Class Test No. 1   **Sub: Surveying**   **Date: 29/01/16**   **Time: One Hour**   **Max.Marks: 15**
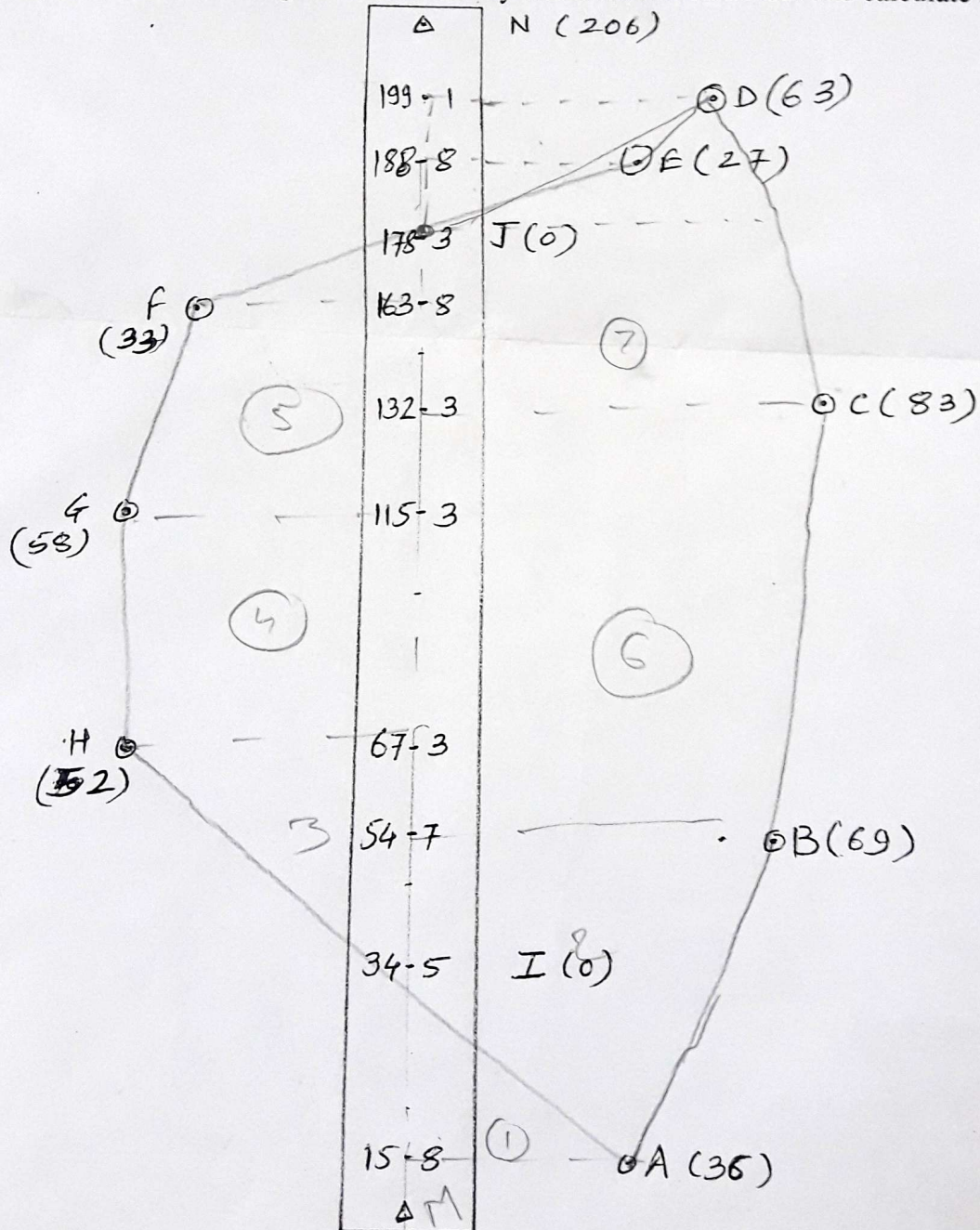
Q No.1: (a) Explain each in detail the principles of surveying. (03) Define the terms Swing and oblique Offsets with the help of sketches. (02)

OR

Explain the necessity of reference sketches. (1) State the different points to be considered While making entry in field book along with the sketch of field book page showing details of objects.(4)

(b) Draw the sectional view of Prismatic compass and show the different components along with their functions. (05)

(c) Plot the following cross staff survey of a field ABCDEFGH and calculate its area. (05)

FIG - (1)

(All dimensions are in m)

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C.T. No: 01   **Sub: Surveying (CEU403)**   **Date: 23/01/18**   **Time: 1 hr.**   **Max. Marks: 15**

Q. No. 1: Solve

a) Explain in brief topographical survey and cadastral survey. **(03)**

b) On an old map a line was drawn to a magnetic bearing of 310°30', when the declination was 3°00'W. Find the present bearing of the line, if the declination is 4°15'E. **(02)**

Q.No.2: a) Explain with help of neat sketches the indirect method of chaining on sloping ground **(05)**
   i) By measuring the slope with clinometer.
   ii) By knowing the difference of level between the points.

OR

b) What are isogonic and agonic lines explain in brief with neat sketch. What is mean by local attraction. **(05)**

Q.No.3 A 20 m steel tape was standardized on flat ground, at a temperature of 20°C and under a pull of 15kg. The tape was used in catenary at a temperature of 30°C and under a pull of P kg. The cross sectional area of the tape is 0.22 cm² and its total weight is 400 gm. The young's modulus and coefficient of linear expansion of steel are 2.1 x 106 kg/cm² and 11 x 10-6 per °C respectively. Find the correct horizontal distance if P is equal to 10 kg. **(05)**