

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI**  
**(MID SEMESTER EXAMINATION MO/2024)**

**CLASS: BTECH**  
**BRANCH: CHEMICAL ENGG**

**SEMESTER :VII**  
**SESSION : MO/2024**

**SUBJECT: CL441 PAINTS AND SURFACE COATING 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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Q.1(a)	Write the main functions of paint ingredients	[2]	1 1
Q.1(b)	Discuss the function of metal catalyst for oleo resinous binder for paint film	[3]	3 2
Q.2(a)	Site examples of different types of oils classified on the basis of their drying mode.	[2]	2 1
Q.2(b)	Illustrate the general rules for polymer solubility in solvent	[3]	3 3
Q.3(a)	Define epoxy resin. Write the general properties of epoxy resin	[2]	1 1
Q.3(b)	Recommend some curing agents for epoxy resin	[3]	2 5
Q.4(a)	Differentiate between polyurethane and polyurea	[2]	3 2
Q.4(b)	Define tinting strength of pigment. Illustrate the light fastness of pigments in sun rays.	[3]	4 3
Q.5(a)	Judge the advantage of ZnS over TiO <sub>2</sub>	[2]	2 5
Q.5(b)	Illustrate PVC and CPVC of paint formulation	[3]	1 3

:25/09/2024:M