SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME : 19EE01 BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

I YEAR /I SEMESTER MECHANICAL & MECHATRONICS ENGINEERING

Unit 2 – Electrical Machines

Single Phase Induction Motor

SINGLE PHASE MOTOR

- Why do we need motors?

- What action motor do?

- How can I create the motor?

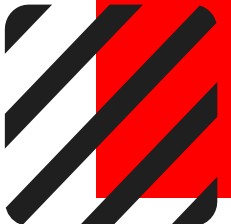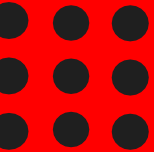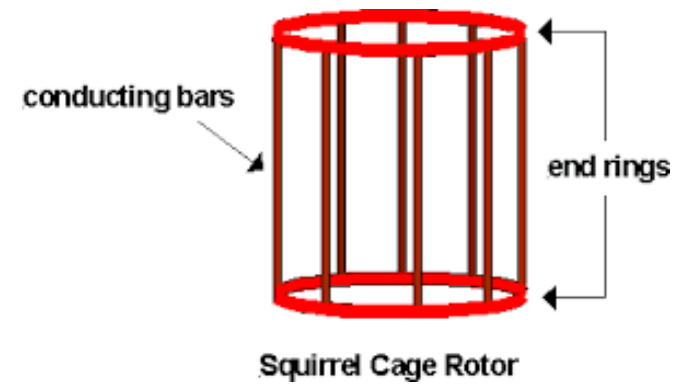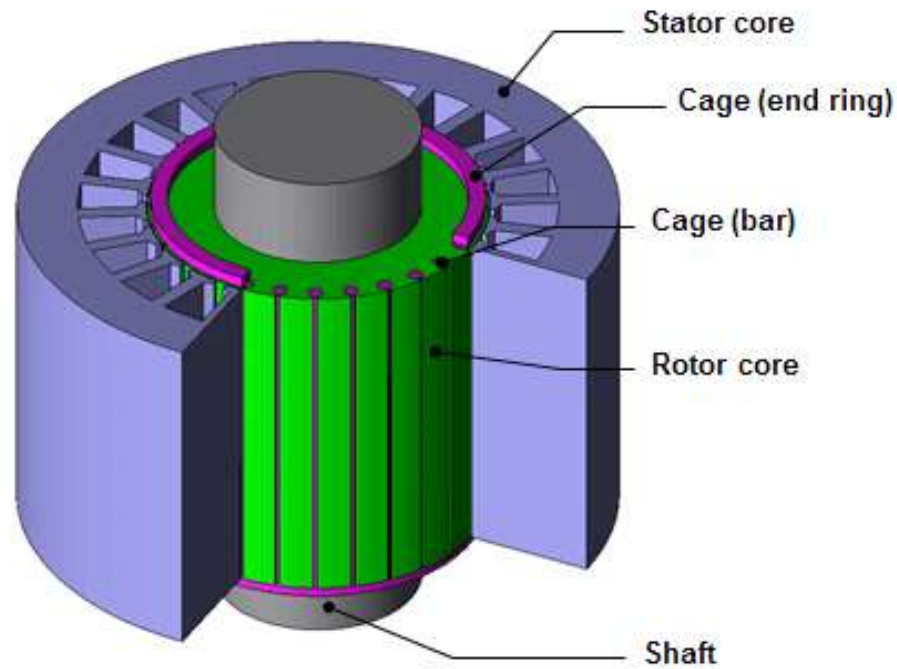- Why motor rotates in circular motion?
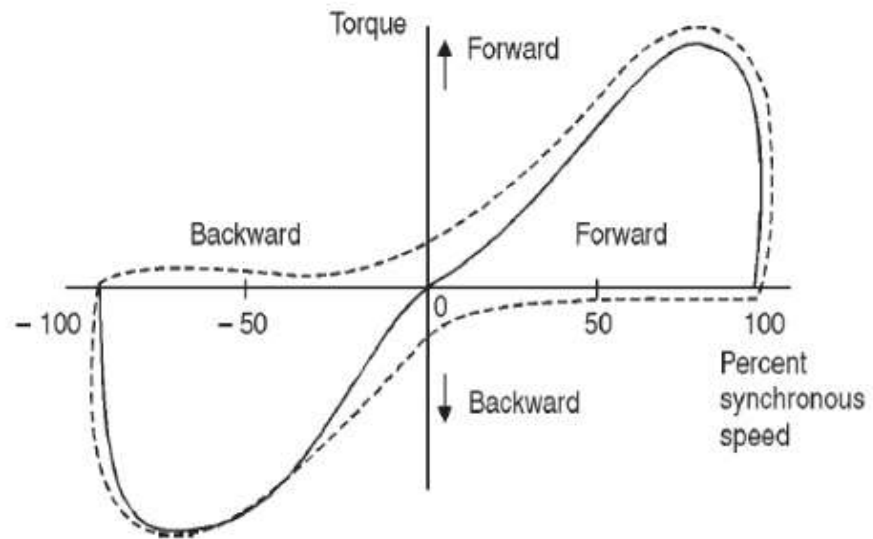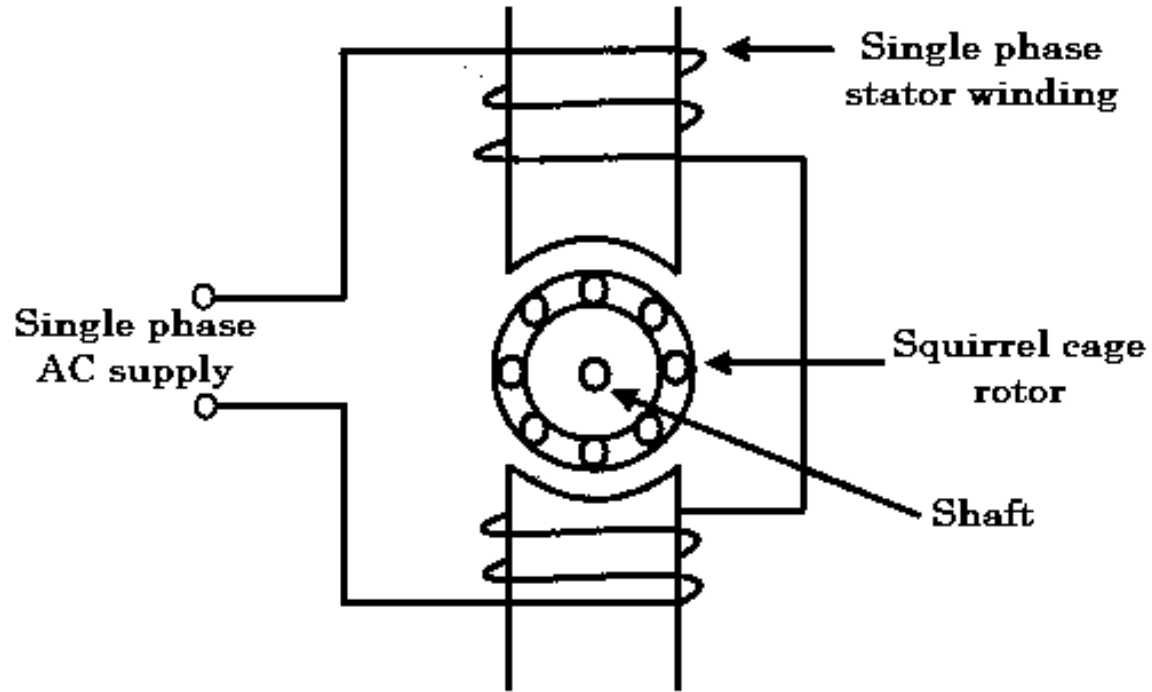
PARTS OF MOTOR

