

KATHMANDU UNIVERSITY  
End Semester Examination  
July, 2024

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

Course : ARCH 425  
Semester : II  
F. M. : 40

7 6 JUL 2024  
SECTION "B"

[ 5 Q × 4 = 20 marks]

Attempt *ALL* questions.

1. How should documentation records be kept and identified?

OR

What are the six phases of the built heritage conservation process as defined by the practitioners?

2. Briefly describe Internal Orientation in Photogrammetry.

3. What is the objective and the concept of collinearity equation? Explain with suitable diagram.

OR

What are the unknowns of collinearity equations? Mention them.

4. What is Orthophoto? Are every photo clicked by a cameraman is an Orthophoto? How is it significant for an Architect person?

5. Why is the documentation process done digitally for heritage? In the process of documentation, why is the role of a conservation architect more prominent over other profession?

SECTION "C"

[ 2 Q × 10 = 20 marks]

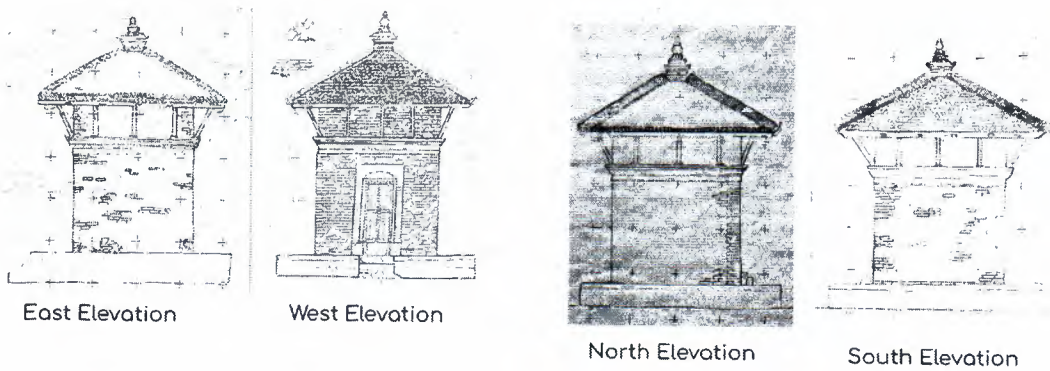
Attempt *ALL* questions.

6. What is Photogrammetry used for and how does it work? What Photos can you use for Photogrammetry and what can we scan using Photogrammetry? What is the best overlap for Photogrammetry and how do you define high quality images? What are the methods of judging depth in stereo photogrammetry? What is the strategy to place control point in photogrammetry? What happen if we do not have control point in structure from Motion (Agisoft Metashape software)? [2+1+2+2+2+1]

P.T.O.

7. Suppose If we have a small hand-held stupa and we want to create 3d Model of it using some Photogrammetric software. can we rotate the stupa fixing the camera during image acquisition process? How should we acquire image for 3d reconstruction? Please explain with reference to the practical session work at Kumbheswar in Lalitpur. Please describe the full process of implementing with the approach structure from Motion (SfM) approach for building's 3D reconstruction. How it's by-product are useful to interpretation of any vulnerable structure which has heritage importance from the past. How the modern software like Agisoft Metashape and traditional handmade drawings can together be fuse together for making the record of those kinds of structures. [1+2+2+3+2]

OR



The context of digital building survey is different in urban and rural. What are the selection and implementation of measurement method in two different cities of Nepal, for example in rural context of Dolpo and in the urban context of Kathmandu like in Kumbheswar. What are the different objections, obligations and objectives in two context? Explain briefly. [4+2+2+2]