

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF TECHNOLOGY EDUCATION
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION
FIRST SEMESTER EXAMINATION, 2012/2013 SESSION

COURSE CODE: AUT 311

COURSE TITLE: FUEL SUPPLY SYSTEM AND CARBURETTION

TIME ALLOWED: 2 HRS

INSTRUCTION: ANSWER ONLY FOUR (4) QUESTIONS

1. a, With a simple sketches, identify the two sections of a simple carburetor.
b, Give a clear differences between constant choke and constant vacuum carburetors.

2. a, Identify the require mixture strength for the following conditions: i, cold starting ii, warm idling iii, full power iv, steady acceleration.

b, Sketch oil type of air filter and explain its principles.

c. Identify five (5) reasons responsible for inability of mechanical type of petrol pump to deliver fuel at low pressure.

3. a, With a simple diagram explain the working principles of a mechanical type of petrol pump.
b, Briefly explain the following terms: i, Atomization ii, Vaporization iii, Condensation.

C, What operational features differentiate supercharger from turbocharger?

4. a, Identify five (5) merits of petrol injection system.

b, Differentiate between petrol injection and carburetor system.

c, Enumerate five (5) properties required from a fuel use in an internal combustion engine.

5. a, Differentiate between blowers and centrifugal types of super charger. Support your answer with suitable sketches.

b, Outline four (4) components of fuel supply system and explain the term ignition temperature.