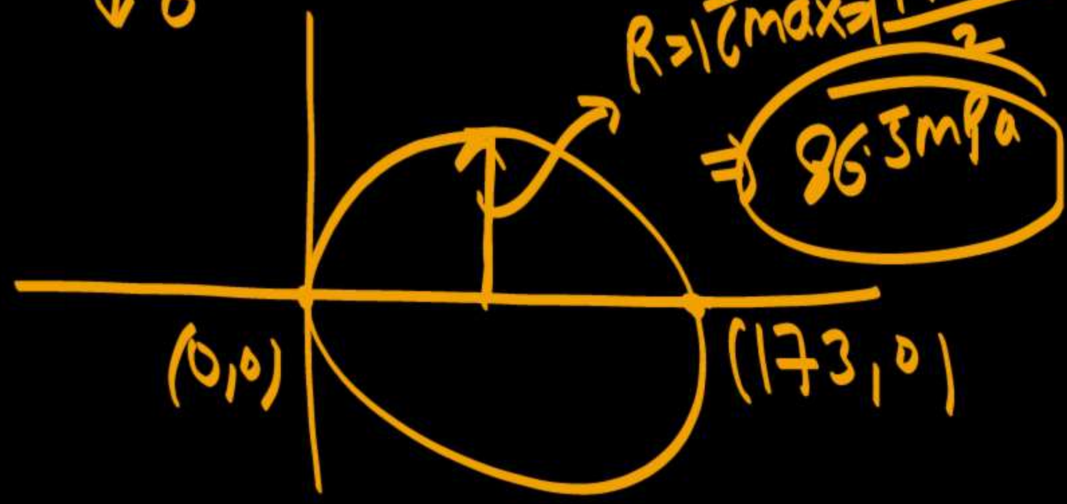
B : 86.5 MPa

C : 100 MPa

D : 122.3 MPa

(B) Correct





Q:) An engineer intends to design a cantilever beam of 2 m length. He selects a hollow square cross section with eternal sides as 60 mm and internal side I = 6×10^5 mm^4. If the section is made up of material having safe bending stress of 100 N/sq.mm, what will be the safe concentrated load (N) at the end?
(DDA JE 24.04.2018, 12:30-2:30 pm)

A : 1500
B : 1000
C : 2000
D : 500

$I = 6 \times 10^5\ mm^4$

$\sigma_{max} = 100\ N/mm^2$

60/2

$100 = \sigma_{max} = \frac{My}{I}$; $100 = \frac{W \times 2000 \times (d/2)}{6 \times 10^5}$

$M_{max} = W \times 2000\ N mm$

$W = 1000\ N$

(B) Correct

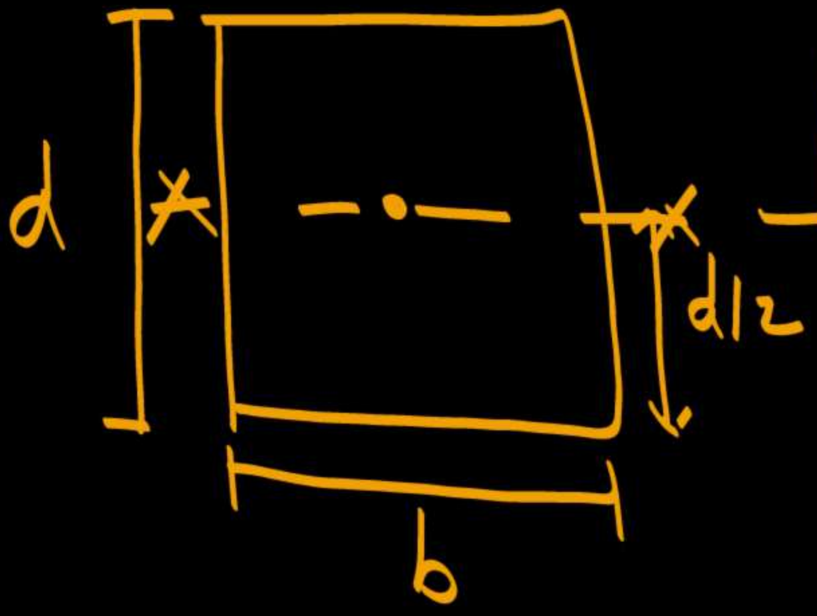
Q:) A rectangle surface is having area b × d, if the centre of gravity from base is at d/2, the value of moment of inertia about its centroidal axis will be: (LMRC J.E. 13.05.2018 (Shift-I) BECIL NMRC J.E. Civil 15.09.2019)

