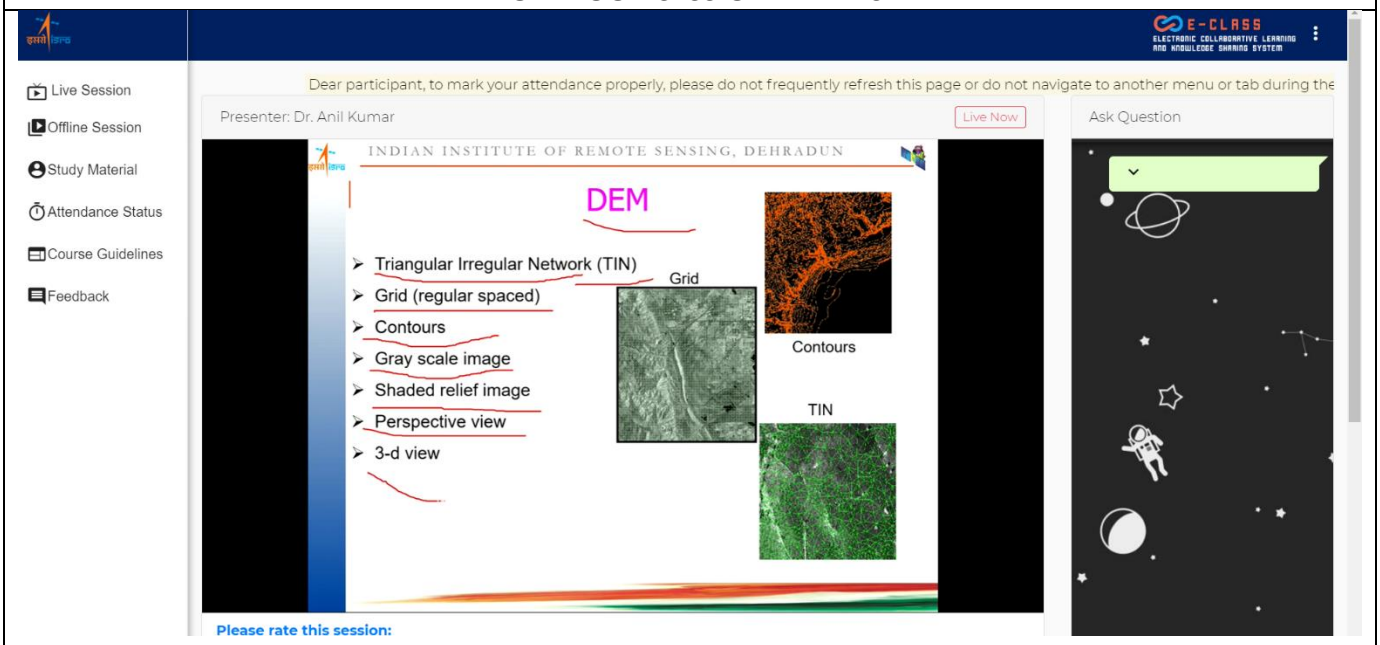
