

KATHMANDU UNIVERSITY  
End Semester Examination  
February, 2025

Marks Scored:

Level : B.Arch.  
Year : II

Course : ARCH 215  
Semester : II

Exam Roll No. : \_\_\_\_\_ Time: 30 mins.

F. M. : 10

Registration No.: \_\_\_\_\_

Date : ~~24~~ FEB 2025  
23

SECTION "A"

[20 Q. × 0.5 = 10 marks]

**Choose and encircle the most appropriate option from each set of choices**

1. "Wane" is a defect in wood caused due  
a. Seasoning      b. Conversion      c. Abnormal Growth      d. Fungus
2. Which of the following statement is not true for heartwood?  
a. It lies in the innermost central portion  
b. It is dark in colour  
c. It imparts rigidity  
d. It provides strong, compact and durable timber
3. Thin sheet of wood is known as :  
a. Particle board      b. Plywood      c. Vaneer      d. Block board
4. Which of the following metals is most commonly used in the construction of structural beams and columns?  
a. Copper      b. Aluminium      c. Steel      d. Tin
5. Which of the following is not a heat treatment carried out in metals?  
a. Galvanizing      b. Annealing      c. Tempering      d. Quenching
6. The corrosion resistance in Stainless steel is due to presence of:  
a. Iron      b. Chromium      c. Nickel      d. Zinc
7. Which of the following is an advantage of using water-based paints over oil-based paints?  
a. Water based paints take longer to dry  
b. Water based paints have less odor and are easier to clean  
c. Water based paints are more durable  
d. Water based paints provide better finish
8. Varnish differs from paint primarily in its lack of which component?  
a. Pigment      b. Solvent      c. Binder      d. Additives
9. What is the primary function of an insulator in construction?  
a. To conduct electricity  
b. To provide structural support  
c. To resist the flow of electricity, heat or sound  
d. To enhance the thermal conductivity

10. Which of the following is not a major factor affecting the effectiveness of thermal insulation in buildings?
  - a. Thickness of the insulation material
  - b. Density of the material
  - c. Surface area of the insulated material
  - d. Magnetic property of the material
  
11. What is the worst enemy of rammed earth technology
  - a. moisture
  - b. insects
  - c. sunlight
  - d. wind
  
12. The term "hollow block" refers to which of the following?
  - a. Blocks with hollow cores to reduce weight and material use
  - b. Blocks made from pure concrete
  - c. Solid blocks with high strength
  - d. Blocks used only for boundary walls
  
13. What is the typical thickness range of Ferro cement structures?
  - a. 5-10mm
  - b. 10-60mm
  - c. 60-100mm
  - d. 100-150mm
  
14. Stone is a bad fire resisting material because
  - a. It is non-combustible
  - b. It is bad conductor of heat
  - c. It disintegrate into pieces when heated
  - d. It melts
  
15. Which method is used to prevent cracking in the plaster?
  - a. Adding Plasticizers
  - b. Spraying water on the surface
  - c. Applying paint immediately
  - d. Using coarse sand
  
16. Which type of plaster is preferred for exterior surfaces?
  - a. Lime Plaster
  - b. Gypsum Plaster
  - c. Mud Plaster
  - d. Cement Plaster
  
17. What is the main advantage of using gypsum board for interior finishes?
  - a. High moisture resistance
  - b. High Cost
  - c. Fire resistance and ease of installation
  - d. Heavy Weight
  
18. Which type of wall cladding is typically used for high -rise buildings due to its light weight and weather resistant properties?
  - a. Stone cladding
  - b. Brick cladding
  - c. Aluminium composite panels (ACP)
  - d. Marble cladding
  
19. Which of the following is **not** an advantage of linoleum flooring?
  - a. Biodegradable
  - b. Water resistant
  - c. Fire resistant
  - d. Low maintenance
  
20. Which characteristic best describes self-finish materials?
  - a. They require extensive surface treatment.
  - b. They are often left untreated showcasing the natural texture.
  - c. They require additional coatings for protection.
  - d. They are only used in exterior applications.

KATHMANDU UNIVERSITY  
End Semester Examination  
February, 2025

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

23  
24 FEB 2025

Course : ARCH 215  
Semester : II  
F. M. : 40

*Candidates are required to give their answers in their own works as far as practicable. Assume suitable data if required. Clarify your answer with the help of figures as per need.*

SECTION "B"

*Attempt ALL questions.*

1. How can timber be treated? List all the treatment process and explain any one. What is electrical seasoning of timber? Explain defect in timber due to insects? [1.5+1+1.5=4]
2. Explain pig Iron extraction process with diagram. What is smelting? [3+1=4]
3. Compare and contrast the properties and uses of Aluminum and steel in architecture. [2+2=4]
4. What is paint? Explain the components of paint and their functions. [1+3=4]
5. What are the types of thermal insulating materials commonly used. What material options are available in market for sound insulation in buildings? [3+1=4]
6. Describe the key steps involved in building a rammed earth wall. What is stabilized soil? List out some of the advantages of hollow blocks. [2+1+1=4]
7. Explain the manufacturing process of glass. Use illustrations where necessary. What is fire load? [3+1=4]
8. List the tools used for plastering. What are the advantages and disadvantages of using lime plaster in contemporary architecture? Show different types of pointing through illustrations. [1+2+1=4]
9. Explain stepwise how are tiles installed? What are the factors that influence the selection of wall finishes in exterior application? What are the advantages of having brick flooring (list any four)? [1.5+1.5+1=4]
10. Write Short notes (*ANY TWO*)
  - a. Glass
  - b. Eco friendly Building material
  - c. Plywood