A : $db^2/12$

B : $bd^3/12$

C : $bd^3/3$

D : $db^3/3$

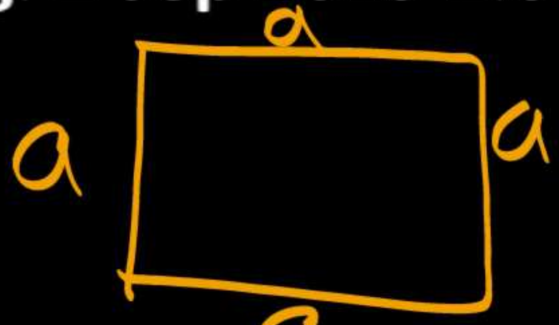


$$I_{xx} = \frac{bd^3}{12}$$

(B) Correct

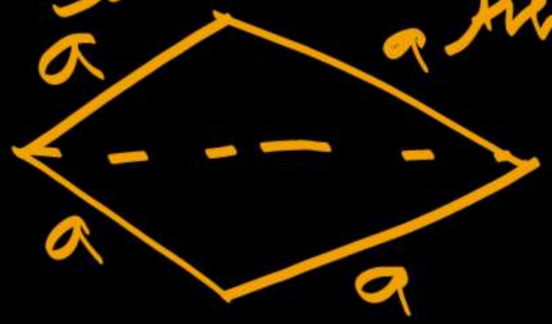
Q:) A beam has square cross section of side 'a' the ratio of section modulus, when the side is horizontal, to the section modulus when it is rotated by 45^0 is
(M.P. Sub Engg. 2 sep 2019 2.00 pm)

A : av2
B : √2 a
C : √2/2
~~D : √2~~



Square

Strength of Square Section more than Diamond By (4T-4T)



Diamond

(D)

$Z_S = \frac{a^4/12}{a/2}$

$Z_D = \frac{a^4/12}{a/\sqrt{2}}$

$Z_S = \sqrt{2}\, Z_D$

$\frac{Z_S}{Z_D} = \frac{a^4/12}{a/2} \times \frac{a/\sqrt{2}}{a^4/12} = \sqrt{2}$

Q:) The ____ of a body is that point through which the resultant of the system of parallel forces formed by weights of all the particles of the body passes for all the position of the body: (M.P. sub Engineer 2016)

A : Elongation
B : Breaking point
C : Yield point
D : Centre of gravity

(D) Correct

Q:) Which among the following is/are the correct assumptions in the theory of simple bending? (DFCCIL 17-04-2016)

Pure Bending

$$\frac{\sigma}{y} = \frac{M}{I} = \frac{E}{R}$$

1. The loads act perpendicular to the beam axis.
2. The beam bends to a circular arc.
3. The beam is initially straight of constant cross-section

A : A and B

B : Only A

C : A, B and C

D : Only B

(C) Correct

$(1-1.0)^{100} = 1$?

Circular arc

2-3 exam

Q:) A mild steel flat of width 120 mm and thickness 10 mm is bent into an arc of a circle of radius 10 m.N/mm² then the magnitude of the pure moment 'M' will be. (M.P. Vyapam Draftman 2016)

