

KATHMANDU UNIVERSITY
End Semester Examination
July/August 2024

Level : B.E.
Year : II
Time : 2 hrs. 30mins.

02 AUG 2024

Course : ARCH 203
Semester : I
F. M. : 40

Students are encouraged to support their answers with necessary figures, illustration and drawings.

SECTION "B"

[10Q. × 2 = 20 marks]

Attempt *ANY TEN* questions.

1. Rat trap bond
2. Pointed Arch
3. Hollow clay tile masonry
4. Sheet Piling
5. Deep Foundation
6. DPC treatment of floors
7. Methods for Improving Bearing Capacity of Soil
8. Cavity Wall
9. Parts of the Floor Structure
10. Supervision of Stone Masonry Construction
11. Function of Foundation

SECTION "C"

[4Q. × 5 = 20 marks]

Attempt *ALL* questions.

12. What is brick bonding? What are the precautions and the procedure used in constructing a one-brick thick wall in Flemish bond? Provide relevant sketches to illustrate the construction process.
13. What is Damp Proof Course (DPC) in construction, and how does it function to prevent moisture penetration in buildings? Discuss the types, materials used, installation methods, and common issues associated with DPC.
14. Explain with sketches how cavity walls provided better sound insulation compared to solid walls. What factors contribute to this improved performance?

P.T.O.

15. Why soil exploration is important before any construction work? Explain the methods of soil exploration.

OR

What are the various steps to be followed for the site works and setting out? Describe briefly the process of setting out for a residential building.

10. _____ tool is commonly used for spreading mortar in brick masonry.
a. Chisel b. Trowel c. Hammer d. Level
11. Which component in cavity walls helps to tie the walls together and provides stability?
a. Dowel rods b. Grout c. Wall ties d. Steel reinforcement
12. The type of excavation performed to create space for foundations or basements below ground level is called _____.
a. Trench excavation b. Shallow excavation
c. Slope excavation d. Surface excavation
13. What is the main function of the foundation in a building?
a. To provide insulation b. To support the roof
c. To bear the load of the building d. To enhance the aesthetics appeal
14. Which of the following is used as a reference point for setting out?
a. Center of the building b. Roof ridge
c. Basement floor d. Corner of the building
15. What is the primary objective of soil investigation before construction?
a. To estimate project cost
b. To determine soil texture
c. To assess soil stability and bearing capacity
d. To calculate construction timeline
16. The type of timbering support used to resist lateral pressure from the soil against the excavation wall is called _____.
a. Rakers b. Sockets c. Walers d. Struts
17. In composite masonry, which material is often used for the exterior face for aesthetic appeal?
a. Concrete blocks b. Bricks c. Stone d. Timber
18. Where DPC is typically installed in a building?
a. On the roof
b. Underneath the flooring
c. Within the walls
d. Between the foundation and superstructure
19. A _____ is the lower horizontal surface of any space in a building, including finishes that are laid as part of the permanent construction.
a. Staircase b. Window c. Floor d. Wall
20. _____ is projecting course at the upper part of a pier or abutment.
a. Impost b. Rise c. Voussoir d. Skewback