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**Question:**

**Define following terms with respect to cam and follower :**

**(i) Prime circle**

**(ii) Pitch circle**

**(iii) Pressure angle**

**(iv) Trace point**

**Answer:**

**i. Prime circle:** It is the smallest circle that can be drawn from the centre of the cam and tangent to the pitch curve. For a knife edge and a flat face follower, the prime circle and the base circle are identical. For a roller follower, the prime circle is larger than the base circle by the radius of the roller.

**ii. Pitch circle:** It is a circle drawn from the centre of the cam through the pitch points.

**iii. Pressure angle:** It is the angle between the direction of the

follower motion and a normal to the pitch curve. This angle is very important in designing a cam profile. If the pressure angle is too large, a reciprocating follower will jam in its bearings.

**iv. Trace point:** It is a reference point on the follower and is used to generate the pitch curve. In case of knife edge follower, the knife edge represents the trace point and the pitch curve corresponds to the cam profile. In a roller follower, the centre of the roller represents the trace point.

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