

13. The type of glass to make laboratory equipment's and cooking utensils is
- Soda lime glass
 - Lead glass
 - Boro-silicate glass
 - Wired glass
14. Which of the following is incorrect statement as per Indian Standard?
- Generally, lime plaster is applied in three coat while cement plaster is applied in two coats
 - For stone work background number of coat of plaster in general is 1 or 2
 - For brick work number of coat of plaster in general may be 1 or 2 or 3
 - For concrete cast in situ number of coat of plaster in general is 2 or 1
15. For mud flooring, chopped straw is mixed in the moist earth for the purpose of
- In order to prevent cracking due to drying
 - In order to make thermal insulation
 - In order to insure easy in construction
 - In order to prevent decay due to fungal and other agencies
16. Terrazzo is a specially prepared concrete surface containing cement (white or grey) and marble chips (of different colors) in proportion to
- 1:1 to 1:2
 - 1.25: 1 to 2:1
 - 1:1.25 to 1:2
 - 1:2 to 1:3
17. Which of the following statement is **INCORRECT**?
- IS 2185-Part III-1984, is related to AAC blocks
 - Autoclaving of AAC Blocks is done for 14 to 18 hours
 - Temperature and Pressure for autoclaving of AAC Blocks is in the range of 185 degree centigrade and 700 kPa.
 - AAC Blocks are classified into three grade based on the compressive strength
18. Which is the incorrect statement for Rammed Earth as per Indian Standard
- Rammed earth is also known as 'pise' or 'Tapial'
 - The moisture content is kept more so that its density is more than optimum moisture content
 - The soil should be kept in layer about 100 mm
 - Small amount of straw in the ratio of not more than one fourth of the volume of soil water mixture may be used in the soil for fissure control
19. The incorrect statement is
- Stone is bad fire resisting material as it gets disintegrated into small pieces when heated and suddenly cooled
 - During exposure of fire, timber surface gets charred, this charred portion acts as protective coating to the inner portion
 - Cast iron and wrought iron rarely used in fire resistant building unless suitably covered by bricks, concrete etc.
 - RCC structures can withstand fire lasting for several hours with a temperature of 2000 degree centigrade without serious damage
20. A hollow unit i.e. hollow concrete block is defined as that unit which has core-void area greater than% of the gross area
- 15%
 - 25%
 - 35%
 - 45%

KATHMANDU UNIVERSITY
End Semester Examination
May/June, 2022

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

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

SECTION "B"

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

Attempt ALL questions.

1. Write the objective of preservations and requirement of preservative of timber? Explain briefly with neat sketch about **Boucherie** process of treatment. [2+2]
2. Differentiate between mild Steel rods and HYSD Bars? Shortly explain (extraction, properties and application) of copper as building material. [2+2]
3. Briefly explain about Quenching and annealing as heat treatment process? Explain with neat figure the detail procedure for the determination of tensile strength of steel experimentally (assume some arbitrary test data for the clarification as an example). [1+3]
4. Name and describe the properties of. [1+1+1+1]
 - i. Base
 - ii. Driers
 - iii. Thinners
 - iv. Adulterants
5. What are the factors to be considered while selecting type of plaster? As per Indian Standard, state the number of coats to be provided in different backgrounds? Explain briefly the methods/procedure of 2-coat cement plastering. [1+1+2]
6. Shortly Write about Ferro Cement as building material. List out major raw material for Glass and briefly explain types of glass with its use. [1+1+2]
7. What are the ideal requirement of the thermal insulating materials? List out the different thermal and sound insulating materials and briefly explain about methods of insulation of exposed wall. [1+2+1]
8. On which aspect AAC blocks are environment friendly building units than others. List out the ingredients and state advantage and disadvantages of AAC blocks. Furthermore, explain shortly about autoclaving procedure. [1+1+1+1+1]
9. Explain shortly about brick and flag stone flooring (material and procedure). [3]
10. Write short notes (*ANY TWO*) [2Q × 2 = 4]
 - i. Recent trend in building material in Nepal after 2015 Gorkha Earthquake.
 - ii. Creativeness in wall finishing material.
 - iii. Earth as building construction material and soil stabilization.

