Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Most chemically active concrete aggregate are from :
   (A) Igneous rock (B) Sedimentary rock
   (C) Metamorphic rock (D) Sand stones

2. Common sugar added to concrete :
   (A) Increases the strength of concrete (B) Retards the setting of concrete
   (C) Accelerates the setting of concrete (D) Gives colour to concrete

3. Air permeability test is done to measure :
   (A) Setting time of cement (B) Soundness of cement
   (C) Chemical composition of cement (D) Fineness of cement

4. ASCU is :
   (A) A damp proofing material for concrete (B) A preservative for timber
   (C) A type of brick bond (D) A type of building finish

5. For concrete exposed to dry conditions, the minimum curing period is :
   (A) 5 days (B) 7 days
   (C) 10 days (D) 14 days

6. A window that projects outside the external walls of a room is :
   (A) Gable window (B) Sash window
   (C) Dormer window (D) Bay window

7. A floor slab supported directly on column is called :
   (A) Ribbed slab (B) Flat slab
   (C) Flat plate (D) Grid floor

8. Service plan :
   (A) is drawn to a scale not less than that of site plan
   (B) include layout of existing water supply system
   (C) shows predominant wind direction
   (D) all the above

9. The notational colour for existing hazardous building in a site plan is :

(A) Black (B) Red

(C) Purple (D) Dark blue

10. For a rectangular foundation of width b, eccentricity of load should not exceed :

(A) b/2 (B) b/3

(C) b/5 (D) b/6

11. The projecting ornamental course at the junction of a wall and ceiling :

(A) Coping (B) Corbel

(C) Cornice (D) Parapet

12. Group B buildings are :

(A) residential (B) institutional

(C) assembly (D) educational

13. Roof trusses are generally used when the span exceeds :

(A) 3m (B) 5m

(C) 10m (D) 15m

14. In struck pointing, the face of the pointing is :

(A) flat (B) sloping outwards

(C) vertical but pressed inside (D) grooved

15. Minimum period before striking soffit formwork to slabs :

(A) 21 days (B) 7 days

(C) 3 days (D) 1 day

16. The line joining the optical centre of object glass to the centre of eye- piece of a telescope is :

(A) Line of collimation (B) Line of sight

(C) Axis of bubble tube (D) Axis of telescope

17. The line normal to the plumb line at all points :

(A) Vertical line (B) Horizontal line

(C) Datum line (D) Level line

18. The staff readings taken at stations A, B, C, D from a single setup of the level are 0.535, 1.105, 2.155, 1.785. The station B is :

(A) Below A and D
(B) Above C and D
(C) Between C and D
(D) None of the above

19. The BS is 6.655 taken on BM of RL 400.000. If FS is 1.45, RL of the last station is :

(A) 394.795
(B) 401.450
(C) 405.205
(D) 406.655

20. The horizontal angle between the true meridian and magnetic meridian is known as :

(A) Declination
(B) Dip
(C) Bearing
(D) Local attraction

21. The fore and back bearing of a line differ exactly by :

(A) 360°
(B) 180°
(C) 90°
(D) 45°

22. The angles of elevation from A to the top and bottom of a rod of length 2 m held vertically at B are 45° and 30° respectively. The horizontal distance AB is :

(A) 4.732 m
(B) 1.268 m
(C) 3.464 m
(D) 0.789 m

23. The sun is at the Autumnal Equinox on :

(A) March 21
(B) June 21
(C) September 21
(D) December 21

24. Subsidiary station established as near the true triangulation station as possible is known as :

(A) Satellite station
(B) Principal station
(C) Central station
(D) Pivot station

25. A ladder of weight W is resting against a smooth vertical wall and a smooth floor. The minimum force to be applied at the floor end to keep it in equilibrium at angle θ with floor is :

(A) $W \tan\theta$
(B) $0.5 W \tan\theta$
(C) $W \cot\theta$
(D) $0.5 W \cot\theta$

26. The centre of gravity of a right circular hollow cone of diameter d and height h lies at a vertical distance of ———— from the base.

(A) h/2
(B) h/3
(C) h/4
(D) h/6