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

OP 1 : 25mm
OP 2 : 30mm
OP 3 : 35mm
OP 4 : 40mm

2 The load factor for live load and dead load are:

OP 1 : 1.8 and 2.2
OP 2 : 1.5 and 1.5
OP 3 : 1.8 and 1.8
OP 4 : 2.2 and 2.2

3 Minimum thickness of load bearing RCC wall should be:

OP 1 : 5 cm
OP 2 : 10 cm
OP 3 : 15 cm
OP 4 : 20 cm

4 For wall column and vertical faces of all the structral members, the form work is generally removed after

OP 1 : After 24 to 48 hours,
OP 2 : After 3 days
OP 3 : After 7 days
OP 4 : After 14 days

5 As per IS:456-2000, the organic content of water used for making concrete should not be more than:

OP 1 : 200 mg/L
OP 2 : 250 mg/L
OP 3 : 100 mg/L
OP 4 : 150 mg/L

6 Mild steel used in RCC structure conforms to;

OP 1 : IS : 432
OP 2 : IS : 1566
OP 3 : IS : 1786
OP 4 : IS : 2062

7 The maximum quantity of cement content needed in one m^3 of a reinforcement concrete which is exposed to sea weather conditions is (in kg).

OP 1 : 350
OP 2 : 200
OP 3 : 250
OP 4 : 300

8 According to Whitney's theory, the maximum depth of concrete stress block in a balanced RCC beam section of depth 'd' is _____.

OP 1 : 0.3 d
OP 2 : 0.43 d
OP 3 : 0.5 d
OP 4 : 0.53 d

9 The approximate allowable stress in axial compression in reinforced concrete is_____.

OP 1 : 0.25 fck
OP 2 : 0.44 fck
OP 3 : 0.33 fck
OP 4 : 0.30 fck

10 For M 15 grade concrete (1:2:4) the moment of resistance factor is

OP 1 : 0.87
OP 2 : 8.5
OP 3 : 7.5
OP 4 : 5.8

11 How does an increases in the pitch of the roof affects the amount of load that can be placed on it?

OP 1 : It increases
OP 2 : It decreases
OP 3 : Remains constant
OP 4 : Depends upon case

12 When not specified, the volume of steel in RCC work is taken as.

OP 1 : 1% to 6% of RCC volume
OP 2 : 2% to 4% of RCC volume
OP 3 : 4% to 6% of RCC volume
OP 4 : 0.6% to 1% RCC volume

13 The beam outside a wall up to floor level above it,is known as

OP 1 : Rafter
OP 2 : Lintel
OP 3 : Spandrel beam
OP 4 : None of these

14 What is the target mean strength (N/mm^2) the M 30 grade concrete, the standard deviation is 5.0?

OP 1 : 21.75
OP 2 : 30
OP 3 : 38.25
OP 4 : 40.25

15 RCC was developed and first used by:

OP 1 : Joseph Monier
OP 2 : John Smeaton
OP 3 : Francois Coignet
OP 4 : Joseph Aspdin

16 Rise of a jack arch is kept about

OP 1 : 1/2 to 1/3 of the span
OP 2 : 1/3 to 1/4 of the span
OP 3 : 1/4 to 1/8 of the span
OP 4 : 1/8 to 1/12 of the span

17 A reinforced concrete beam, supported on columns are ends, has a clear span 5m and 0.5m effective depth. It carries a total uniformly distributed load 100kN.m. The design shear force the beam is

OP 1 : 250 kN
OP 2 : 200 kN
OP 3 : 175 kN
OP 4 : 150 kN

18 Shrinkage in a concrete slab

OP 1 : Causes shear cracks
OP 2 : Causes tension cracks
OP 3 : Causes compression cracks
OP 4 : Does not cause any cracking

19 Diagonal tension reinforced is provided as

OP 1 : Longitudinal bars
OP 2 : Bent up bars
OP 3 : Helical reinforced
OP 4 : 90^O bent at the end.

