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

CLASS: IMSC **SEMESTER : V**
BRANCH: FOOD TECHNOLOGY **SESSION : MO/19**

SUBJECT: IMF5005 CEREAL TECHNOLOGY

TIME: 3 HOURS **FULL MARKS: 60**

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
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.

Q.1(a)	Differentiate between Kharip, Rabi and Zaid crop?	[2]
Q.1(b)	How gluten Network is formed in dough matrix?	[4]
Q.1(c)	What is anti-nutritional factors? Explain with example. Explain Osborne classification of wheat protein.	[6]
Q.2(a)	Enlist the steps performed in cleaning of wheat.	[2]
Q.2(b)	Differentiate between tempering and conditioning of wheat.	[4]
Q.2(c)	Explain the principle of de-stoner. Discuss how hardness of wheat kernel affects the milling performance?	[6]
Q.3(a)	What do you mean by gelatinization and retrogradation?	[2]
Q.3(b)	Differentiate between flaked, puffed rice and extruded rice.	[4]
Q.3(c)	What is parboiling? How parboiling is related to physiochemical characteristic of rice? Why Indent cylinder is used?	[6]
Q.4(a)	What are the different types of corn commercially available?	[2]
Q.4(b)	Why rye bread is not made from single flower.	[4]
Q.4(c)	Explain the process of malting of barley with its advantages that is obtained in this process.	[6]
Q.5(a)	What do you mean by staling of bread and ropyness in bread?	[2]
Q.5(b)	Mention any three ingredients and their function in bread making.	[4]
Q.5(c)	Give reaction schemes of heat decomposition of baker's ammonia and baker's soda.	[6]
Q.6(a)	Give examples of difficult-to-mill and easy-to-mill pulsed.	[2]
Q.6(b)	Write a short note on sweet and savory products from legumes in India.	[4]
Q.6(c)	Explain the steps of milling of pulses with schematic diagram.	[6]
Q.7(a)	Are there any benefits of using twin screw versus a single screw extruder?	[2]
Q.7(b)	What are the disadvantages of using twin screw extruders rather than single screw extruders?	[4]
Q.7(c)	With schematic representation explain the extrusion process. Why extrusion is also termed as cooking process?	[6]

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