M. Sc. (Computer Science and Applications) 3rd Semester Examination – 2020 (CBCS)

Subject: Computer Science and Applications

Paper: MCSA – 302 (Computer Graphics)

Full Marks: 40 **Time: 2 Hours**

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any 8 (eight) questions. All questions carry equal marks of 5.

1) Draw schematic diagram of a typical mother board (main board) depicting full name of it's components. 5

2) With suitable sketch, explain working principle of LASER printer. 5

3) Write Bresenham's line drawing algorithm for $m < 1$. 5

4) Write mid – point circle drawing algorithm. 5

5) Explain interactive seed – fill algorithm. 5

6) Prove that "General Pivot – Point Rotation" is actually a composite transformation. 5

7) Deduce a general formulation for Window to Viewport co-ordinate transformation. 5

8) Explain HSV colour model. What are additive and subtractive colour models? 5

9) Explain Paul De'Casteljau curve. Show that this is exactly same as Bezier curve. 5

10) Write Cohen – Sutherland line clipping algorithm (explanation not required). 5