SECONDARY MOTIONS
FAQ

1. (a) Considering a typical seven wheel take up motion of a cotton loom, explain the significance of the constant relating the fabric pick spacing to the number of teeth in the change wheel.

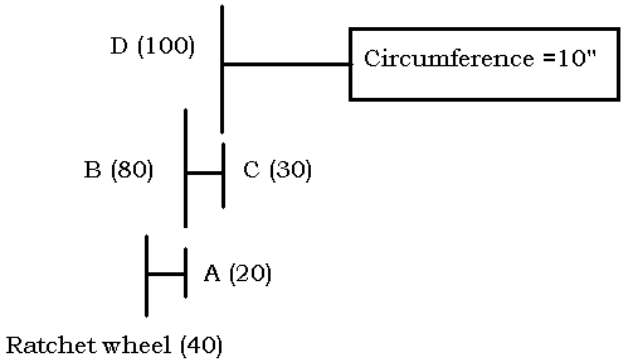
   (b)What would be the wavelength of the period in pick spacing due to a broken tooth of the beam wheel of 90 teeth, mounted on a take-up roller of 38.23 cm circumference?

2. A seven wheel take up motion is being used on a loom with 80 teeth CW. The pick spacing in fabric is showing a fault having width of 0.12 cm and wavelength of 3.8 cm. Identify the faulty gear and comment on the defect of the gear.
3. What are the necessary conditions of take-up system for the elimination of dangerous periodicities in the fabric? Explain the working principle of such a take-up system.

4. Prove that the dead weights have be to shifted intermittently in a negative let off system to keep the warp tension under control. Explain the basic principle of positive let off motion.

5. a) For the following take up system determine the cause of periodicity in pick spacing if
   i. Wavelength is 0.75 inch
   ii. Wavelength is 0.0375 inch

   b) If only one tooth of gear A is worn-out then what type of fault will be produced in the fabric



6. A simple weight lever system at each end of a loom beam is provided with weights of 500 N. The leverage of the system (y/x ratio) is 4:1. The full beam radius is 75 cm and the ruffle radius is 15 cm. If the ropes are given 0.5 lap around the ruffles and the warp tension at the slipping point is 435 N, then determine the coefficient of friction between ruffle and the rope.

7. A loom is running with negative let of motions. The full and empty diameters of weavers beam is 60 cm and 20 cm respectively. The weaver

does not want tension variation of exceed by 20% during the weaving. How, may times the weight has to be shifted during the weaving.

8. A loom is running with negative let of motions. The full and empty diameters of weavers beam is 60 cm and 20 cm respectively. The weaver does not want tension variation of exceed by 20% during the weaving. How, may times the weight has to be shifted during the weaving.

9. Classify various stop motions used in a loom. Discuss the working principle of loose reed warp protector motion and mention its advantages over fast reed motion.

10. Explain the working principle of side weft fork motion with beat diagram. Why thi system limits higher loom speed?