20 Diagonal tension in a reinforced concrete beam:

OP 1 : Is maximum at neutral axis.
OP 2 : Decreases below neutral axis and increases above neutral axis.
OP 3 : Increase below neutral axis and decreases above neutral axis
OP 4 : Remains constant throughout the depth.

21 In RCC section of effective depth 'd', if vertical stirrups are provided to resist shear, their maximum spacing measured along the axis of the member as per IS:456-2000 should not exceed

OP 1 : 0.25 d
OP 2 : 0.50 d
OP 3 : 0.75 d
OP 4 : 1.00 d

22 In a singly reinforced beam, If the concrete is stressed to its allowable limit earlier than steel the section is said to be

OP 1 : Economical section
OP 2 : Over reinforced section
OP 3 : Balanced section
OP 4 : Under reinforced section

23 Which of the following statement is correct?

OP 1 : Shear cracks start due to high diagonal tension in case of beams with their webs and high prestressing force
OP 2 : shear design for a prestressed concrete beam is based on elastic theory
OP 3 : In the zone where bending moment is dominant and shear is insignificant, cracks occur at 20^O to 30^O
OP 4 : After diagonal cracking, the mechanics of shear transfer in a prestressed concrete member is vary much different from that in reinforced concrete members.

24 Pickup the correct statement from the following:

OP 1 : The bent up bars at a support resist the negative bending moment
OP 2 : The bent up bars at a support resist the shearing force
OP 3 : The bending of bars near support is generally 45^O degree
OP 4 : All options are correct

25 Diagonal tension in beam_____

OP 1 : Is maximum at neutral axis
OP 2 : Decreases below the neutral axis and increases above the neutral axis
OP 3 : Increase below the neutral axis and decreases above the neutral axis
OP 4 : Remains the same in both above and below the neutral axis

Which of the following is the multiplying factor for the estimation of lead for sandy tracks?

A : 1
B : 1.1
C : 1.2
D : 1.4

Grouting of the cracks is measured in_____.

A : Cubic metre
B : Metre
C : Number
D : Square metre

Calculate the quantity (cubic meter) of brick work for a room using the central line method, if the interior dimension of the room is 5m x 4m and height of the room is 3.5m.The width of the wall is 300mm and dimension of the door is 2m x 1.2m.

A : 19.2
B : 19.44
C : 20.16
D : 20.88

A building has been purchased by a person at a cost of Rs. 25000.The useful life of the building is 40 years and the srcap value of the building is Rs. 3000.Calculate the annual sinking fund(Rs.) at the rate of 5% interest.

A : 136
B : 155
C : 182
D : 207

What percentage of total cost is added in the cost of construction for contingencies?

A : 0.02
B : 0.15
C : 0.01
D : 1.55

Calculate the quantity of the cement required in cubic meter for 10 square meter of cement plaster 12mm thick using cement mortar of 1:6

A : 0.015
B : 0.0175
C : 0.0205
D : 0.325

Calculate the primary estimate including contractor's profit in rupees for the building having a plinth area of 1500 square meters and a rate Rs. 2000 per square meter.

A : 3000000
B : 3150000
C : 3300000
D : 3500000

How many bags of cement are required for 14 cubic meter of cement concrete work (1:2:4)?

A : 58
B : 70
C : 88
D : 116

What is the unit measurement of pointing?

A : Meter
B : Cubic meter
C : Kilograms
D : Square meter

Calculate the total weight (kg) of the steel bar required for a slab of 3m x 2m, if the slab is reinforced with 16mm diameter bars @ 250mm/cc in longitudinal and transverse direction.

A : 38
B : 75.85
C : 82.17
D : 113.78

The objectives of creating the sinking fund is to accumulate the sufficient money to_____.

A : Meet cost of construction and replacement after its useful life
B : Pay taxes
C : recover the cost of construction
D : Save money for future