

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

**CLASS: BTECH
BRANCH: ALL**

**SEMESTER: VII
SESSION: MO/2022**

SUBJECT: CL322 ENERGY ENGINEERING

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
 2. Candidates attempt for all 25 marks.
 3. Before attempting the question paper, be sure that you have got the correct question paper.
 4. The missing data, if any, may be assumed suitably.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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Q1	Explain the types of Recuperators in detail with illustrations	[5]	CO322.1	2
Q2	Compare and contrast (i) open cycle & closed cycle gas turbine cogen. Systems with figs. (ii) Topping & Bottoming cycle	[5]	CO322.1	2
Q3	(a) Identify and explain the environmentally important energy audit	[2]	CO322.5/1	3,2
Q3	(b) Identify and outline the salient points of a LTC retort having zigzag path with a neat diagram	[3]	CO322.2	3,2
Q4	Distinguish By-product recovery and Non-recovery coke ovens	[5]	CO322.2	4
Q5	Illustrate an industrial distillation column showing the components and sections and list the functions of reflux & reboiler. Also, distinguish TBP & ASTM distillation methods briefly	[5]	CO322.2	4,2

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