

WELDING AND FABRICATION ENGINEERING CRAFT PRACTICE

EXAMINATION SCHEME

There will be three papers, Papers 1, 2 and 3, all of which must be taken.
Papers 1 and 2 will be a composite paper to be taken at one sitting.

- Paper 1: will consist of forty multiple-choice objective questions all of which are to be answered in 1 hour for 40 marks.
- Paper 2: will consist of five questions out of which candidates will be required to answer any four in 1½ hours for 60 marks.
- Paper 3: will be practical test of 3 hours, 10 minutes duration. It will consist of one compulsory question for 100 marks.

A list of materials for the test shall be made available to schools not less than two weeks before the paper is taken for material procurement and relevant preparations.

ALTERNATIVE TO PRACTICAL TEST

The Council may consider testing candidates' ability in practical work as prescribed in the syllabus in the event that materials for the actual practical test cannot be acquired. For this alternative test there will be one question to be answered in 3 hours for 100 marks.

SPECIMEN QUESTIONS

OBJECTIVE

1. Which of the following is used to clean metal surface before welding?
 - A. Petrol
 - B. Emery cloth
 - C. Soap
 - D. Chemical

2. A single V-edge preparation on a 6mm thick plate can be made with the use of
 - A. file.

- B. scraper.
 - C. grinder.
 - D. drill.
3. Which of the following is **not** a weld defect?
- A. Porosity
 - B. Slag inclusion
 - C. Lack of fusion
 - D. Heating zone
4. Which of the following is **not** considered when setting up a fabrication and welding workshop?
- A. Cost
 - B. Site
 - C. Weather
 - D. Object
5. The ability of a metal to go back to its original shape after deformation is called
- A. hardness.
 - B. toughness.
 - C. elasticity.
 - D. plasticity.
6. The property that enables a material to withstand indentation is
- A. hardness.
 - B. toughness.
 - C. elasticity.
 - D. plasticity.

ESSAY

1. (a) Write short notes on each of the following:
- (i) Entrepreneurship;
 - (ii) Employer;

- (iii) Employee.
 - (b) Differentiate between small-scale and large scale enterprise.
 - (c) State **three** factors to be considered when setting-up a welding and fabrication workshop.
2. (a) State **two** safety precautions to be observed when:
- (i) chiseling;
 - (ii) using hazardous gas.
- (b) State the essential points to note relating to the welding workshop in the following areas:
- (i) ventilation;
 - (ii) clothing;
 - (iii) layout.
- (c) List **three** equipment needed when setting up a welding and fabrication workshop.
3. (a) Differentiate between ferrous and non-ferrous metals.
- (b) Explain the following properties of metals:
- (i) plasticity;
 - (ii) toughness;
 - (iii) malleability.
- (c) Describe how the cupola furnace is used to produce cast iron.

