

NAME.....

ROLL NO.....

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-2008

**III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS
AUTOMOBILE ENGINEERING
(MECHATRONICS)**

AUG/SEP 2008

TIME-3 HOUR
MARK-80

ANSWER ANY FIVE QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

1. What are the important basic components of an IC engine? Explain them briefly.
2. (a) Describe the distributor type fuel injection pump.
(b) Explain the various types of injector nozzles.
3. Explain the various types of engine cooling systems and compare them.
4. (a) What are the requirements of an ignition system.
(b) What are the types of ignition system and describe the working of Battery ignition system.
5. (a) Describe the working of a fuel gauge.
(b) Explain the working of a Horn cutout relay.
6. (a) Explain the construction and use of Overdrive? List out its advantages and imitations.
(b) Explain the working of a dog clutch.
7. (a) Explain the constant velocity universal joint with a sketch.
(b) What is the purpose of a slip joint in a propeller shaft.
(c) What are the types of rear axels?
8. (a) What is the effect of slip angle, inflation pressure on the cornering force.
(b) Sketch the construction and explain the working of a Davis steering mechanism.