CONSTRUCTION OF 1 PH IM
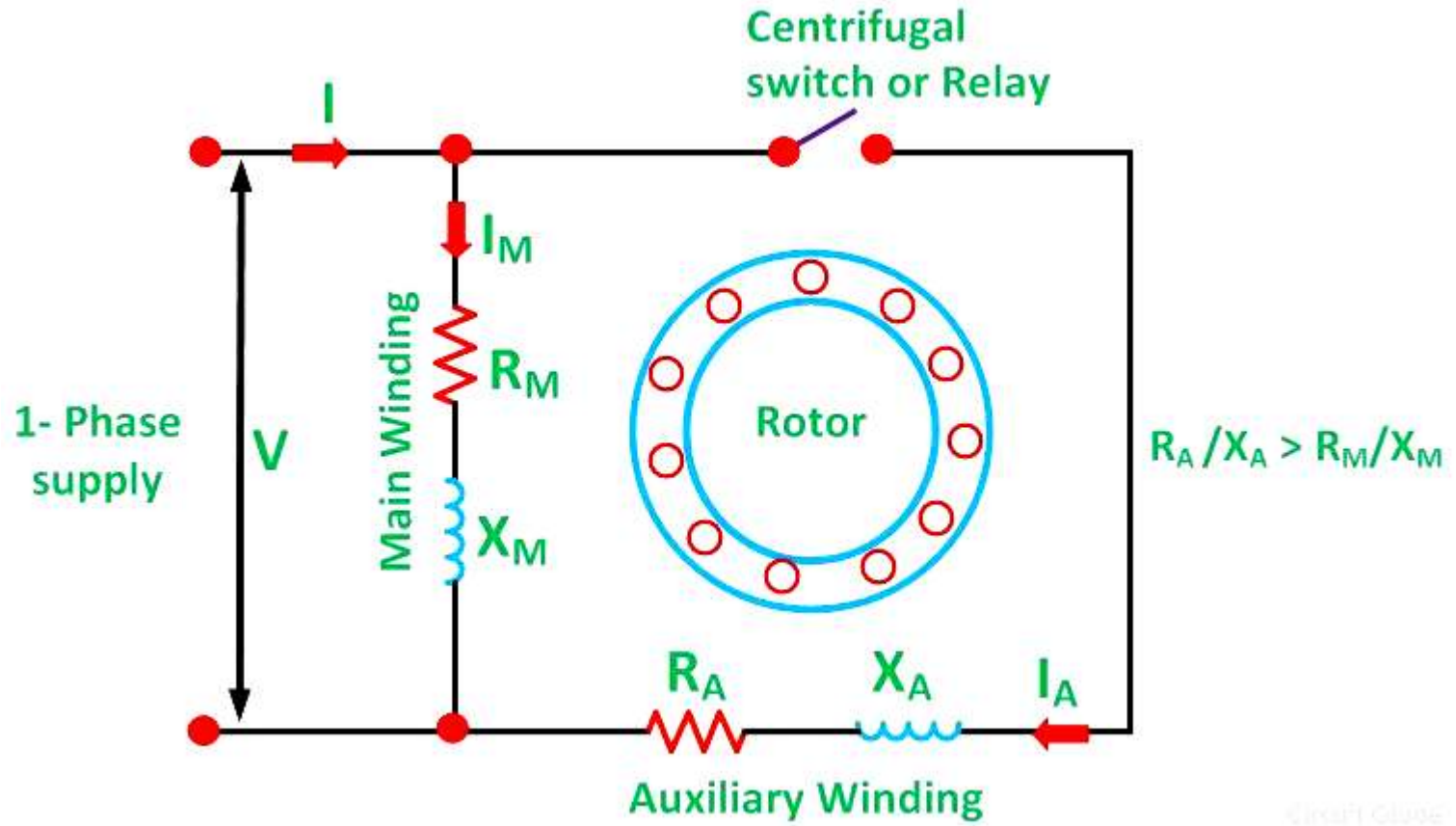

Squirrel Cage Rotor

WORKING PRINCIPLE

ASSESSMENT 1

1. The torque developed by a single-phase motor at starting is
