

NAME: IBE CHIBUNNA FELIS

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DEPARTMENT: MECHANICAL ENGINEERING

MFE 212

### SAQ 1

#### a) Similarities

- i Both are mechanical devices
- ii Both control or regulate the fluctuations in speed with the exception of the point of impact

#### b) Differences

Flywheel	Governor
i It is not required in all engines	It is required in all engines
ii It runs as long as the engine is running	It runs when the engine doesn't run at its mean speed
iii It's relatively a heavy mechanical device with large moment of inertia	It's a light mechanical device with relatively small moment of inertia

#### b) Speed control system

#### c) Difference

Centrifugal governors	meritcal governor
i Sensitivity is less compared to meritca governors	Highly sensitive to varying load
ii Easy to balance the revolving parts	Hard to balance revolving parts
iii Only centrifugal force is in controlling action.	Both centrifugal force and meritca forces are in action
iv This type of governor is more frequently used	They are not popular.

### SAQ 2

Watt governors are rarely used because

- i) They are limited to in vertical position applications.
- ii) They can only be used in slow speed engine since their sensitivity decrease at higher speed.

### SAQ 3

\* In its sensitivity, since the Porter governor is more sensitive than the Ward governor.

### SAQ 4

Spring controlled type of governors will be preferred over dead weight type since spring controlled in IC engines since the spring controlled type can work with inclined axes of rotation also.