



Code No: RT31353

R13**SET - 1****III B. Tech I Semester Regular/Supplementary Examinations, October/November - 2017****AGRICULTURAL PROCESS ENGINEERING**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

PART -A

- 1 a) What are the principles of size reduction? [4M]
b) Define mixing and mixing index. [3M]
c) Explain specific gravity separator. [4M]
d) What are the types of moisture? [4M]
e) Draw the flowchart for showing the process of wet milling method of pulses. [3M]
f) Write the importance of material handling devices. [4M]

PART -B

- 2 a) With a neat sketch explain the working principle of hammer mill. Enumerate the advantages and disadvantages of hammer mill. [8M]
b) Explain the factors affecting nature of the material to be conveyed. [8M]
- 3 a) With neat sketch explain the propeller agitators. [8M]
b) Explain the criteria of mixer effectiveness and mixing index for granular solids. [8M]
- 4 a) Explain aerodynamic properties of agricultural products. [8M]
b) With a neat diagram explain briefly about cyclone separator along with related equations. [8M]
- 5 a) With a neat sketch explain deep bed drying. [8M]
b) Explain hysteresis effect. [3M]
c) Explain static and dynamic methods of EMC. [5M]
- 6 a) With a neat sketch explain plate and frame filter press. [8M]
b) Explain briefly the parboiling operations of paddy. [8M]
- 7 a) What is the principle of operation of chain conveyor? Enumerate the advantages and disadvantages of chain conveyor. [8M]
b) Explain principle of operation of screw conveyor with a neat sketch. [8M]

