SE507: Advanced Design of Concrete Structures

Teaching Scheme			Credits	Marks Distribution				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE	CE	ESE	CE	
3	2	0	5	70	30	30	20	150

Course Content:

Sr. No	Topics	Teaching Hrs.
1	**Serviceability Criteria :** Serviceability Criteria like deflections and Crack width, Vibration etc.	03
2	**Flat Slab:** Proportioning, analysis and design of flat slab by direct design method.	04
3	**Grid Floors:** Analysis and Design of grid floor by Rankine Grashroff Classical equivalent plate theory and IS 456 Design.	05
4	**Deep Foundations:** Design of rafts, Strip footing and pile cap.	07
5	**Domes:** Design of domes with openings	03
6	**Water Tank:** Design of Intze type shaft supported water tank.	10
7	**Folded Plate Roofs:** Analysis and design of Folded plate roofs.	06

8	**Bunker and Silos:**	04
	Design of Bunker and Silos.	

Total Hrs. 42

Reference Books:

1. V. L. Shah and S. R. Karve, "*Design of Multi-storied Building (G+3)*", Structure Publications, Pune.
2. KrishanaRaju N., "*Advanced Design of Concrete Structures*". Tata Mc-Graw Hill, Delhi.
3. Sinha S. N, "*Reinforced Concrete Design*". Tata Mc-Graw Hill, Delhi.
4. Jain A. K., "*Limit State Design of Reinforced Concrete*". Nemchand & Bros., Roorkee.
5. Varghese A. V, "*Advanced Reinforced Concrete*", Prentice Hall of India.
6. Shah H. J., "*Reinforced concrete, Vol - I and II*". Charotar Publication, Anand.
7. *IS Codes* : IS:456, IS:875, IS:1893 (I, II, and III), IS:4326, IS:13920, IS: 4995 (I & II), SP:16, SP:34.