

Code No: RT41355

R13

Set No. 1

IV B.Tech I Semester Supplementary Examinations, March - 2021
SEED PROCESSING AND STORAGE ENGINEERING
(Agriculture Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B

PART-A(22 Marks)

1. a) What is Hysteresis effect? [3]
- b) Write about convective drying with neat sketch. [3]
- c) What are the different sources of infestation in grains? [4]
- d) What are the principles of grain storage? [4]
- e) Give the equations for lateral pressure on walls exerted by shallow bins and deep bins [4]
- f) Give the formula for calculation of capacity of bucket elevator and screw conveyor [4]

PART-B(3x16 = 48 Marks)

2. a) What is psychrometric chart? Explain the common uses of it in drying problem analysis. [8]
- b) Explain the methods for determining moisture content. [8]
3. a) Explain in detail about freeze drying with neat sketch. [8]
- b) Explain the working of flat bed type batch dryer. [8]
4. a) Explain the functional requirements of storage. [8]
- b) Write about different types of cooling load. [8]
5. a) Write in detail about moisture migration in grains. [8]
- b) Write in detail about design and control of environment in the storage [8]
6. a) Explain about the design of silo [8]
- b) Explain about vertical silo with neat sketch [8]
7. a) Give a detailed explain of belt conveyor and its parts. [8]
- b) Write about hermetically sealed and air cooling storage. [8]