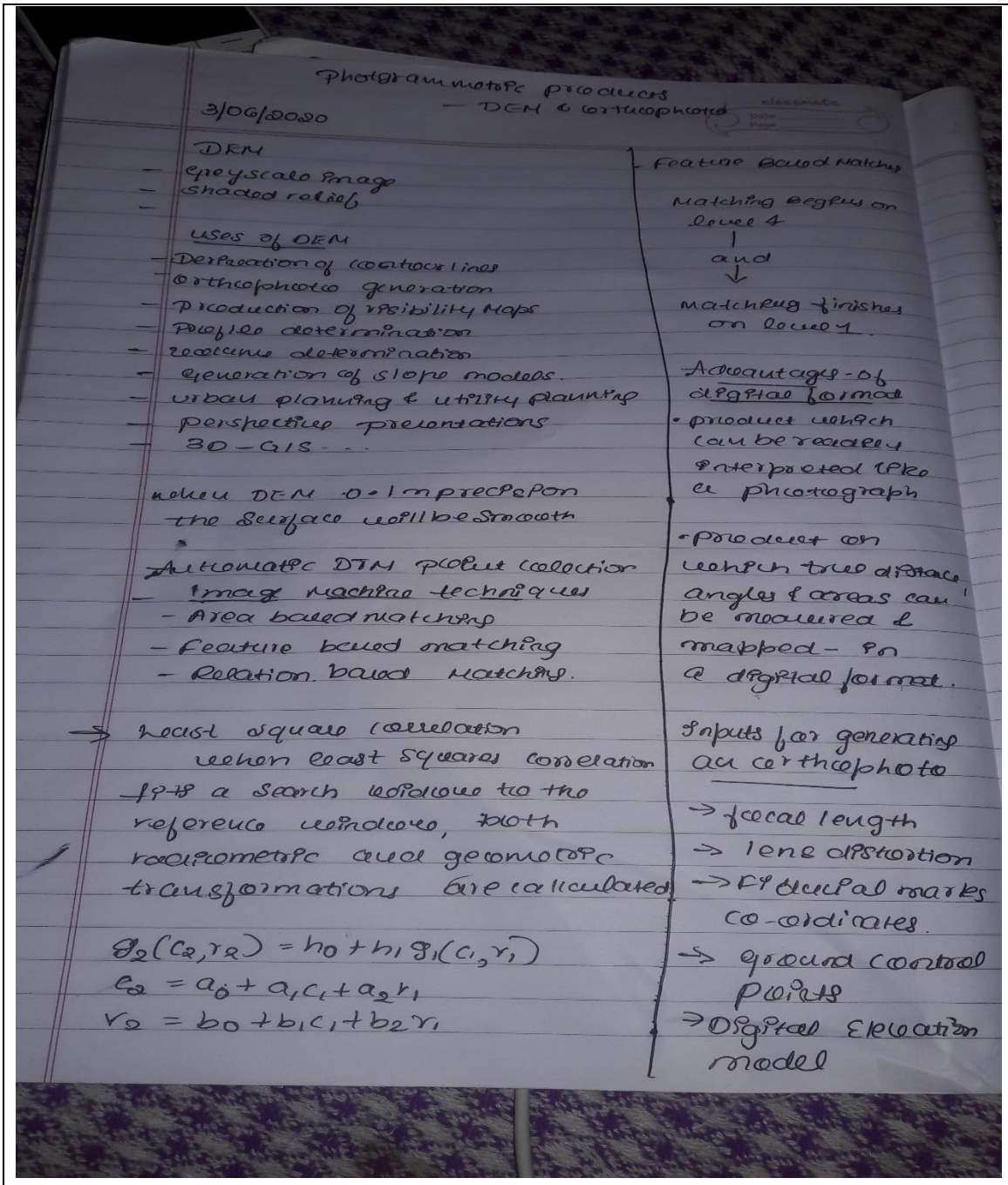
DAILY ASSESSMENT FORMAT