   A.less than the rated torque
   B.More than the rated torque
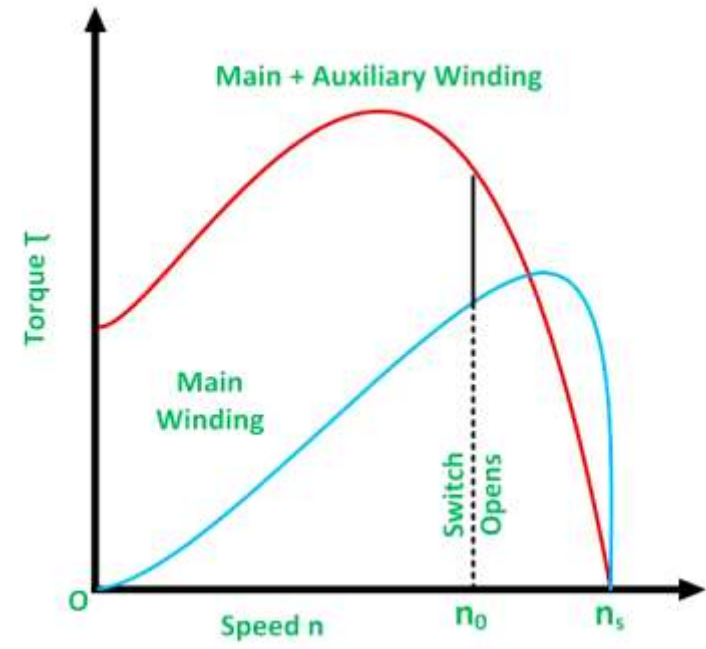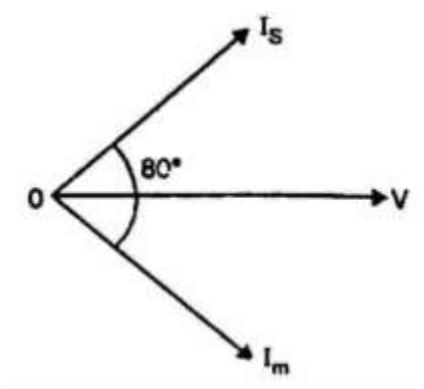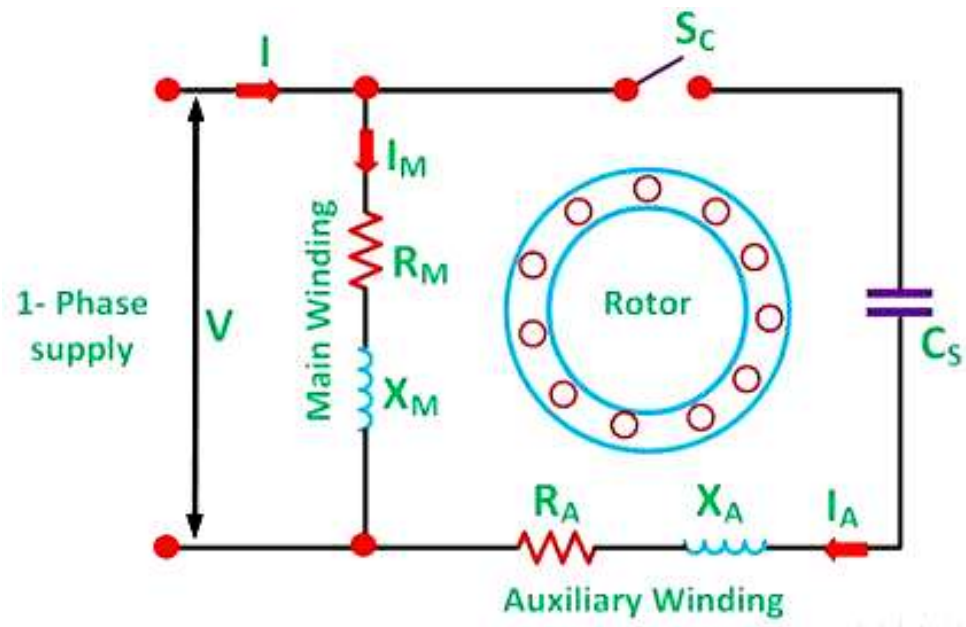