

KATHMANDU UNIVERSITY
End Semester Examination [C]
July, 2017

JUL 11 2017
Course : MEPP 412
Semester : I
F. M. : 55

Level : B.E.
Year : IV
Time : 2 hrs. 30 mins.

SECTION "B"

Attempt *ALL* the questions.

1. What are the requirements of a good combustion chamber for spark ignition engine? Explain. [5]
2. Explain the function and operation of the exhaust gas recirculation (EGR) system with neat sketches. [5]
3. Draw a typical layout to explain the working principle of vacuum clutch and hydraulic clutch. [5]
4. Mention the common faults that occur in a synchromesh gear box? Point out the cause of their occurrence and suggest suitable remedies to avoid those. [5]
5. What is meant by semi-floating, three quarter floating and fully –floating axles. Illustrate your answer with suitable sketches. [5]
6. What is meant by power steering? Describe, with a neat sketch, the working of a typical power steering system. [5]
7. Describe, with a neat sketch, the construction and functioning of a MacPherson strut and Double wishbone suspension system. [5]
8. Discuss, with leveled diagram, the construction and working of electronic ignition system and conventional ignition system [5]
9. Explain with neat sketches of working of mechanical brake, vacuum operated brake and pneumatic brake system in motor vehicle. [7]
10. Draw a neat diagram of different types of fuel injection system used in Petrol and Diesel engine discuss their relative merits and demerits. [8]

