

MECHANICAL ENGINEERING DEPARTMENT.

Test 1.

Answer ALL questions.

1. a Define displacement Volume and compression ratio of an engine
Takrifkan isipadu anjakan dan nisbah mampatan dalam sebuah injin.

CLO1 (6 marks)

- b. Explain what is meant by the valve timing and sketch a diagram that shows the actual valve timing both close and open the valve for internal combustion engines.

Terangkan apakah yang di maksudkan dengan pemasaan injap serta lakarkan gambarajah pemasaan injap sebenar yang menunjukkan kedua-dua injap tutup dan buka bagi injin pembakaran dalam..

CLO1 (6 marks)

- c. Explain briefly **FOUR (4)** differences between a 4-stroke petrol and 4-stroke diesel engines.

*Terangkan secara ringkas **EMPAT (4)** perbezaan antara injin petrol 4 lejang dan enjin diesel 4 Lejang.*

CLO1 (8 marks)

2. Cooling and Lubrication System.

- a. List **FOUR (4)** Function of engine lubrication system.
*Senaraikan **EMPAT (4)** fungsi sistem pelinciran.*

CLO1 (8 marks)

- b. Explain how the pressurize cooling system maintain the coolant level through the operation.
Terangkan bagaimana tekanan sistem penyejukan mengekalkan tahap penyejuk semasa kendalian.

CLO1 (4 marks)

- c. Explain **FOUR (4)** main components of vehicle cooling system in order to control engine temperature.

*Huraikan **EMPAT (4)** komponen utama bagi sistem penyejukan enjin kenderaan untuk mengawal suhu enjin*

CLO1 (8 marks).