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## PART B1-CIVIL ENGINEERING STUDENTS

### Question 1

- (A) Given a project area of a proposed dam construction for which mapping by aerial photogrammetry is required for feasibility study and preliminary design at a photo scale of 1:30,000 using a 150mm camera focal length and camera format of 230mm (15/23), calculate the following;

- The airbase and photo base
- Flying height
- Distance between strips (runs)

Given that end and side overlaps are 60% and 20% respectively.

(10)

- (B) -Define stereoscopic perception as used in photogrammetric observations  
-Describe the principle <sup>of</sup> height measurements by using a parallax bar

(5)

- (C) Briefly describe the use of remote sensing in the following civil engineering applications [motivate your answer].

(10)

- highway planning (feasibility study)
  - water resources investigations
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