

Question
Which of the following statement about flat slab is incorrect?
Drops are provided in flat slabs to resist _____
The design live load in direct design method shall _____
The distance of the critical section for shear from the periphery of the column or drop panel is at a distance _____
Which of the following is correct about direct design method?
Deep beams are designed for _____
Flexural members should be designed as deep beams if the ratio of clear span to the overall depth is _____
As per IS 456-2000, for a simply supported beam, if $1 \leq 2$; then lever arm z is given as _____
A continuous beam is deemed to be a deep beam when the ratio of effective span to overall depth (l/D) is less than _____
The total area of side face reinforcement, in case of deep beam should not be less than _____
Chimneys are subjected to _____
Which of the following statement about brick chimneys is incorrect?
What is the temperature below which concrete chimneys can be used without any fire brick lining?
Why the vertical steel is provided in concrete chimneys?
What is the use of horizontal steel i.e. hoop steel in chimneys?
Counter fort retaining wall provided when _____
The main function of retaining walls is _____
Semi gravity retaining wall classified into _____
Gravity type retaining wall type is suitable for retaining backfill upto _____
Which one used as deep groundwater barriers through and under dams?
If the area of steel is 1078 mm^2 and assumed dia. bar is 16mm the calculated spacing is _____
Vertical steel is provided in the wall to avoid _____
Circumferential steel is provided in wall to avoid _____ force
As per the IS provision minimum thickness of wall is _____
Coefficient of direct tension is 0.174 and height of wall is $H = 4.5 \text{ m}$ then max. Shear tensile force is _____
Yield line are _____ lines so that they may act as plastic hinges
If an edge is fixed or continuous, a yield line may form along the _____
Analysis of slab by using yield line _____ method is used
For hexagonal simply supported slab $M_u = 24.264 \text{ KNm}$ then load carrying capacity is _____ when _____
Radius of circular slab $r = 3.5 \text{ m}$, $w_u = 12 \text{ KN/m}^2$ with all edges simply supported then moment carried by _____

Answer1
Flat slab minimizes floor-to-floor heights
Bending Moment
not exceed three times the design dead load
$d/5$
End span must be shorter but not greater than interior span
Shear force only
Greater than 3
$z = 0.2 (l+2D)$
1.5
0.1% of web area
Stresses due to self weight
Brick chimneys are suitable for short as well as long heights
350°C
To resist horizontal shear
To resist horizontal shear
height of the cantilever retaining wall is more than about 7m
stabilize hillsides
Flexible retaining walls
3-5 m
Retaining wall
186 mm
Bending
Bending
200mm
401 KN
Parallel
Span
Virtual Work Method
15.845 KN/m ²
23.50 KNm

Answer2
It increases the shear strength of the slab
Shear
not exceed two times the design dead load
$d/3$
End span must be shorter and greater than interior span
Bending moment only
Greater than 4
$z = 0.2 (l + 1.5D)$
2
0.2% of web area
Stresses due to wind moment
Brick chimneys require heavy foundation
400°C
To resist vertical shear
To resist vertical shear
height of the cantilever retaining wall is more than about 7.5m
Control erosion
Cantilever retaining wall
5-8 m
Diaphragm wall
196 mm
Shear
Shear
150 mm
4010 KN
Parabolic
Support
Is Code Method
15.884KN/m^2
24.50 KNm

Answer3
It is possible to have a large span
Deflection
exceed three times the design dead load
$d/2$
End span must be equal to interior span
Both shear force and bending moment
Less than 3
$z = 0.2 (2l + 2D)$
2.5
0.3% of web area
Stresses due to temp. variation between inside and outside of chimney
Brick chimneys frequently cracks and becomes unstable
450°C
To resist bending moment due to wind
To resist bending moment due to wind
height of the cantilever retaining wall is more than about 8m
to reduce the grades of roads
B and C both
4 - 7 m
Sheet pile wall
1860 mm
Hoop
Hoop
300mm
501 kn
Straight
Edges
Moment Distribution Method
15.584 KN/m ²
25.50 KNm

Answer4	CorrectAnswer	Marks
Construction time required is less	Answer3	2
Torsion	Answer2	2
exceed two times the design dead load	Answer1	2
d	Answer3	2
None of the above	Answer1	2
Bearing	Answer2	2
Less than 4	Answer3	2
$z = 0.2 (2l + 1.5D)$	Answer1	2
3	Answer3	2
0.4% of web area	Answer2	2
All of the above	Answer4	2
They become bulky with increase in height	Answer1	2
500°C	Answer2	2
None of the above	Answer3	2
None of the above	Answer1	2
none of these	Answer1	2
all are correct	Answer1	2
All are correct	Answer4	2
Any height	Answer3	2
All are correct	Answer2	2
1960 mm	Answer1	2
Torsion	Answer1	2
Torsion	Answer3	2
250mm	Answer2	2
None of above	Answer1	2
None of the above	Answer3	2
Mid span	Answer2	2
Matrix Method	Answer1	2
15.485 KN/m ²	Answer1	2
26.50 KNm	Answer2	2