1. Explain the principle governing leno formation by rotating disc method.

Ans. If two spools are mounted on a disc and two threads coming out of the spools are held rigidly at a point away from the disc and the disc is rotated about an axis joining this point to the disc centre then the two threads would be twisted around each other moving alternately to the right and to the left of the axis of rotation. If this point is now moved along an arc of 90 degrees such that the line joining this point and disc centre is coplanar with the disc and the axis of rotation is kept unchanged then the rotating disc would still cause twisting of the threads around each other, moving the threads alternately to the left and to the right of line. If this line is parallel to fabric selvedge then the threads would move alternately close to the selvedge and away from the selvedge. In the case of full rotation of disc one thread would thus always remain closest to the selvedge while the other farthest.

2. What are the structural differences between a leno formed by half rotation of disc as compared to the one formed by full rotation?

Ans. Crossing of threads in leno formed by half rotation of disc occurs once between successive picks while that formed by full rotation occurs twice. Moreover in the full rotation variant one of the crossing threads always floats below the pick of weft while the other thread always floats above. The two threads in a full rotation of disc maintain position about their axis of rotation.