

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION
DÉPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION
FIRST SEMESTER EXAMINATION 2017/2018 SESSION

COURSE CODE: ITE314

COURSE TITLE: FUEL SUPPLY SYSTEM AND CARBURETION

TIME: 2HRS

INSTRUCTION: Attempt only (4) Questions

1.
 - a, Fully describe the constructional and operational principle of autovac gravity type of fuel supply system. Illustrate your answers with a diagram.
 - b, Outline FIVE functional requirements of a vehicle carburetor
 - c, Differentiate between atomization and vapouration.
2.
 - a, Enumerate briefly the following terms: i, carburetion ii, anti-nock iii, calorific value iv, octane number v, flash point vi, fuel gauge vii, fuel pump viii, mixing chamber ix, strangler and x, spray nozzle.
 - b, Provide a mixture strength for each of the following condition: i, slow running ii, maximum power iii, starting from cold and fuel economy.
 - c, outline THREE major defects of a carburetor.
3.
 - a, With the aid of a suitable sketch, explain the action of a balancing type of fuel gauge
 - b, Enumerate simple reasons why petrol tanks are generally baffled.
 - c, Outline FIVE reasons that may be responsible for the inability of electric type of petrol pump to operate.
4.
 - a, Identify and enumerate various types of carburetor positioning in a vehicle. Supports your answers with suitable sketches.
 - b, Enumerate the following: i, constant vacuum carburetor ii, constant vacuum carburetor iii, single barrel carburetor iv, dual barrel carburetor and v, paper element air filter.
5.
 - a, Provide a well labeled diagram of an exhaust system.
 - b, What are the main constructional and operational differences between supercharger and turbocharger?
 - c, Differentiate between mechanical and electric type of petrol pumps. Leave your responses in a tabular form.