Code No: **RT41355** **R13** **Set No. 1**

IV B.Tech. I Semester Regular/Supplementary Examinations, Oct/Nov - 2018

SEED PROCESING 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(22Marks)

1	a)	Explain the typical drying curves with neat sketches.	[4]
	b)	Explain why convection drying is considered as the most popular method of grain drying.	[4]
	c)	List out the segments of total refrigeration load.	[4]
	d)	List out and briefly explain destructive agents of grains in storage.	[4]
	e)	Explain bunker storage with any diagram.	[3]
	f)	List out the limitations of pneumatic conveyer.	[3]

PART –B(3 X 16=48Marks)

2	a)	Give a detailed account on any two EMC models. If 1000 kg of paddy seed at 25 % moisture content on wet basis is dried to 14 % moisture content for storage, calculate the amount of moisture removed in drying on wet and dry basis.	[8]
	b)	List out the usefulness of EMC and derive henderson's equation.	[8]
3	a)	Give a detailed account on continuous flowing non mixing type of grain drier with a labeled diagram.	[8]
	b)	Explain the construction and operation of rotary drier.	[8]
4	a)	List out different types of spoilage that occur in storage grains.	[8]
	b)	List out the important changes taking place in grain during storage.	[8]
5	a)	Briefly explain various kinds of losses caused due to insect pest infestation on stored food grains.	[8]
	b)	What are the different methods of estimation of damage available to assess damage caused to food grains?	[8]
6	a)	Give a detailed on the following bulk storage structures (i) Pusa bin (ii) Brick and cement bin (iii) Vertical stylos	[8]
	b)	Give a detailed account on traditional storage structures.	[8]
7	a)	List out the principles to be considered before selecting a conveying system and give a detailed account on belt conveyers idlers.	[8]
	b)	Explain how grains are stored under controlled atmospheric conditions.	[8]