

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. Explain the following:
 - (a) Battery efficiency
 - (b) Battery self-discharge
 - (c) Battery capacity and rating
 - (d) dison (Nickel-iron) storage battery.
2. (a) What are the requirements of an ignition system for an IC Engine?
 - (b) Enumerate the basic ignition systems and describe any one of them.
 - (c) What is the purpose of an ignition system in a petrol engine?
3. (a) With a neat sketch explain the functions of MPFI system.
 - (b) With a neat diagram explain port injection system.
4. Describe in detail the procedure for servicing of a generator regulator mentioning clearly how the correct regulator setting is obtained.
5. With neat sketches, explain the six volt and twelve volt auto electrical systems.
6. Explain briefly about different types of temperature gauges used in automobile system.
7. (a) Perform the subtraction with the following unsigned binary numbers by taking 2's complement of the subtrahend.
 - i. 11010 – 10000
 - ii. 11010 – 1101
 - iii. 100 – 110000
 - iv. 1010100 – 1010100
 - (b) Explain the octal number system. Explain how you would convert octal numbers into decimal numbers and vice-versa.
8. Explain the working of a ripple counter. What are its disadvantages?