Roll No……..….. **Total No. of Printed Pages: [02]**
Total No. of Questions: [09]

B. Tech (Civil/CSE/ECE/EE/ME/Textile Engg.) (Semester – 1st/2nd)
ENGINEERING GRAPHICS & DESIGN
Subject Code: BMECE0101
Paper ID: [18110203]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a. Give an example of the aligned system of dimensioning.
b. Draw the symbol of third angle projection system.
c. What is the Representative Fraction (R.F.) or Scale Factor (S.F.)?
d. Draw any two types of lines and give their applications.
e. Draw the projections of a point P which is 30 mm below HP and 25 mm behind VP.
f. A straight line will represent its true length in that plane to which it is …… (perpendicular/parallel).
g. Write the following statement using single stroke capital letters of 12 mm size: MRSPTU BATHINDA
h. What is the significance of a trace of a line?
i. What is the difference between truncated and oblique solids?
j. What is the need of development of surfaces?

Section – B **(5 marks each)**

Q2. Construct a diagonal scale to show metres, decimetres and centimetres and long enough to measure upto 4 metres when 1 metre is represented by 2.5 cm. Find R.F and also indicate a distance of 4.65 m.

Q3. The projectors of the line AB are 60 mm apart. End A is 25 mm above HP and 30 mm in front of VP. End B is 35 mm above HP and 45 mm in front of VP. Find the true length of the line using auxiliary plane method. Also find the inclinations of the line with HP and VP.

Q4. A square lamina of 40 mm side rests on one of its edges on the HP. The lamina makes an angle of 45° to the HP and the side on which it rests makes 30° to the VP. Draw the projections of the lamina.

Q5. Draw the projections of a cylinder 50 mm diameter and axis 65mm long, is resting on a point of base circle on H.P. with its axis inclined at 45° to H.P. and parallel to V.P.

Q6. A right circular cone of base diameter 50 mm and height 70 mm, rests on one of its generators on HP and its axis is inclined at 450 to VP. Draw its projections.

Section – C **(10 marks each)**

Q7. Draw isometric views of a cylindrical block of 30mm diameter and 30mm thickness having a cube of 15mm side resting centrally on top of it.

Q8. A right regular pentagon ABCDE of 40 mm side, has its corner A on HP. Its side CD parallel to HP and inclined at 45° with the VP. The plane of the pentagon makes an angle of 35° with the HP. Draw its projection keeping its corner point C 70 mm in front of VP.

Q9. Draw the orthographic views i.e. front view, top view and side view of the figure shown below.