$E = 2\times10^5\ N/mm^2$

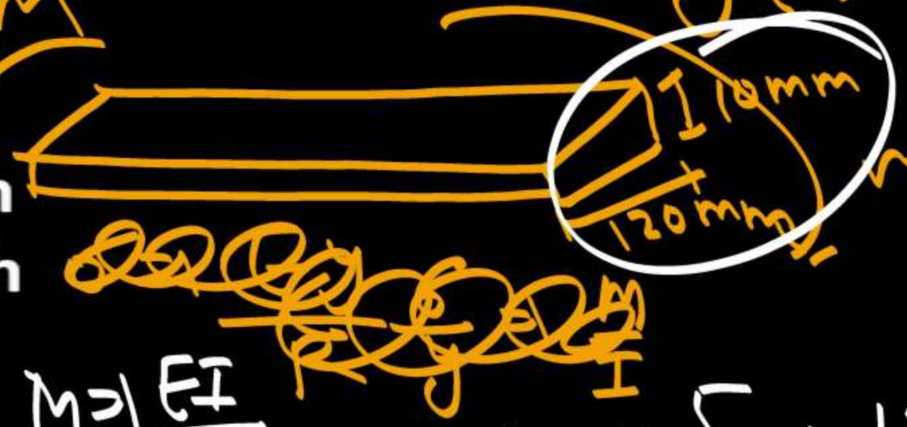
A : 2×10^6 N–mm

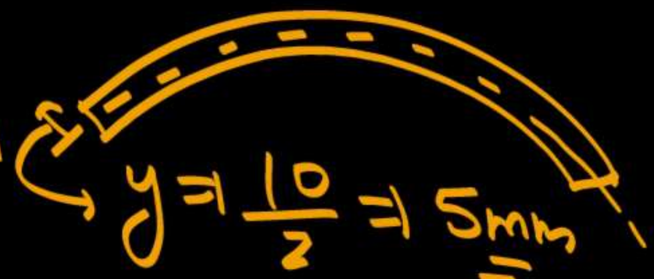
B : 2×10^5 N–mm

C : 0.2×10^5 N–mm

D : 0.2×10^4 N–mm

Pure Bending (flexural formula)





$$\frac{\sigma}{y} = \frac{M}{I} = \frac{E}{R}$$

$$M = \frac{EI}{R} = \frac{2\times10^5 \times \frac{120\times10^3}{12}}{10000\ mm}$$

$R = 10\ m$

$$M = 2\times10^5\ N\,mm$$

(B) Correct

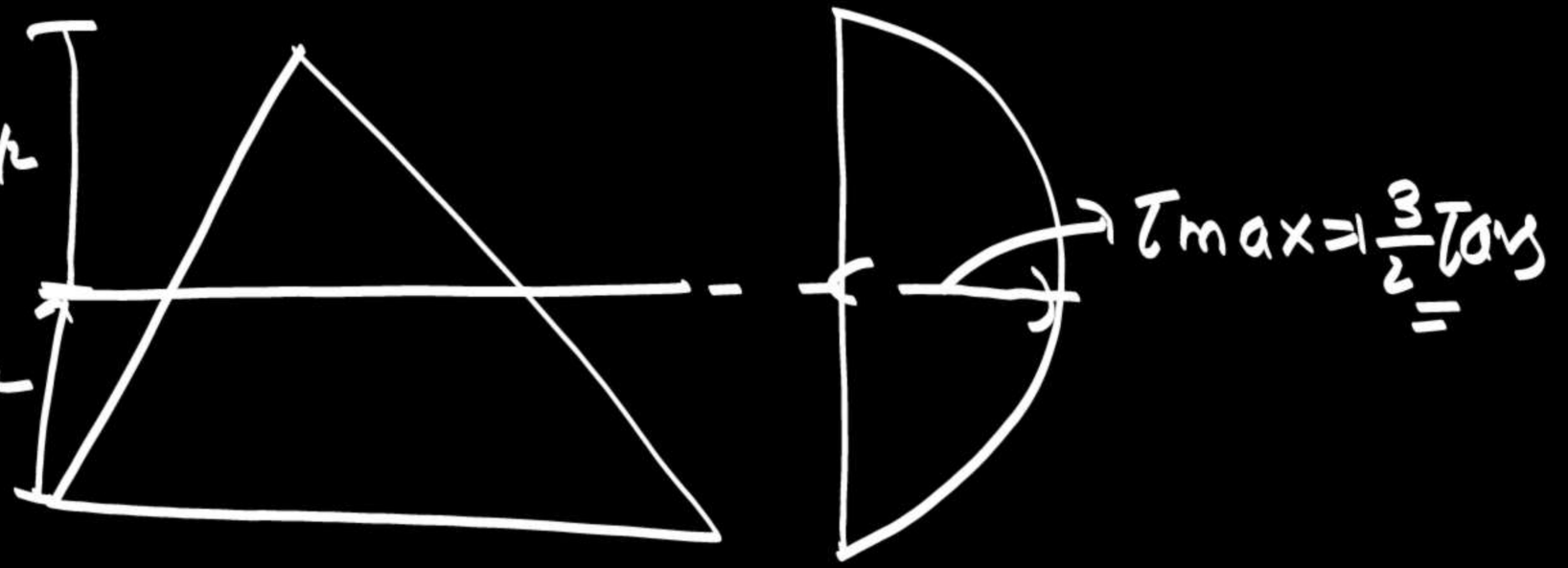
Q:) In the case of a triangular section, the shear stress is maximum at the: (DFCCIL Civil JE 10-11-2018)

