

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP2023)

CLASS: BTECH
BRANCH: CHEMICAL / P&P

SEMESTER : VI
SESSION : SP2023

SUBJECT: CL317 CHEMICAL PROCESS TECHNOLOGY

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	Demonstrate the characteristics of various catalyst used in contact process for sulfuric acid production. Mention their (catalyst) advantages.	[2] 1	2
Q.1(b)	Draw the schematic diagram of DCDA process for sulfuric acid production. List the reasons the process to be more economic and environmentally friendly.	[3] 3,5	3
Q.2(a)	Mention different processes (methods) for soda ash production.	[2] 1	2
Q.2(b)	Present the roles of limestone and coke in soda ash manufacturing.	[3] 2	2
Q.3(a)	Mention the uses of phosphate rock.	[2] 1	1
Q.3(b)	Explain the production of triple superphosphate (TSP) with a diagram.	[3] 1,2	2
Q.4(a)	Interpret the major engineering problems of Dorr Strong acid (sulfuric acid) process for phosphoric acid production from phosphate rock.	[2] 4	2
Q.4(a)	Demonstrate the mercury electrolytic cell for caustic chlorine production with a diagram.	[3] 1	2
Q.5(a)	Write different grades of cement based on their compositions.	[2] 1	1
Q.5(b)	Draw the flowsheet for cement rock beneficiation	[3] 1,2	3

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