



**Tertiary & Vocational Education
Commission**

Welding Technology

Model paper for NCT equivalence Examination



Question No 01

1. Briefly explain what is the Safety. (3 Marks)
2. What are the common Hazards in industries. (5 Marks)
3. Write 3 causes starting a fire. (3 Marks)
4. Define resistivity (ρ) of a conductor. (3 Marks)
5. Figure below shows a 12v battery connected to a resistor network. Calculate the
 - a. Current (I) (7 Marks)
 - b. Power dissipated R1 (7 Marks)

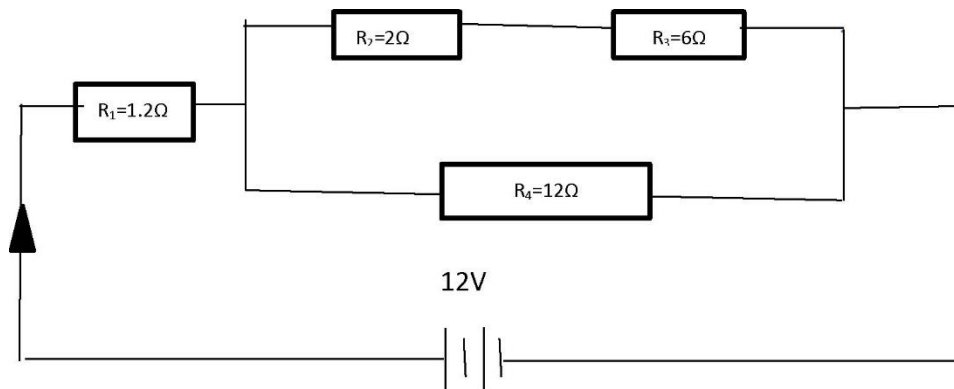


Figure-1

Question No 02

1. Draw the iron-carbon diagram and showing the x, y, and axis. Show also zones of ferrite, austenite, and cementite and describe. (5 Marks)
2. List out some of the main factors in the select of materials for engineering components. (5 Marks)
3. What is the definition of pre-heat the for gas cutting. (3 Marks)
4. What is hardness of materials? (5Marks)
5. Give the names of any four alloy-steel? (2 Marks)

Question No 03

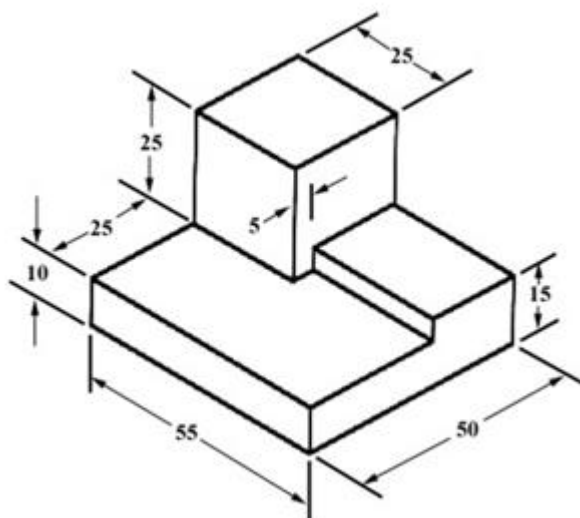
1. Name the main parts of micrometer and caliper (5 Marks)
2. What are the different types of plastics? (5 Marks)
3. Draw the stress -strain curve for, (5 Marks)
 - i. The brittle material
 - ii. The ductile material

Question No 04

1. Briefly explain about cost, profit and price. (6 Marks)
2. Write short notes on the, (9 Marks)
 - a. Preliminary Estimates
 - b. Detailed Estimates
 - c. Activity Estimates

Question No 05

Make a complete orthographic drawing with a front view, End view and a plan view of the model given below. (25 Marks)



Question No. 6

1. Write 5 basic welding joints used for plate welding with aid of sketches.

(10 Marks)

2. Draw simple sketch of a butt joint and show the following. (8 Marks)

a. Root gap

b. Root face

c. Bevel face

d. Bevel angle

(5 Marks)

3. What are the components of an ARC welding (MMAW) system?

(2 Marks)

4. What is meant by “Tack” welding?

Question No 07

1. Compare between riveting and welding.

(5 Marks)

2. Explain main difference between soldering and brazing.

(5 Marks)

3. What are the main difference MAG and TIG welding?

(5 Marks)

4. Why we use AC current or DC revers polarity (DCRP).

(5 Marks)

Question No 08

1. What is distortion?

(5 Marks)

2. What is meant by the term a lack of penetration?

(5 Marks)

3. Explain 3 methods of controlling weld distortion with aid of sketches.

(6 Marks)

4. What are the major causes for undercut?

(4 Marks)

Question No 09

1. Briefly describe what is meant by “record typing”.

(5 Marks)

2. Give 3 examples for records.

(5 Marks)

3. What are the advantages of “WPS”

(5 Marks)

4. Give four documents that should be maintained in welding.

(8 Marks)

Question No 10

1. What is noise pollution and what are the effects of high noise?

(6 Marks)

2. Why is management more concerned to keep “zero accident” at the working station?

(6 Marks)