A : Centre of gravity

B : Neutral axis

C : Height of h/2

D : Height of 2h/3



(C) Correct

Q:) Match List-I with List-II

SSB Himachal Pradesh 2018

List-I	List-II
P. Section modulus	1. Tension
Q. Principal plane	2. Slope
R. Fixed end	3. Shear stress
S. Middle third rule	4. Strength of section

A: P - 4, Q - 3, R - 2, S -1

B: P - 3, Q - 1, R - 4, S – 2

C: P - 4, Q - 1, R - 2, S – 3

D: P - 4, Q - 2, R - 3, S – 1

(A) Correct

Q:) The rectangular beam 'A' has length L, width b and depth d. Another beam 'B' has the same length and width but depth is double that of 'A'. The elastic strength of beam B will be:

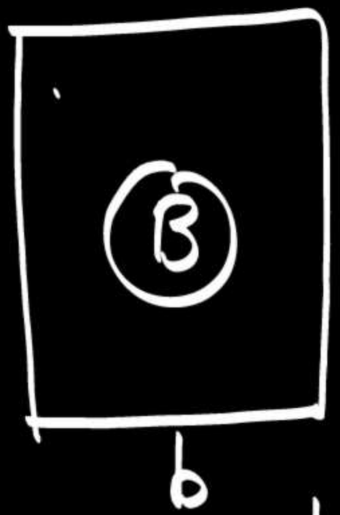
(NBCC JE 2018 (Morning Shift)

A : Same

B : Double

C : Four times

D : Six times



$Z_A = \frac{I_A}{y_A} = \frac{bd^3/12}{d/2}$

$Z_A = \frac{bd^2}{6}$

$Z_B = \frac{b(2d)^3}{12} = \frac{8bd^2}{12}$

$Z_A = \frac{1}{4} Z_B$

(C) Correct

Q:) In moment distribution method, the distribution factor at any point can be calculated by, using which of following expression; where, k is stiffness of the member, M is moment in member due to loads.
(LMRCL (ASST. MANAGER) 15.05.2018)

A : $k/\sum k$

B : $(k/\sum k) \times M$

C : $(k/M) \times \sum k$

D : $\sum k/k$

(A) Correct

Distribution Factor (D.F) = Member Stiffness / Joint Stiffness

$$D.F = \frac{K}{\Sigma K}$$

Q:) Who introduced moment area method?
(Hariyana SSC JE Shift I 09-04-2018)

