GUWOR-NIKI WARE-EBI HARRY

17/EDG06/038

MECHANICAL

SAQ 1

1) Compare flywheel with governor.

- the flywheel is a heavy rotating wheel that reduces the jerk due to unavoidable speed flunctuations while a governor is a speed controlling devices that controls speed variation caused due to varying load.

- a flywheel runs as long as the engine is running while the governor runs when the engine doesn't run at its main speed.

- flywheels have no influence over the mean speed of the engine while the governor has no influence on the cyclic flunctuations in speed.

- flywheels are heavy with a large moment of inertia while governors are light with a relatively small moment of inertia.

2) What type of control does the governor system use?

- Mechanical feedback control System

3. Compare centrifugal governors with inertia governors.

- the response of the centrifugal governor is slower than that of the inertia governor

- only centrifugal force controls the centrifugal governor while both centrifugal and inertia forces control the inertia governor.

- the sensitivity of the inertia governor is greater than that of the centrifugal governor

- the revolving parts of the centrifugal governor are easier to balance than that of the inertia governor.

SAQ 2

Why is the Watt governor rarely used?

— the watt governor is rarely used because it is limited to only vertical position applications and its sensitivity decreases while speed increases.

SAQ 3

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

— 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.

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