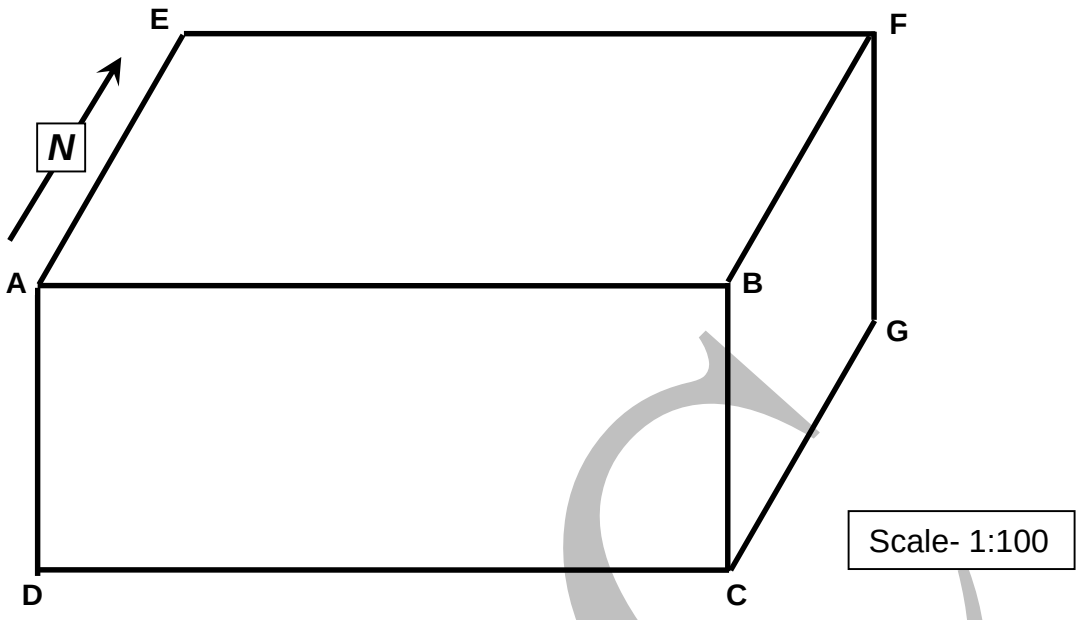
BLOCK DIAGRAMS OF HOMOCLINAL BEDS



Problem – HSB-1 / JDC 2016

All the lengths and angles measured on the face ABCD are undistorted. Lengths measured parallel to AE are also undistorted.

A homoclinal sequence comprising sandstone, shale, marl and limestone in ascending order and having an attitude 040/35SE is cross-cut by a vertical dyke trending 120. The true thicknesses of shale, marl and dyke are 3m, 2m and 3m respectively. The sandstone-shale contact is exposed at B, and the NE boundary of the dyke is exposed at D.

1. Show all the rock units in the block diagram, using appropriate symbols.
2. Draw the plan view.
3. Measure the vertical thickness, horizontal thickness and width of outcrop of the rock units wherever possible.

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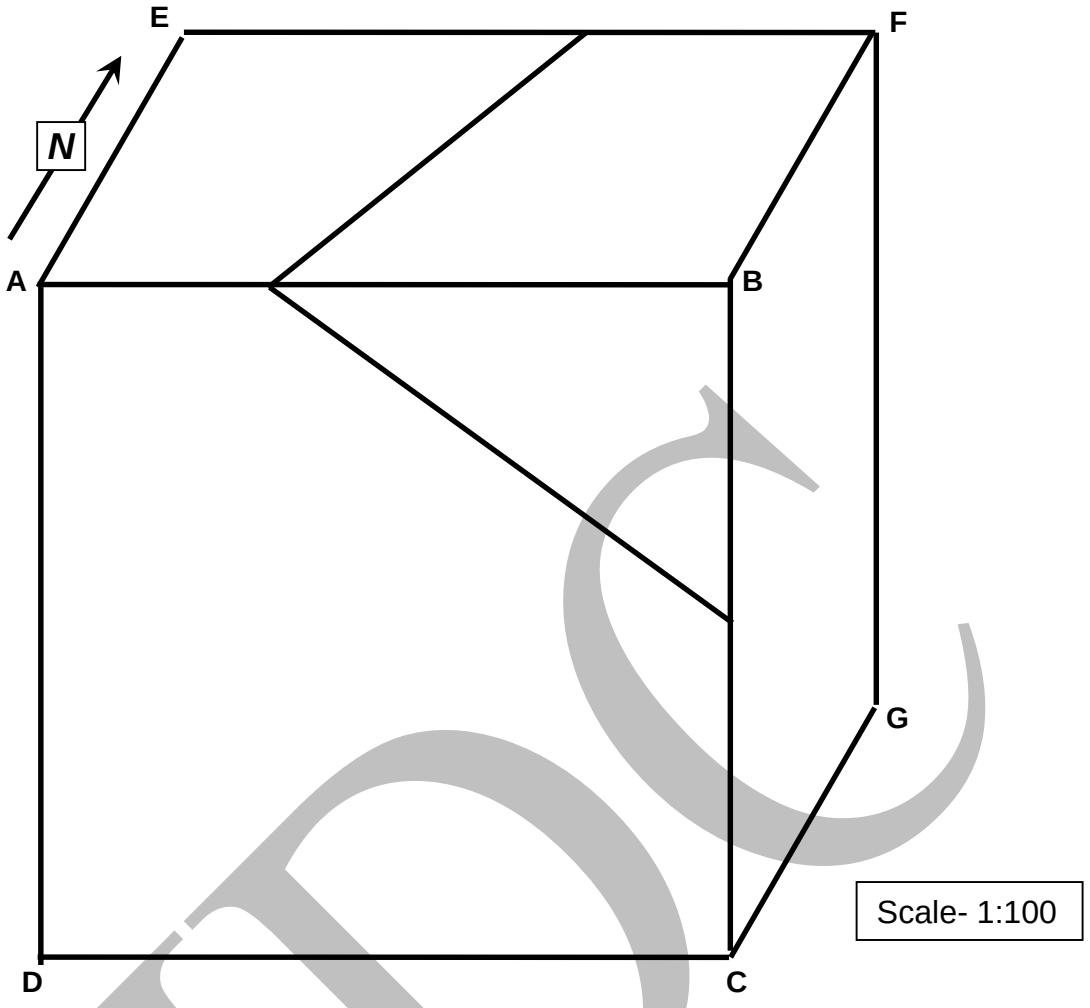

Problem – HSB-2 / JDC 2016

All the lengths and angles measured on the face ABCD are undistorted. Lengths measured parallel to AE are also undistorted.

A homoclinal group comprising the beds P, Q, R, S in ascending order and having an attitude 110/60SW is overlain by another homoclinal group comprising the beds L, M and N in ascending order. The vertical thicknesses of all the beds are approximately 2m. The traces of the lower boundary of L on top and front faces are shown. The P-Q contact is exposed at point E.

1. Show all the rock units in the block diagram.
2. Draw the plan view.
3. Find out the attitude of the upper group of rocks.
4. Measure the true thickness and width of outcrop of the rock units.
5. Mark the discontinuity surface separating the upper and lower groups in the block and in the plan view and identify it with reasons.