A : Charles E. Greene
B : Clapeyron
C : Stanley P. Rockwell
D : Joe N. Greene

(A) Correct

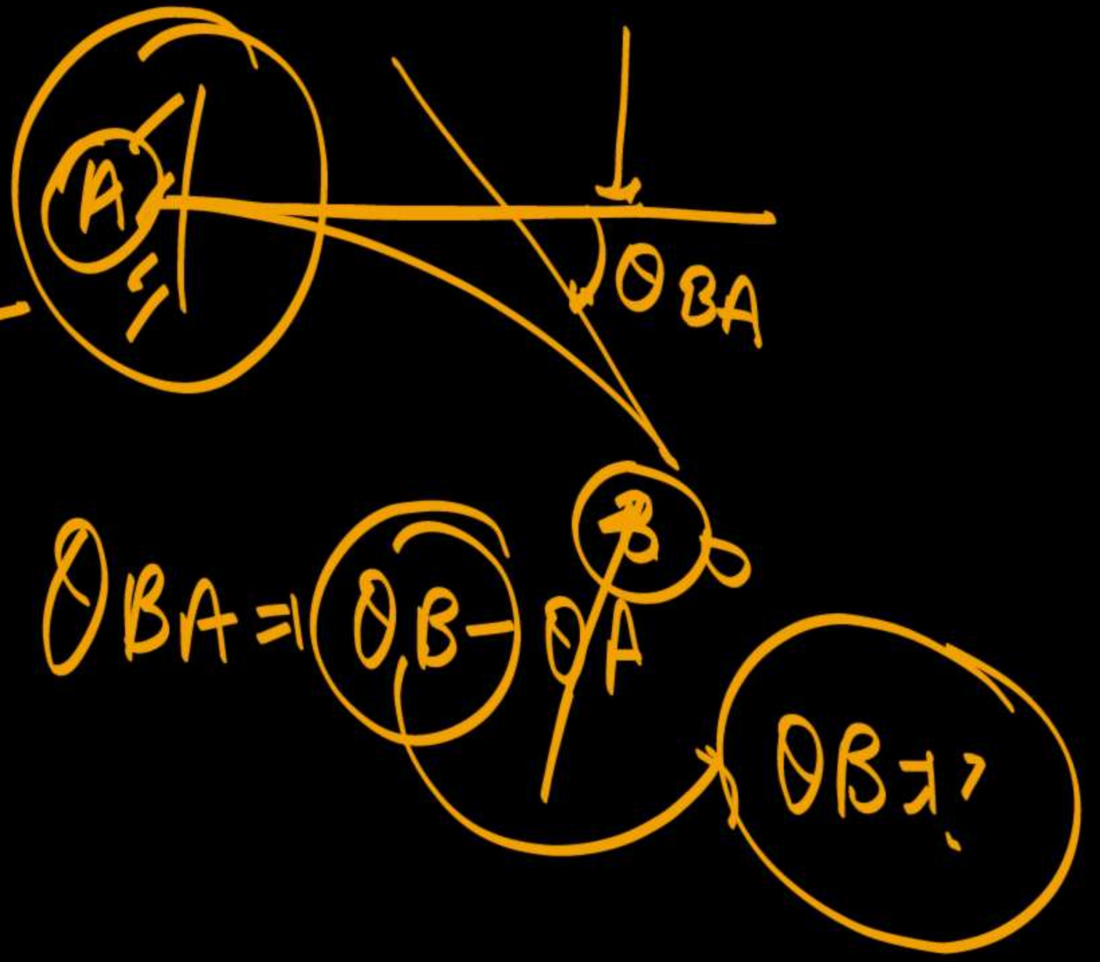
Q:) The moment area method is not suitable for which type of beams? (Hariyana SSC JE shift-I (11.04.2018)

A : Cantilever beams

B : Continuous beams

C : Simply supported beams

D : Beams fixed at both ends



Q:) What does the Mohr's circle represent?
(Hariyana SSC JE Shift-I (10.04.2018)

A : Strain on planes

B : Stresses on planes

C : Shear on planes

D : Friction on planes

(B) Correct

Q:) Which of the following concepts is the basic principle of structural design?
(RRB JE CBT-II 29-08-2019 (evening)

A : Wqually strong column-beam
B : Partial weak column-beam
C : Strong-column weak-beam
D : Weak-column strong-beam

Q:) The Euler for a column is 1000 kN and the crushing load is 1500 kN. The Rankine load for this is equal to (NBCC JE 2017, (ESE 2010)

