

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF SCIENCE AND TECHNOLOGY EDUCATION
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION
FIRST SEMESTER EXAMINATION
2022/2023 SESSION

COURSE TITLE: - Power Engines

COURSE CODE: - ITE 511

INSTRUCTION: - Answer Any Four (4) Questions Only

TIME ALLOWED: - 2hrs

- 1a. State the five requirements for good combustion chamber?
- 1b. Mention two basic types of combustion chamber?
- 1c. With a neat sketch, draw Air-Cell combustion chamber and name its parts?

- 2a. Enumerate five functions of combustion chamber?
- 2b. List the five types of combustion chambers used in petrol engine?
- 2c. Draw the basic diagram of combustion chamber?

- 3a. Explain five characteristics of a governor??
- 3b. Outline three merits and three demerits of combustion chamber?
- 3c. Draw typical types of mechanical governor and name its parts?

- 4a. State four advantages of C. I. engine as compared to S. I. engine?
- 4b. Explain three classification of governor?
- 4c. Draw three types of nozzles indicating proper nozzle angle and direction?

- 5a. Mention and explain the essential components of Air fuel injection method?
- 5b. What is the purpose of fuel injection pump?
- 5c. Draw a typical distributor type of fuel injection pump and name its parts?

- 6a. State the two requirements for injector nozzles?
- 6b. Name the two types of injector nozzle?
- 6c. With a neat sketch, draw the three types of injector nozzles?