

KATHMANDU UNIVERSITY  
End Semester Examination  
January/February 2024

Marks Scored:

Level : B.Arch.  
Year : II

23 JAN 2024

Course : ARCH 215  
Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date :

SECTION "A"

[20Q. × 0.5 = 10 marks]

Choose and encircle the most appropriate answer.

1. Which of the following is defect in timber due to seasoning?  
a. Callus                      b. Rind Galls                      c. Knots                      d. Twist
2. Timber with \_\_\_\_\_ annular rings are generally the strongest.  
a. Narrow                      b. Wide                      c. Distinct                      d. Indistinct
3. Which part of timber imparts rigidity to the tree?  
a. Pith                      b. Heartwood                      c. Medullary Rings                      d. Bark
4. Which of the following is **NOT** the property of cast iron?  
a. Cast Iron is not ductile                      b. Cast iron is hard but brittle  
c. Cast Iron can be magnetised                      d. Cast iron does not rust readily
5. Which metal is used during the process of galvanization?  
a. Zinc                      b. Chromium                      c. Nickel                      d. Aluminium
6. The corrosion resistance in Stainless steel is due to presence of \_\_\_\_\_.  
a. Iron                      b. Chromium                      c. Nickel                      d. Zinc
7. \_\_\_\_\_ consists of white cement, pigment, accelerator and other additives.  
a. Colloidal paint                      b. Emulsion Paint                      c. Cement Paint                      d. Enamel Paint
8. Varnish is a nearly homogeneous solution of \_\_\_\_\_ in oil, alcohol or turpentine oil.  
a. Pigment                      b. Resin                      c. Base                      d. Adulterant
9. Which of the following types of Wall is constructed for both thermal and Sound insulation?  
a. Curtain Wall                      b. Cavity Wall                      c. Partition Wall                      d. Glass Partition
10. Which of the following is not an example of loose fill insulating material?  
a. rock wool                      b. Gypsum board                      c. slag wool                      d. cellulose fibre wood
11. Which of the following remark is not true for **hollow concrete blocks**?  
a. They are lightweight                      b. They are completely energy-efficient  
c. They are cost effective                      d. They have excellent load bearing capacity
12. All of the products mentioned below are commonly used as soil stabilizer **EXCEPT** \_\_\_\_  
a. Cement                      b. Lime  
c. Lime based product                      d. Water

13. A variety of laminated glass which is made by pressing together several layers of glass and vinyl resins in alternate manner is \_\_\_\_\_
- a. Wired Glass
  - b. Bullet proof glass
  - c. Borosilicate glass
  - d. Glass Fibre
14. Which of the following is the most preferred material while considering fire resistivity?
- a. Brick
  - b. Steel
  - c. Glass
  - d. Timber
15. Why are floating rule used during plastering?
- a. To apply mortar in corners
  - b. To spread mortar on surface
  - c. To assure that the plaster is truly vertical
  - d. To check the level of the plastered surface between the successive screeds
16. During Plastering, the rendered coat is \_\_\_\_\_
- a. First Coat
  - b. Second Coat
  - c. Last Coat
  - d. Floating Coat
17. Which of the following is **NOT** a self-finishing?
- a. Stone Finish
  - b. Brick Finish
  - c. Wood Finish
  - d. Plastered Finish
18. Which of the following is not among the advantages of dry finish over wet finish is that?
- a. no shrinkage will occur during the dry out process.
  - b. They are uniform in color, size and be true to shape.
  - c. They are always cost effective
  - d. The application of dry finishes does not prevent occupancy of the building.
19. \_\_\_\_\_ flooring material is a mixture of linseed oil, gums and resins, pigments, wood flour, cork dust and other filling materials.
- a. Linoleum
  - b. Plastic
  - c. Moorum
  - d. Magnesite
20. Which of the following flooring is most suitable for kids play are?
- a. Concrete Flooring
  - b. Brick Flooring
  - c. Rubber flooring
  - d. Flagstone flooring

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Time : 2 hrs. 30 mins.

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

SECTION "B"  
[10Q × 4 = 40 marks]

Attempt *ALL* questions. Assume suitable data if required.

1. What are the characteristics of good timber? What is natural seasoning of timber? Explain with diagram. How do we preserve timber from fungus? [1+2+1]
2. What are the factors affecting the properties of steel? What is corrosion and how can we prevent it? [2+1+1]
3. Explain any two types of reinforcing steel bars. Explain tensile strength testing of metal using stress-strain curve? [2+2]
4. What is paint? Why is painting done? What are the characteristics of ideal paint? [1+1+2]
5. How do we impart sound insulation in a room located in third floor of a six storey building located next to highway? What are the thermal insulating materials popularly used. [2+2=4]
6. Describe how rammed earth construction is carried out. Support your answer with sketches. What are the materials used for manufacturing hollow blocks. List out some of the applications of hollow blocks. [2+1+1]
7. What are the ideal characteristics of fire resisting materials? What are the materials required in ferro cement construction? Explain the techniques adopted in ferro cement construction.
8. What are the defects observed on a plastered surface? What are the difference between plastering and pointing? [2+2]
9. Why are Wall finishes done? What are the factors to be considered while selecting the wall finishes? What are the different types of cement plastered finishes done on walls? [1+1+2]
10. Write Short notes on *ANT TWO*. [2+2]
  - a. Glass
  - b. Tiles
  - c. Eco Panels