A : 600 kN
B : 1000 kN
C : 1500 kN
D : 2500 kN

(A) Correct

Rankine load

$$\frac{1}{P_R} = \frac{1}{P_C} + \frac{1}{P_E}$$

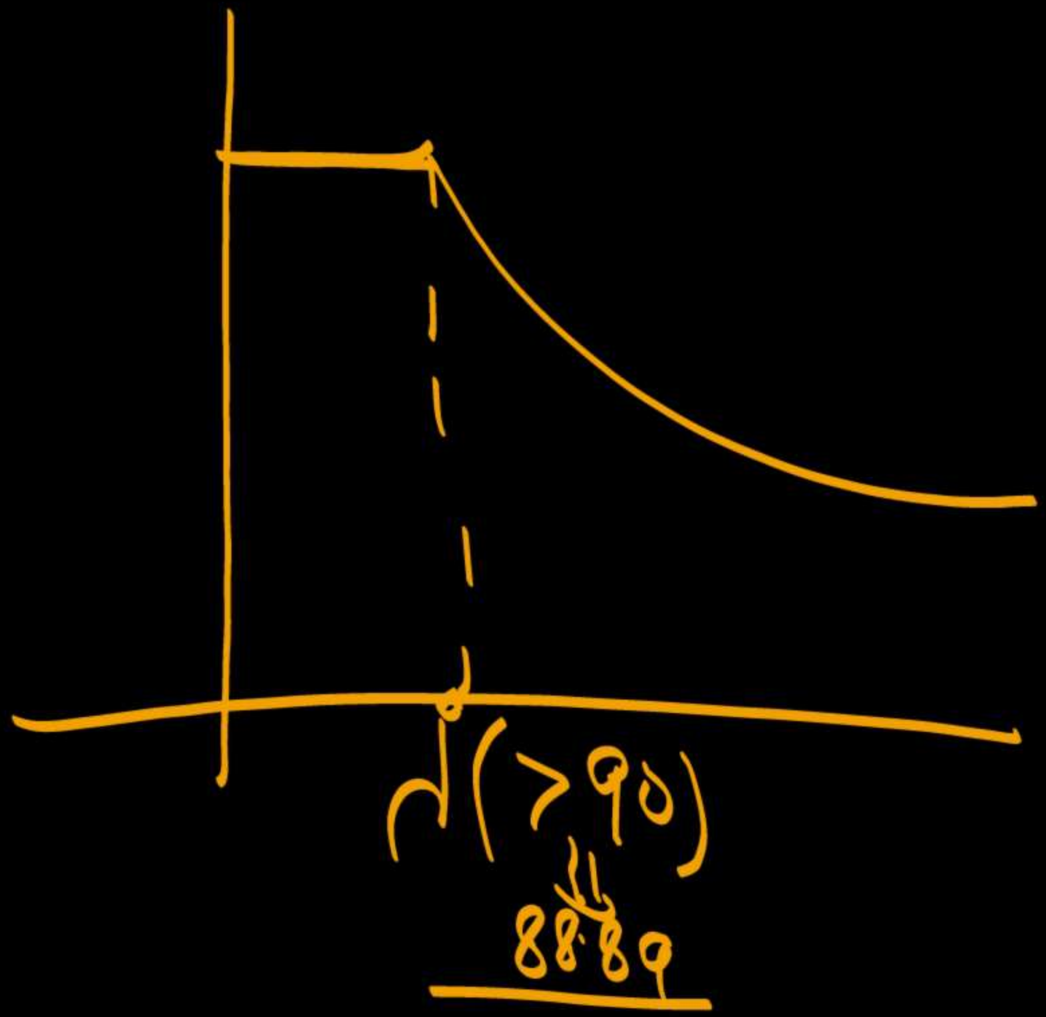
$$\frac{1}{P_R} = \frac{1}{1500} + \frac{1}{1000}$$

$$P_R = 600\ \text{kN}$$

Q:) The euler's formula for column is valid for:
(FCI 2016)

A : Zero slenderness ratio
B : Small slenderness ratio
C : Large slenderness ratio
D : None of these

© Correct



Q:) The slenderness ratio of a vertical column of square cross section 2.5 cm sides and 300 cm length is-
(UPSSSC JE 31-07-2016)

