

Total No. of printed pages = 3

FPT-402/S&MFM/4th Sem/2013/N/C

SERVICING AND MAINTENANCE OF FOOD MACHINERIES

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer any *five* questions.

1. (a) Classify engineering materials. Define ferrous and non-ferrous metals with example. 2+3=5
- (b) What are the factors considered while selecting the materials for engineering purposes ? 3
- (c) Define the terms stress and strain. 3
- (d) Explain the terms creep and plasticity. 3
2. (a) Name the various types of mechanical properties. Describe them briefly. 8

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- (b) Write about the composition and uses of Y-alloy and Magnalium. 6
3. (a) What are the important applications of a fastener ? 3
- (b) Name some important types of fasteners. 4
- (c) Why items such as rope and string not considered fasteners ? 2
- (d) Give the classification of general purpose machine elements with examples. 5
4. (a) Describe the electroplating process with a neat diagram. 10
- (b) Differentiate between drilling, boring and reaming operations. 4
5. (a) Describe the properties and uses of the following non-ferrous metals : 6
- (i) Aluminium
- (ii) Copper.
- (b) Discuss any four types of aluminium alloys giving their composition, properties and uses. 8

6. (a) What are the objectives of heat treatment of metals and alloys ? Name the various heat treatment processes. Describe any two heat treatment processes. $4+1+5=10$

(b) Classify packaging. 2

(c) What is a hand tool ? Give some example of hand tool. 2

7. Write short notes on any *four* of the following : $3 \times 5 \times 4 = 14$

(i) Packaging

(ii) Lubricant and lubrication

(iii) Bronze

(iv) Lead

(v) Cast iron.