

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: IMSc.
BRANCH: FOOD TECHNOLOGY**

**SEMESTER: IX
SESSION: MO/2024**

SUBJECT: FT513 GRAIN STORAGE TECHNOLOGY

TIME: 3 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data handbook/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	What type of thermal properties are important in the designing of a grain dryer?	[5] 1	3
Q.1(b)	Write the application of engineering properties in the handling and grain storage.	[5] 1	2
Q.2(a)	Explain the term 'Equilibrium moisture content" and describe the principles of grain drying.	[5] 2	1
Q.2(b)	Differentiate between the following: (i) Free water and Bound water. (ii) Constant drying rate and Falling rate of drying rate.	[5] 2	4
Q.3(a)	Briefly discuss the changes occurring in the stored food grains concerning germination and moisture migration during storage.	[5] 4	2
Q.3(b)	Explain the term 'Aeration" and describe the methods of aeration of grains in storage	[5] 4	4
Q.4(a)	Briefly discuss on SILO's and provide a list of the different improved storage structures.	[5] 3	2
Q.4(b)	Describe the advantages and disadvantages of traditional storage methods.	[5] 3	2
Q.5(a)	Define the term 'Integrated Pest Management' and describe the management of rodents in warehouses.	[5] 5	2
Q.5(b)	Elaborate on the types of storage loss caused by insects in stored grains and their control measures.	[5] 5	4

:22/11/2024:E