BOARD OF TECHNICAL EXAMINATIONS, GOA STATE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

TERM II

(4521) **BUILDING CONSTRUCTION - II**

Pre-requisite - 2055, 2056, 4520

Lectures per week (hrs): 2
Practicals per week (hrs): 4
Course Credits : 6

Theory Marks: Nil
Prog. Ass. Marks: 75 (25+50)
Pract. Exam Marks: 50
Total 125

Semester	Theory	Test	Total	TW	PR	Gr Total
	75	25	100	25	-	125

RATIONALE : - The aim of this course is to introduce the students to a building as a structure comprising of different components and the way it is executed on site at different stages. In this course stress has also been laid in covering the different mason jobs on a construction site.

Sr No	Course Content	Hrs	Marks
I.	Structures a) Load bearing. b) Framed -Definition, Differentiation. -Necessity and characteristics of bonding of composite materials in construction . -Various materials forming a composite bond.	8	5
II	Foundations -Definition, Function, Essential requirement of a good foundation. -Types – shallow and deep, foundation for walls and piers, bearing capacity of soil, setting out of foundation trenches . -Detailing of bonds between stone/ brick as in masonry.	12	10
III.	Walls Types of wall construction – i) Load bearing and its types. – ii) Non-load bearing and its types. a) Stone Masonry - Terminology, materials used, dressing of stones, classification, joints in masonry, supervision of stone masonry construction. b) Brick Masonry - Bond at connections, brick piers and footings, supervision - of brick work, defects, strength of brick masonry.	10 10	20

- Typical structures in brick work, brick work curved in plan, brick knogging.
- Comparision of brick & stone measonry

c) Composite Masonry.
- Brick and stone composite, Reinforced cement and
- Brick/ stone masonry.
- Detailing of bonds between steel & stone/brick in reinforced brick measonry.

		10	
IV	Openings a) Lintels – Definition, terminology and classification b) Arch - Definition, terminology, stability, classification, construction. - Detailing of bonds between steel, concrete, stone & bricks in lintels.	12	15
V	Floor and wall finishes a) Floor finishes. - Introduction, components, selection of flooring material, types of flooring and characteristics of each. Cladding – materials used for cladding , choice of materials and fixing.	16	10
VI	Stairs. Introduction, terminology, requirements of good staircase, considerations for comfort, types of stairs.	18	15

Term work/practicals

- Sketches with notes on topic under Sr.No. I
- 1 sheet on topic under Sr.No. II
- 2 sheets on topic under Sr.No. III
- 2 sheets on topic under Sr.No. IV
- 2 sheets on topic under Sr.No. V
- 2 sheets on topic under Sr.No. VI

METHODS OF TEACHING

1. Regular site visits for study of building under execution.
2. Sketching of construction details on site.
3. Handling different materials on site .
4. Drafting of construction details in class,

REFERENCE BOOKS:-

1) Building construction - B. C. Punmia.
2) Building construction - Bindra & Arora .
3) Building construction – Sushil Kumar.
4) Building construction - D. K. Ching.
5) Visual Dictionary of Architecture - D. K. Ching.