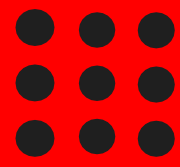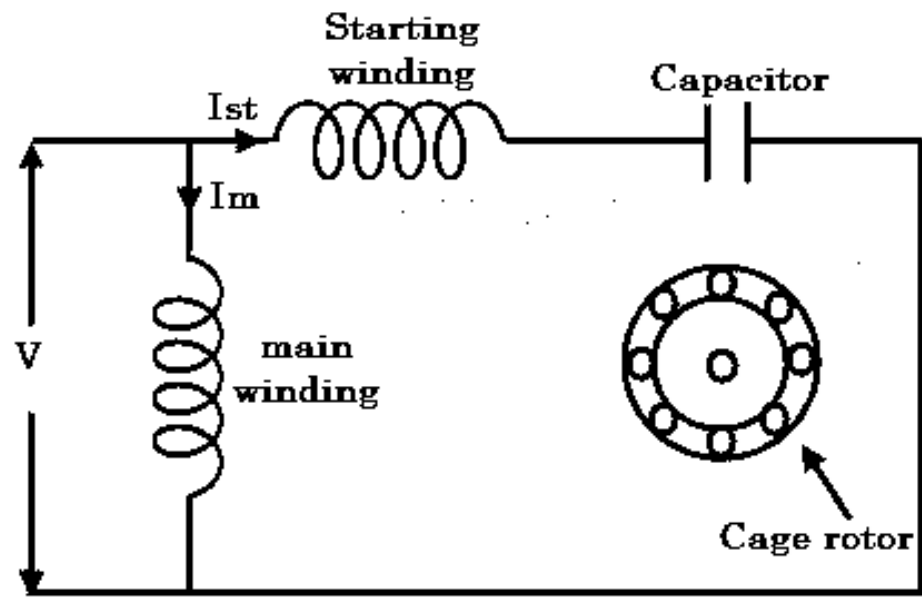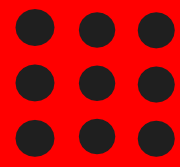   C.zero
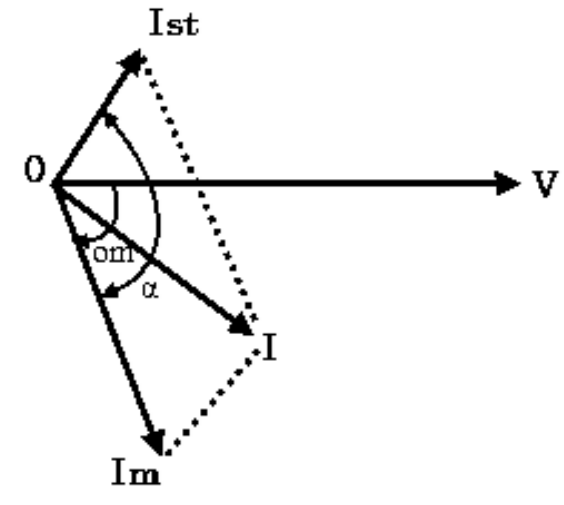   D.None of the above

