

Speed Control

1 Which method of governing is preferred for
a) Petrol and b) Diesel Engine. why?

These are three methods of governing.

1) Hit and Miss Governing.

2) Quality Governing.

3) Quantity Governing.

→ Petrol Engine :

Quantity Governing method is used in petrol engine.

Quantity Governing is also known as throttle governing.

This method is generally used in stationary type of petrol and gas engine.

This method varies the quantity of air fuel mixture supplied to the cylinder.

In case of quantity governing the quality of mixture remains the same.

Quantity of mixture supplied to the cycle cylinder can be varied by throttling the mixture before it enters in the cylinder.

→ Diesel Engine

Quality Governing method is used in Diesel Engine.

Quality Governing is also known as cut off Governing.

This method is generally used in compression ignition engine means diesel engine.

In this method of governing the amount of air taken inside the cylinder is constant.

In this case air fuel ratio of mixture is varies with the amount of fuel supply.

In this method quality of air fuel mixture changes as per the amount of fuel supply.

Diesel engine amount of fuel is varied usually by spring loaded mechanical governors.

2. Differentiate between the function of a governor and flywheel.

Flywheel

Governor

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| 1. Flywheel is used to prevent fluctuation of energy. | Governor is used to maintain the constant speed. |
| 2. Flywheel is a heavy part of the machine. | Governor is lighter in weight than flywheel. |
| 3. It is a rotating component. | It is a non-rotating component. |
| 4. The moment of inertia is very large. | The moment of inertia is very small. |
| 5. It does not control the fuel supply. | It controls the fuel supply. |
| 6. It regulates speed in one cycle only. | It regulates speed over a period of time. |
| 7. A Flywheel controls $\frac{dN}{dt}$. | A Governor controls dN . |