# DR. A.P.J ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW



# EVALUATION SCHEME & SYLLABUS FOR

**B. TECH. THIRD YEAR** 

(CIVIL ENGINEERING)

(Effective from session 2020-21)

# SIXTH SEMESTER

# **CIVIL ENGINEERING**

# **SESSION 2020-21**

S.No	Subject Code	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	KCE 601	Design of Concrete Structures	3	1	0	30	20	50		100		150	4
2	KCE 602	Transportation Engineering	3	1	0	30	20	50		100		150	4
3	KCE 603	Environmental Engineering	3	1	0	30	20	50		100		150	4
4		Departmental Elective-III	3	0	0	30	20	50		100		150	3
	KCE 061	Advance Structural Analysis											
	KCE 062	River Engineering											
	KCE 063	Repair and Rehabilitation of Structures											
	KCE 064	Foundation Design											
5		Open Elective-I	3	0	0	30	20	50		100		150	3
6	KCE 651	Transportation Engineering Lab	0	0	2				25		25	50	1
7	KCE 652	Environmental Engineering Lab	0	0	2				25		25	50	1
8	KCE 653	Structural Detailing Lab	0	0	2				25		25	50	1
9	KNC601/ KNC602	Constitution of India, Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			
10		MOOCs (Essential for Hons. Degree)											
		Total	17	3	6							900	21

# **NOTE:**

- 1. Regular classroom interaction with industry experts is to be ensured in all theory courses (minimum two expert talks from relevant Industry).
- 2. Working on experiments using virtual labs is to be ensured in lab courses.
- 3. Student's visit to Industry/Industry Expert's project site must be arranged as & when possible.

#### KCE 652 ENVIRONMENTAL ENGINEERING LAB

(L-T-P 0-0-2) Credit -1

# PART -A (To be performed in lab)

- 1. Determination of turbidity and conductivity.
- 2. Determination of pH, alkalinity and acidity.
- 3. Determination of hardness and chlorides.
- 4. Determination of residual chlorine.
- 5. Determination of MPN (most probable number) of coliforms.
- 6. Measurement of SPM and PM10 with high volume sampler.
- 7. Measurement of sound level with sound level meter.
- 8. Determination of total, suspended and dissolved solids.
- 9. Determination of BOD.
- 10. Determination of COD.
- 11. Determination of kjeldahl nitrogen.
- 12. Determination of fluoride.
- 13. Determination of optimum dose of coagulants by Jar Test Apparatus.
- 14. Field Visit of Water/ Sewage Treatment Plant of a nearby area.

# Note: 1. Experiment at S.NO. 14 is mandatory.

2. Any 8 Experiments out of the S.NO 1 to 13 are to be performed.

#### **PART B**

- 1. It is mandatory to perform experiments using virtual lab where ever applicable.
- 2. Relevant specifications and IS codes must be studied.

#### **References:**

- 1. A.P.H.A. "Standard Methods for the Examination of Water and Wastewater", American Public Health Association.
- 2. Sawyer, C.N., McCarty, P.L. & Parkin, G.F. "Chemistry for Environmental Engineering", McGraw Hill.
- 3. Mathur, R.P. "Water & Wastewater Testing", Lab Manual, Roorkee.
- 4. O P Gupta, Environmental Chemistry, "Khanna Publishing house.