

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

CLASS: IMSc
BRANCH: FOOD TECHNOLOGY

SEMESTER : V
SESSION : MO/2023

SUBJECT: FT321 CEREAL PULSES & OILSEEDS 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 hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q.1(a)	Differentiate between a. starch gelatinization and retrogradation b. Amylose and amylopectin c. alpha 1-4 and 1-6 linkage d. D and L glucose e. primary and secondary structure of protein	[5]	1	2
Q.1(b)	Explain a. the benefit of modified starch over normal starch, b. different types of modified starch (with example)	[5]	2	2
Q.2(a)	Discuss a. parboiling process b. benefit of parboiling process c. industrial drying of paddy	[5]	1, 2	2
Q.2(b)	Explain the term a. de-husking b. Mist polishing c. 1000 grain weight d. Angle of repose e. bulk and true density	[5]	2	2
Q.3(a)	Differentiate between a. dry and wet milling of Corn. b. dry and wet milling of pulse	[5]	3, 4	2
Q.3(b)	Discuss about high fructose corn syrup? Why focus is been given in millet production?	[5]	5	2
Q.4(a)	Illustrate the malting of barley with suitable explanation of its sub steps (Steeping, germination and klining).	[5]	3	3
Q.4(b)	Illustrate the process and benefits of a. Degumming b. Neutralization c. Silica absorption d. Bleaching e. Hydrogenation	[5]	4	4
Q.5(a)	Describe the terms a. Dairy analogues based on plant milk b. Oleoresin c. essential oil d. Chemical leavening agent e. biological leavening agent	[5]	5	1
Q.5(b)	Explain the a. principle of extrusion. B. different parts of extruder (With suitable diagram explain) c. feeding section, metering section and transition section	[5]	5	1

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