



# राष्ट्रीय प्रौद्योगिकी संस्थान गोवा NATIONAL INSTITUTE OF TECHNOLOGY GOA

Farmagudi, Ponda, Goa, 403401

Programme Name: B.Tech, Second Semester.

Mid Semester Examinations, June-2021

Course Name: Engineering Drawing

Date: 12<sup>th</sup> June 2021

Duration: 1 Hour 30 Minutes

Course Code: ME101

Time: 10:00 AM-11:30 AM

Max. Marks: 50

## Please read instructions carefully

- (1) Answer all questions.
- (2) Follow drawing protocols in each of the drawing sheet.
- (3) Draw neat 2D and 3D drawings on A4 size paper wherever necessary.
- (4) Use only drawing tools to obtain exact dimensions which leads to full marks.
- (5) Separate sheet will be used for theory questions (without following lettering scheme).

(1) How “Engineering Drawing” is useful in the B.Tech coursework? Justify with two different applications of engineering drawing as per your respective branch.

**(8 Marks)**

(2)(a) How lettering in engineering drawing is different from handwriting? Write down the methods of “Lettering Schemes” and major difference between them.

**(7 Marks)**

(b) Write all capital and small letters using **scheme B** by selecting two different letter heights, h. Also find corresponding lettering parameters in table format.

**(12 Marks)**

(3) Why second and fourth angle projections are not used for getting projections? Justify only with example using 2D and 3D projections of line

**(8 Marks)**

(4) Draw 2D and 3D projection of points/lines along through their projection lines in 3D drawing: -

(a) Point **A** lies 25 mm in front of VP and 40 mm below HP

(b) Line **AB** of 50 mm is inclined at 60° from HP at a height of 30 mm and 45 mm in front of VP

**(15 Marks)**

(c) Line **PQ** of 46 mm is parallel to both HP and VP

(d) Point **R** in VP and 55 mm above HP

(e) Point **P** is 20mm below HP and lies in 3<sup>rd</sup> quadrant. Its shortest distance from XY reference line is 40 mm.