

Date : 02-10-2022

RPSC (A.En.) Test Series - 2022

Answer + Solution

Test ID - 002

Building Construction Paper

1. (b)
Live loads on floors and roofs consists of all the loads which are temporarily placed on the structure, For example, loads of people, furniture, machines etc. Live loads keep on changing from time to time. Live loads are also called as imposed loads.
2. (c)
As per IS: 875(Part-1)-1987, the unit weight of masonry brick (burnt clay) is $1920 \text{ kg / cum.} = [1920 \text{ kg/cum.} \times 2.76 \text{ cum.}]$
3. (c)
Minimum thickness of stone wall is generally restricted to 350mm, while minimum thickness in case of brick wall is generally 100mm. Stone masonry structures are generally weak against seismic activities.
4. (b)
The butt joint is a very simple and easy and commonly used joint in ordinary stone masonry work. In this type of joint, two adjacent stones are placed in such a way that their square faces are abutted with each other.
5. (b)
BED JOINT : The horizontal layer of mortar on which a masonry unit is laid. **BED COURSE**: A narrow horizontal course of masonry, sometimes slightly projected such as window sills which are made continuous.
6. (c)
Generally the height of brick masonry construction in a day should be less than 1.5m. The maximum difference in rise of the wall between the different portions should not be more than one meter.
7. (d)
In brick masonry or stone masonry, it is provided at the expansion joint of 25M to 30M.
8. (b)
The size of the door should be of such dimension as it will facilitate the movement of the largest object likely to use the doors. In case of the residential buildings, the size of the door should not be less than $0.9 \text{ m} \times 2.0 \text{ m}$.

9. (a) As a general guide, the total window area should be less than 25 per cent of the total floor area of the house.
10. (a) In architecture, a transom is a transverse horizontal structural beam or bar, or a crosspiece separating a door from a window above it. This contrasts with a mullion, a vertical structural member.
11. (b) Vertical frame members are called 'side jambs'; the top, horizontal piece is the 'head jamb'; the bottom, horizontal piece is the 'sill'.
12. (a) **Materials widely used for damp proofing include :** Flexible materials like butyl rubber, hot bitumen (asphalt), plastic sheets, bituminous felts, sheets of lead, copper, etc. Semi-rigid materials like mastic asphalt.
13. (c)
14. (b) Thickness of cement concrete (1 : 2 : 4) for horizontal D.P.C is equal to 4 cm.
15. (a) Materials widely used for damp proofing other than concrete include: Flexible materials like butyl rubber, hot bitumen (asphalt), plastic sheets, bituminous felts, sheets of lead, copper, etc. Semi-rigid materials like mastic asphalt.
16. (c) Stairways shall have a headroom clearance of not less than 80 inches (2032 mm) measured vertically from a line connecting the edge of the nosings. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser.
17. (a) These stairs are commonly used in public buildings. In this type of stairs, the bottom flight is wider and is bifurcated into two narrower flights at the landing. The bifurcated stairs may be of two types, viz. Quarter turn and half turn.
18. (c) A horizontal platform between two successive flight of a stair is called landing. Landing is used as a resting place during use of the stair. It facilitates the change of direction of the flight.
19. (b) **Nosing :** The projected portion of a tread beyond the face of the riser is called as nosing.
20. (d) The dimension ranges from 270 mm for residential buildings and factories to 300 mm for public buildings where a large number of persons use the staircase. (b) Nosing: In some cases, the tread is projected outward to increase the space.
21. (c)
22. (c) The highest part are peak point of extrados is called crown.
23. (a) The Rise of jack arch is kept about $1/4$ to $1/8$ of span.
24. (b) For construction of multi-storey buildings, building pillars, heavy or load effective walls, boundary wall and other walls that require high strength, cement sand mortar in the ratio of 1: 4 is used.
25. (a)
26. (a)
27. (c) Main reinforcement is provided at the bottom consists 8 to 10 mm diameter bars, which are cranked up at the ends.
28. (a) Ensure the lintel is level and is bedded in mortar. The length of lintel bearings must be no less than 100mm with the manufacturers recommendations for minimum end bearing followed on all occasions.

29. (b) The highest part are peak point of extrados is called crown.
30. (d)
31. (a) Pointing consists of raking the points to a depth of 10 to 20 mm and filling them off with better quality mortar in the desired shape.
32. (a)
33. (d) **Scaffolding** : It is a safe working platform provided for the workers working at an elevation greater than 1.5 meters, and also to have limited space for storage of building materials. It is a temporary rigid structure, made of steel or bamboo.
34. (d)
35. (c) In the Grillage foundation, the distance between flanges is kept 1.5 to 2 times the width of the flange or 30 cm whichever is lesser.
36. (d)
37. (b)
38. (b) And Skewback is a inclined portion of abutment on which arch directly rest, in other words we say skewback receives the arch load to the abutment.
39. (b)
40. (a)