**BBDNITM**

**MECHANICAL DEPARTMENT**

**SESSION (2018-19)**

**Automobile Engineering [NME-702]**

**ASSIGNMENT SHEET NO.1**

Q.1 What do you understand by torque developed by an engine? How it varies with speed?

Q.2 What is tractive effort and gradeability of a car?

Q.3 How compression ratio affects vehicle performance?how output of engine may be increased ?

Q.4 What is propelling power? What is its relation with tractive resistance?

Q.5 What is the necessity of gear box? Explain the working of constant mesh gear box. What are its advantages, limitations?

Q.6 How does a dog clutch connect a constant mesh second mesh gear with the main shaft ?

Q.7 What type of resistances are offered by a vehicle? How can these resistances be minimised?

Q.8 Define volumetric efficiency. What is its effect on engine power and specific fuel consumption.

Q.9 Why are synchronizers used in transmission?

Q.10 Briefly explain the valve mechanism of 4-stroke engine with the help of suitable diagram.