



BOWEN UNIVERSITY, IWO, OSUN
COLLEGE OF AGRICULTURE, ENGINEERING & SCIENCES (COAES)
MECHATRONICS ENGINEERING PROGRAMME
2022/2023 SECOND SEMESTER EXAMINATIONS

COURSE CODE: MCE 206
COURSE TITLE: Workshop Technology II
COURSE UNIT: 2
INSTRUCTIONS: Answer All Questions

TIME ALLOWED: 2 HOURS

QUESTION ONE

- A mild steel rod of diameter 30 mm and length 60 mm is to be machined to give the shape indicated in Figure 1, explain in details how to achieve this. (5 marks)
- List 10 equipment used in gas welding. (5 marks)
- With the aid of diagram, explain the three types of flames in gas welding and how they are obtained. (6 marks)

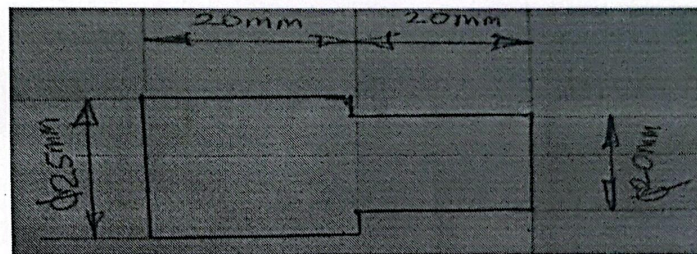


Figure 1.

QUESTION TWO

Explain the following parts of the cooling system of an automobile.

- Water Pump.
 - Thermostat.
 - Radiator.
 - Expansion Tank.
 - Fan.
- (10 marks)

QUESTION THREE

- Explain the four strokes of an internal combustion petrol engine. (4 marks)
- What are the differences between Petrol and Diesel engines? (4 marks)
- List the two types of cylinders used in gas welding and their colour. (2 marks)

QUESTION FOUR

- What are the areas of application of Shielded Metal Arc Welding? (2 marks)
- What are the main components of a car suspension system? (2 marks)

QUESTION FIVE

- Explain the term "Safety first, safety always." (2 marks)
- What are the advantages and disadvantages of gas welding? (4 marks)
- List the various types of springs used in car suspension system. (4 marks)