

SECTION B: ANSWER ANY TWO QUESTIONS

2. a) Sketch and describe the following hand tools
- i) Flat chisel
 - ii) Scriber
 - iii) Hacksaw
 - iv) Ball pein hammer (8 marks)
- b) Sketch and explain the following drilling operations;
- i) Boring
 - ii) Counter sinking
 - iii) Reaming
 - iv) Tapping (8marks)
- c) Differentiate between cutting and shearing in sheet metal work. (4 marks)
3. a) Discuss any **three** metals used in sheet metal work. (6 marks)
- b) Describe the following sheet metal operations
- i) Measuring and marking
 - ii) Riveting
 - iii) Raising
 - iv) Soft Soldering (8 marks)
- (c) Using clear sketches describe the procedure of making a grooved joint (6 marks)
4. a) Differentiate between the ferrous and non ferrous metals (4 marks)
- b) Describe the following properties of materials
- i) Ductility
 - ii) Fusibility
 - iii) Elasticity
 - iv) Malleability
 - v) Hardness (10 marks)
- c) Describe the cross filing process using a sketch. (6 marks)

5. a) Describe the following engineering materials giving two examples of each.
- i) Conductor
 - ii) Semi-conductor
 - iii) Modern dielectrics. (6 marks)
- b) Describe **four** classes of fires stating appropriate extinguishers for each. (12 marks)
- c) Define an accident. (2 marks)