

Total No. of printed pages = 3

FPT-504/FSP/5th Sem/2014/N

FOOD STORAGE AND PACKAGING

Full Marks – 70

Pass Marks – 28

Time – Three hours

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

General Instructions :

- * Answer any *five* questions.
- * Make suitable assumption(s) wherever applicable.

1. (a) How do the agricultural commodities get infested by insects ? Explain the sources.

7

(b) What are the requirements of food grain storage structure ? Name any five traditional storage structures.

7

[Turn over

2. (a) How do you construct a Pesa bin ? Write down the points to be considered during design of bin. 7

(b) Define : 2+2+2+1=7

(i) Sphericity

(ii) True density

(iii) Angle of repose

(iv) Equivalent diameter.

3. (a) Define smooth wall and rough wall. 5

(b) What do you understand by core flow and mass flow ? 5

(c) Explain the types of spoilage during storage. 4

4. Write short notes on : 4+6+4=14

(i) Squat silo

(ii) Aseptic packaging

(iii) Bucket elevator.

5. (a) What do you mean by labelling ? Write down the different types of labelling. 6

(b) Why we require packaging ? 3

(c) Discuss different functions and regulations of packaging. 5

6. Differentiate the following :

(a) CAP and MAP

(b) Shallow bin and Deep bin

(c) Belt conveyor and Screw conveyor.

5+5+4=14

7. (a) Wheat weighing 900 kg/m^3 is loaded in a circular concrete silo of 3m internal diameter and a clear height of 8m. The angle of internal friction for wheat is 25° and that for concrete is 24° . Applying Airy theory, calculate the maximum lateral pressure at the bottom of the bin section. 7

(b) Write a brief note on 'cold storage'. 7