

KERALA AGRICULTURAL UNIVERSITY
B.Tech. (Food Engineering) - 2011 Admission 1st Semester
Final examination – February – March 2012

Cat. No: Meen 1101
Title: Production Engineering

Marks: 80
Time : 3 hours

I. a. Fill up the blanks with appropriate word(s). (5x1= 5)

1. Carbon content of cast iron is normally ranges from ----- % to -----%.
2. Brass is an alloy composed mainly of ----- and -----.
3. ----- are used for pulling out nails from the wood.
4. The ratio of oxygen and acetylene is ----- for neutral flames.
5. Cutting inside thread is called -----.

I.b. Define the following terms. (5x1= 5)

1. Plasticity
2. Ductility
3. Hardening
4. Reaming
5. Skeleton patterns

II. Write short notes/answers ANY TEN (10x3= 30)

1. Differentiate between Anvil and Beak (Horn).
2. Explain the boring tools in the carpentry shop.
3. Differentiate between Soldering and Brazing.
4. List out the purpose of heat treatment.
5. Different operations that can be carried out in lathe.
6. Structure and formation of grains in metals
7. Principal parts of a shaper
8. Types of moulding sand
9. Ferrous metals and its classifications
10. Hardening of steel
11. Power press
12. Types of grinding machine

III. Write short essay on ANY SIX (6x5= 30)

1. Narrate the different type of hammers used in smithy with neat sketches
2. What is a Stakes and Narrate the different types with neat sketches
3. Explain the different types of welding joints.
4. Explain the different carpentry joints with neat sketches.
5. Explain the different allowances provided in a pattern.
6. Distinguish between Drilling, Boring and Reaming.
7. Describe with a neat sketch the working of a Beveled Edge Grooving Tool as used in carpentry.
8. Name the main tools used in smithy shop. Explain the functions of Swage Block.

IV. Write essay on ANY ONE (1x10= 10)

1. With a neat sketch explain the main parts of a lathe and describe briefly their functions.
2. What is Die casting? State its limitations and applications. Discuss the advantages and disadvantages of hot working of steel.