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

CLASS: BARCH **SEMESTER: II**
BRANCH: ARCHITECTURE & PLANNING **SESSION: SP/2022**

SUBJECT: AR151 ADVANCED BUILDING MATERIALS

TIME: 3 Hours **FULL MARKS: 50**

INSTRUCTIONS:
1. The paper contains 5 questions, each of 10 marks and 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Tables/Data handbook/Graph paper, to be supplied to the candidates in the examination hall.**

Q.1(a) Mention the uses of non-ferrous metals commonly used in engineering structures. With proper justification? [CO1], [Analyze] [5]

Q.1(b) Mention the characteristics of Aluminium as an essential building material. [CO2], [Understand] [5]

Q.2(a) What is terra-cotta? How is it manufactured? [CO1], [Remember] [5]

Q.2(b) Differentiate between the following [5]
a. Porous terra-cotta and polished terra-cotta
b. Salt glazing and lead glaze [CO1], [Understand]

Q.3(a) What is meant by lightweight concrete? What are its advantages? [CO3], [Remember] [5]

Q.3(b) Write short notes on the following [5]
a. Ready-mix concrete
b. Water cement ratio [CO2],[Understand]

Q.4(a) Mention the objective of the painting and point out the characteristics of an ideal paint? [CO1],[Remember] [5]

Q.4(b) Mention the different types of varnishes and describe the process of varnishing on woodwork. [CO1], [Remember] [5]

Q.5(a) Write a critical note on plastics as an engineering material, and justify your answer with examples? [CO3],[Analyze] [5]

Q.5(b) Write short notes on: [5]
a. Fly-ash
b. Fibre-glass [CO3],[Apply]

:::::18/07/2022:::::