

Okwong, David Victor
17/ENG06/063
Mechanical Engr

MEE312

3006

SAQ1

- 1) Compare Flywheel with Governor
 - a) Flywheel is a heavy rotating wheel that reduces the jerk due to unsteady load speed fluctuations while a governor is a speed controlling device that controls speed variations caused due to varying load.
 - b) A Flywheel runs as long as the engine is running while the governor runs when the engine doesn't run at its mean speed.
 - c) Flywheel have no influence over the mean speed of the engine while the governor has no influence on the cyclic fluctuation in speed.
 - d) Flywheels are heavy with a large moment of inertia while governors are light with a relatively small moment of inertia.

2) Which type of Control is the Governor System?

Answer:

Mechanical Feedback Control System.

- 3) Compare Centrifugal Governors with Inertia Governors.
 - a) The response of the Centrifugal Governor is slower than that of the Inertia Governor.
 - b) Only Centrifugal force controls the Centrifugal Governor while both Centrifugal and Inertia forces control the ~~Inertia~~ Inertia Governor.
 - c) The Sensitivity of the Inertia Governor is greater than that of the Centrifugal Governor.
 - d) The revolving parts of the Centrifugal Governor are easier to balance than that of the Inertia Governor.

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SAQ 2

Why is the Watt governor rarely used?

Ans

The Watt governor is rarely used because it is limited to only vertical position application and its stability decreases with speed increase.

SAQ 3

In which respect is the Porter governor better than the Watt governor?

Ans

The Porter is more sensitive at higher speeds than the Watt governor and the Porter governor can carry dead weight unlike the Watt governor.

SAQ 4

For IC engines, what type of governor will you prefer? Dead weight type or Spring controlled type? Give reasons.

Ans

A dead weight/gravity controlled governor is preferred in IC engines as the basic principle of engine operation is centrifugation.