A : 200
B : 240
C : 360
D : 416

$\gamma_{min} = \sqrt{\frac{I_{min}}{Area}} = \frac{a}{2\sqrt{3}}$

$\frac{a^4}{12} \div a^2 = \frac{a^2}{12}$

(D) Correct

↳ eff. length = 300 cm

$\lambda = \frac{\text{eff}}{\gamma_{min}} = \frac{300 \times 2\sqrt{3}}{2.5}$

$\lambda = 416$

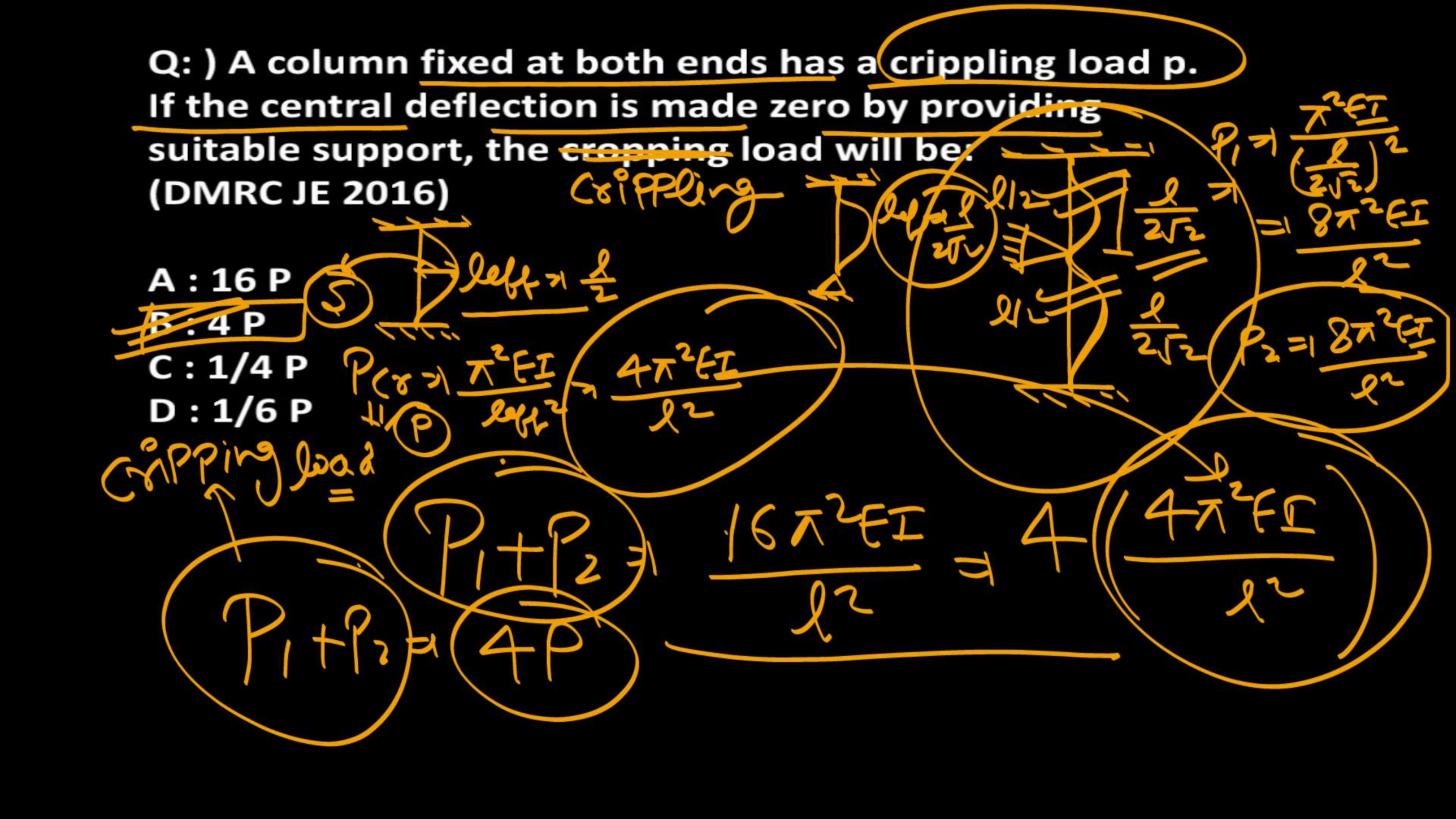
Q:) A column fixed at both ends has a crippling load p. If the central deflection is made zero by providing suitable support, the cropping load will be: (DMRC JE 2016)

A : 16 P

B : 4 P

C : 1/4 P

D : 1/6 P



Q:) Ability of a material to regain its original shape upon the remove; of the applied loads is termed as: (BSPHCL JE Civil 29.01.2019 (Batch-2)

A : Torsion

B : Shear stress

C : Moment of Inertia

D : Resilience

(D) صحیح

5min → 11:30Pm

260

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