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Mechanical Engineering

MEE 312

SAQ 1

Flywheel	Governor
a) is a heavy rotating wheel that reduces jerk due to unavoidable fluctuations,	controls speed variations caused by varying load.
b) runs while the engine is running	only runs when the engine doesn't run at its mean speed.
c) have a great moment of inertia and are heavy	have relatively small moment of inertia and are light

2) Mechanical Feedback control system.

Centrifugal governors	Inertia governors
a) They are slow in response	They are faster than the centrifugal in response
b) Their sensitivity is relatively small.	Their sensitivity is high.
c) revolving parts are easier to balance.	revolving parts are hard to balance
d) controlled by only centrifugal force.	controlled by both centrifugal and inertia forces.

SAQ 2

Because it is limited to only vertical positions and its sensitivity decrease with increase in speed, the Watt Governor is rarely used.

SAQ 3

The porter governor can carry dead weight and can also be more sensitive at higher speeds.

SAQ 4

A dead weight / gravity controlled governor is most preferred in internal combustion engines due to its centrifugation as basic principles of engine operation.