Date:	**03-07-2020**	**Name:**	**BINDUSHRI**
Course:	**Satellite photogrammetry and its application**	**USN:**	**4AL17EC011**
Topic:	**Photogrammetric products DEM & Orthophoto**		**6th A**
Github Repository:	**Bindushri**		

FORENOON SESSION DETAILS





Photogrammetric products
— DEM & orthophoto
3/06/2020

DEM
- greyscale image
- shaded relief
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Uses of DEM
- Derivation of contour lines
- Orthophoto generation
- Production of visibility maps
- Profile determination
- volume determination
- Generation of slope models.
- urban planning & utility planning
- perspective presentations
- 3D-GIS ...

When DEM of impression the surface will be smooth

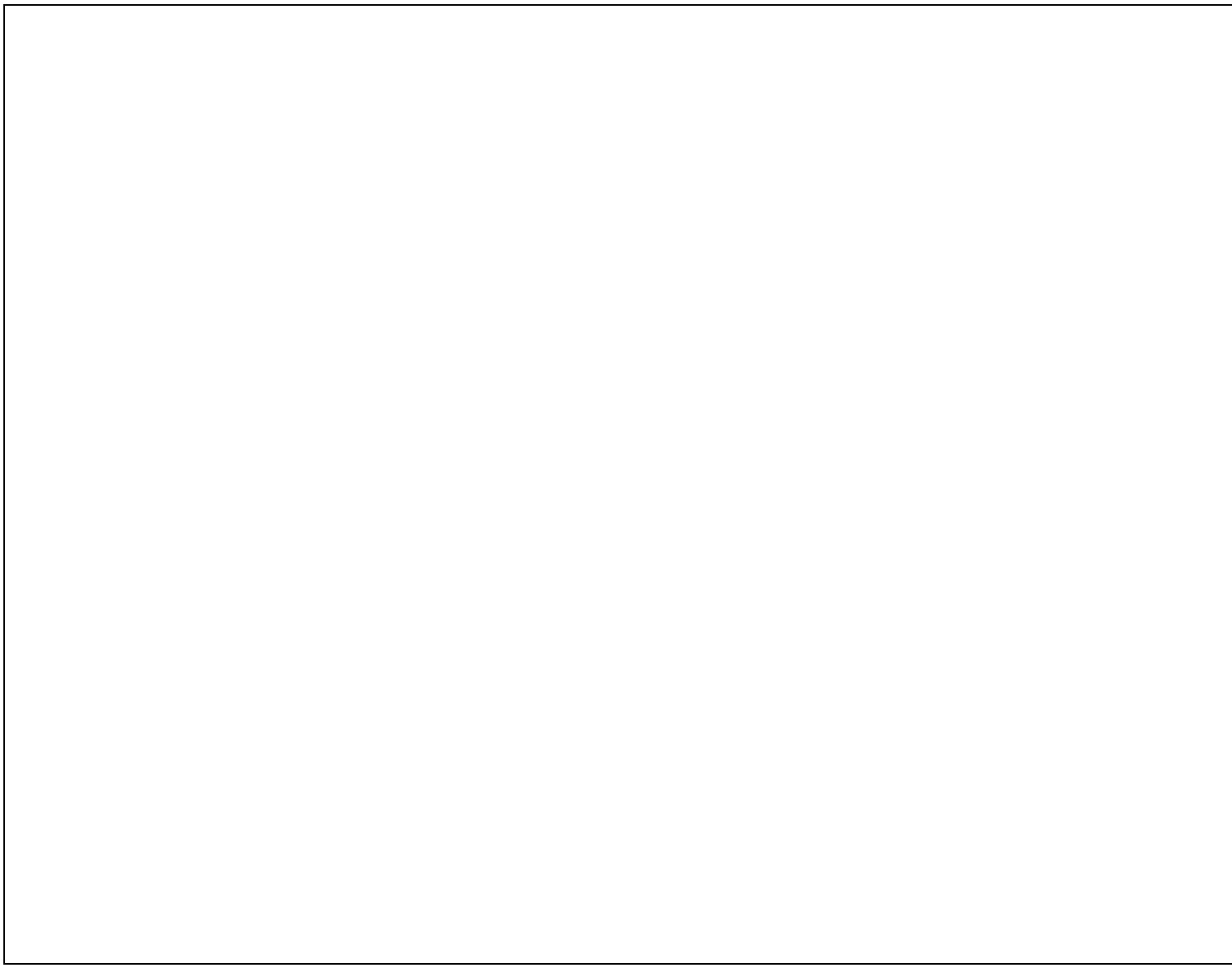
Automatic DTM point collection
- Image matching techniques
  - Area based matching
  - Feature based matching
  - Relation based matching.

→ least square correlation
when least squares correlation is a search window to the reference window, both radiometric and geometric transformations are calculated

$$g_2(c_2, r_2) = h_0 + h_1 g_1(c_1, r_1)$$
$$c_2 = a_0 + a_1 c_1 + a_2 r_1$$
$$r_2 = b_0 + b_1 c_1 + b_2 r_1$$

Feature based matching

Matching begins on level 4
↓
and
↓
Matching finishes on level 1.

Advantages of digital format
- product which can be readily interpreted like a photograph
- Product on which true distance, angles & areas can be measured & mapped - on a digital format.

Inputs for generating an orthophoto
→ focal length
→ lens distortion
→ Fiducial marks co-ordinates.
→ ground control points
→ Digital Elevation model