

2008 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

**III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS
AUTOMATIVE ELECTRICAL AND AUTOTRONICS
(AUTOMOBILE ENGINEERING)**

AUG/SEP 2008

**TIME : 3 HR
MARK : 80**

**Answer any FIVE Questions
All Questions carry equal marks**

1. (a) Describe the construction of a storage battery and explain the functions of each component.
(b) Write a short note on the following terms:
 - i. Sulphation
 - ii. Desulphation.
2. Describe the following :-
 - (a) Ignition switch
 - (b) Vibrating type ignition
 - (c) Vacuum advance and retard mechanism.
3. (a) What are the various sensors used in electronic fuel injection system?
(b) What is a common rail fuel injection system? Explain.
4. What is the principle of a generator? Give its constructional details.
5. With neat sketches, explain the six volt and twelve volt auto electrical systems.
6. Explain the operation of bimetal-thermostat (thermal) type temperature gauge with a neat diagram.
7. Convert the decimal number (250.5) to base 3, base 4, base 7 and base 9.
8. (a) Describe the action of parallel counter.
(b) How many flip-flops are required to construct a mod-6 counter? Explain how you arrive at the figure