

130/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Stainless steel is an alloy of which among the following?
(A) chromium, nickel and iron (B) manganese, copper and iron
(C) copper, carbon and iron (D) copper, tin and zinc
2. What is determined by conducting an abrasion test?
(A) aggregate crushing value (B) toughness
(C) hardness (D) soundness
3. On which of the following, the support for flat slab is provide?
(A) beams built monolithically above walls
(B) columns built monolithically with slab
(C) beams
(D) walls
4. What is the width of Broad Gauge?
(A) 1.575 m (B) 1.565 m
(C) 1.576 m (D) 1.676 m
5. Among which of the following conditions a T-beam becomes identical to a rectangular beam with width equal to that of flange?
(A) neutral axis remains within web
(B) neutral axis remains within flange
(C) neutral axis coincides with geometrical centre of beam
(D) none of these
6. Which among the following is a step used for changing the direction of a stair?
(A) flight (B) nosing
(C) landing (D) winder
7. By which of the following tests, fineness of cement can be determined?
(A) permeability test (B) soundness test
(C) vicat apparatus test (D) compression test
8. Among the following, in which type of canal, flow occurs only when there is a rise of flow in river?
(A) inundation canal (B) contour canal
(C) ridge canal (D) side slope canal

9. What is defined as the ratio of volume of air voids to the total volume of soil mass and is expressed as percentage?
- (A) void ratio (B) porosity
(C) percentage air voids (D) air content
10. What is the side slope of a Cipoletti weir?
- (A) 1 horizontal to 2 vertical (B) 2 horizontal to 1 vertical
(C) 4 horizontal to 1 vertical (D) 1 horizontal to 4 vertical
11. How the temporary hardness of water is removed?
- (A) by boiling (B) by lime soda process
(C) by zeolite process (D) by aeration
12. In which of the following types of concrete beam section, failure will occur all on a sudden?
- (A) singly reinforced beam (B) under reinforced section
(C) balanced section (D) over reinforced section
13. In which condition a doubly reinforced beam is used?
- (A) when extra safety is needed
(B) when depth and breadth of beam have to be restricted in size
(C) when large moment is expected
(D) when depth is more than 1 m
14. In a water supply scheme, for what purpose aeration is carried out?
- (A) to remove taste and odour
(B) for complete elimination of colloidal matter
(C) for killing pathogenic bacteria
(D) for coagulation
15. What is the disadvantage of centrifugal pump compared with reciprocating pump?
- (A) priming required (B) pulsatory flow
(C) low speed (D) difficult to handle viscous fluid
16. What is known as the force per unit area required to penetrate into a soil mass with a circular plunger of 50 mm diameter at a rate of 1.25 mm/minute?
- (A) bearing capacity (B) modulus of rupture
(C) CBR (D) aggregate crushing value
17. What is floor area ratio?
- (A) ratio of total floor area on all floors to plinth area
(B) ratio of plinth area to plot area
(C) ratio of ground floor area to plot area
(D) ratio of total floor area on all floors to plot area