SPLIT PHASE IM

CAPACITOR START IM
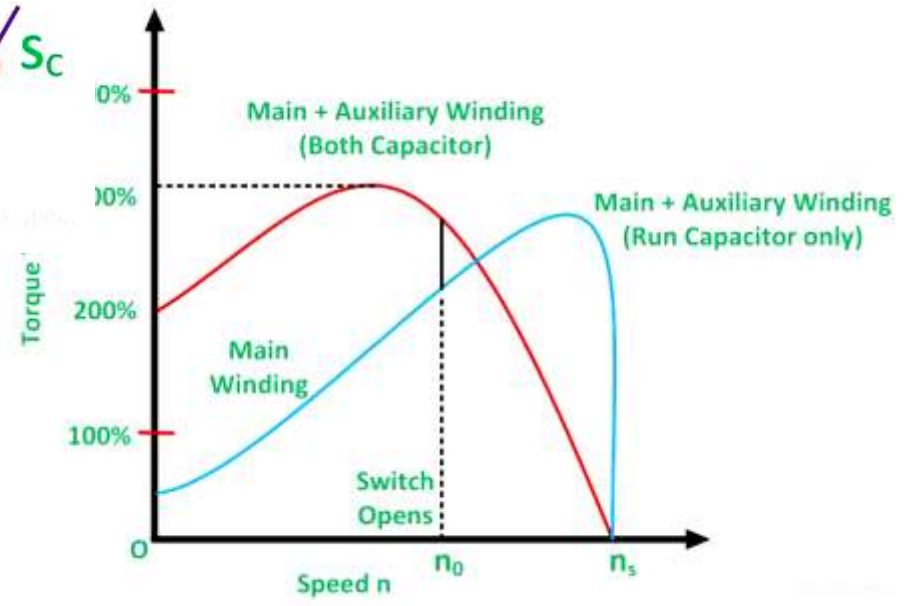
CAPACITOR RUN IM

Circuit diagram of capacitor run motor

Phasor diagram

CAPACITOR START & CAPACITOR RUN IM

SHADED POLE IM

(a) 4-pole shaded pole construction

(b) Salient pole with shading band
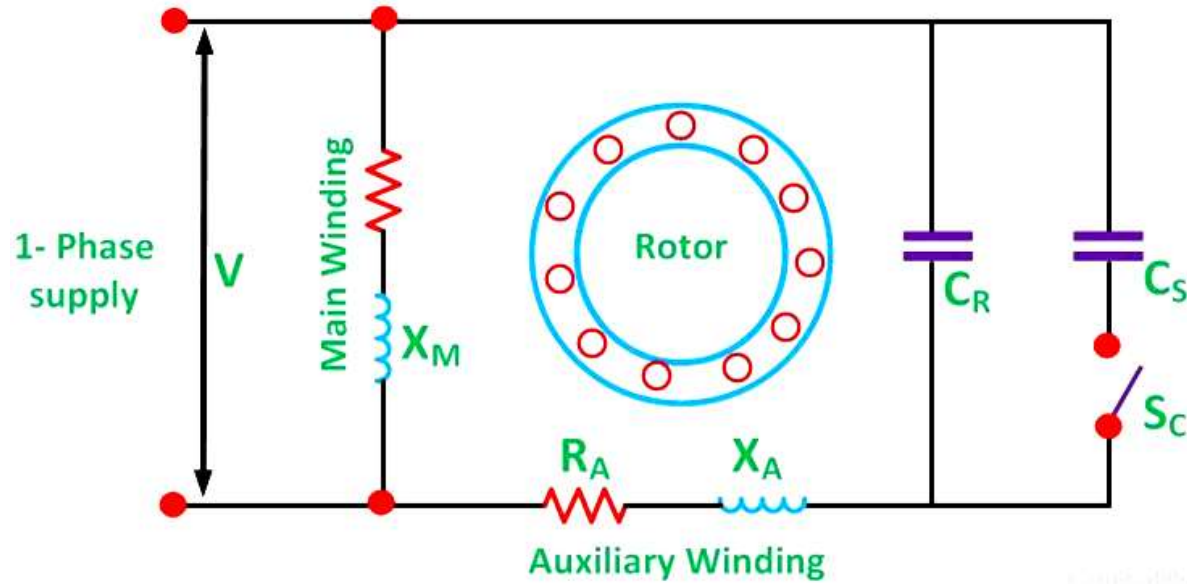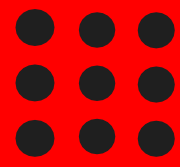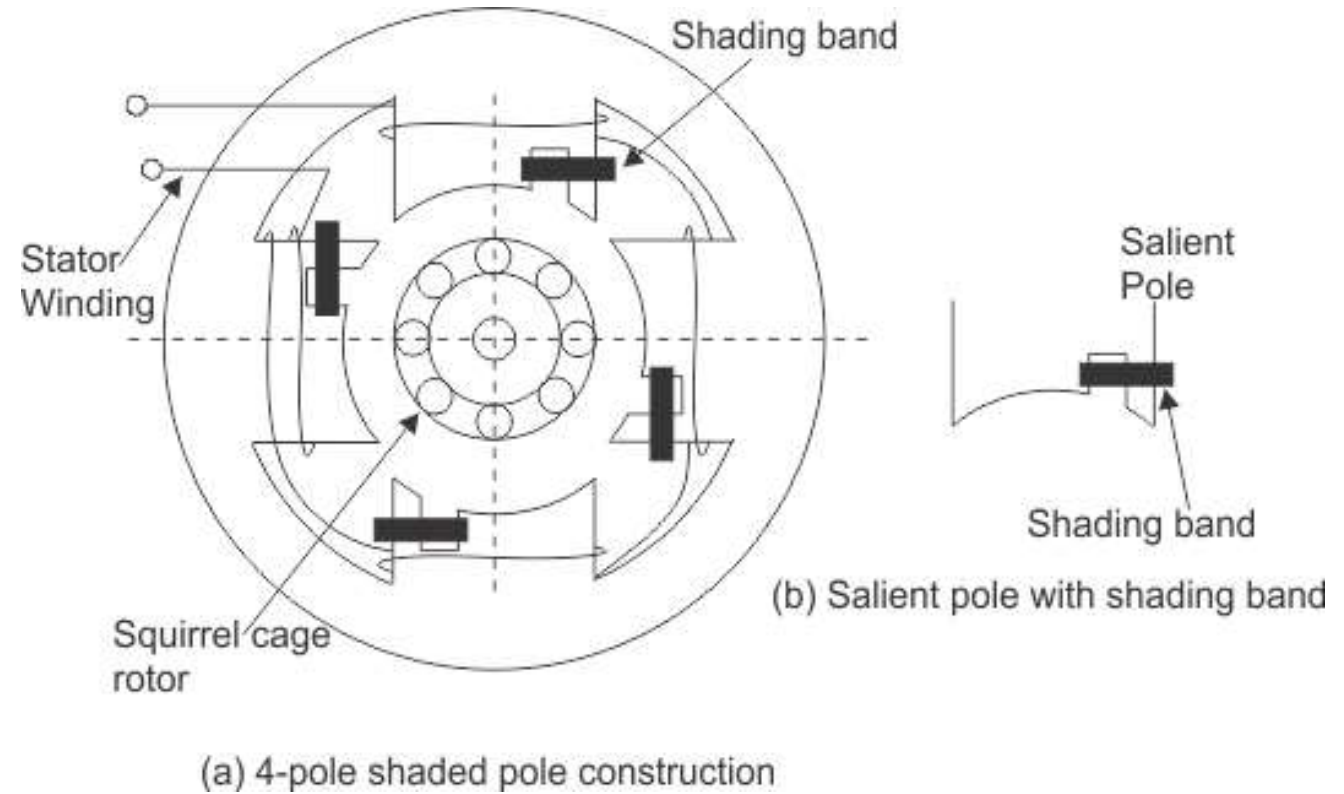
Assessment 2

1. A centrifugal switch is used to disconnect 'starting winding when motor has
   a) Picked up 10% speed
   b) Picked up 20% speed
   c) Picked up 5 – 10% speed
   d) Picked up 50 – 70% speed

REFERENCES

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THANK YOU