

ARKA JAIN UNIVERSITY

School of
Engineering & Information Technology

Department of Civil Engineering

(Semester I - VIII)

Scheme of Study
(w.e.f Batch 2020)



ARKA JAIN
University
Jharkhand

SEMESTER I

Name of the Subject	Group	L-T-P	Credit
Engineering Mathematics–I	A & B	03-01-2000	4
Engineering Chemistry	A	3-0-0	3
Programming for Problem Solving	B	3-0-0	3
Basic Electrical Engineering	A	03-01-2000	4
Engineering physics	B	03-01-2000	4
Engineering Mechanics	A	3-0-0	3
English for Communication	B	3-0-0	3
Constitution of India	B	0-0-0	0
Engineering Chemistry Lab	A	0-0-1	1
Engineering Physics Lab	B	0-0-1	1
Basic Electrical Engineering Lab	A	0-0-1	1
Programming for Problem Solving Lab	B	0-0-2	2
Engineering Mechanics Lab	A	0-0-1	1
Engineering Graphics & Design	A	0-0-2	2
Workshop Practices	B	0-0-2	2
TOTAL	A or B	12-02-2005	19

SEMESTER II

Name of the Subject	Group	L-T-P	Credit
Engineering Mathematics–II	A & B	03-01-2000	4
Engineering Chemistry	B	3-0-0	3
Programming for Problem Solving	A	3-0-0	3
Basic Electrical Engineering	B	03-01-2000	4
Engineering physics	A	03-01-2000	4
Engineering Mechanics	B	3-0-0	3
English for Communication	A	3-0-0	3
Constitution of India	A	0-0-0	0
Engineering Chemistry Lab	B	0-0-1	1
Engineering Physics Lab	A	0-0-1	1
Basic Electrical Engineering Lab	B	0-0-1	1
Programming for Problem Solving Lab	A	0-0-2	2
Engineering Mechanics Lab	B	0-0-1	1
Engineering Graphics& Design	B	0-0-2	2
Workshop Practices	A	0-0-2	2
TOTAL	A or B	12-02-2005	19

SEMESTER –I (Group-A)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Engineering Chemistry	BSC	3	3	100	70	20	5	5
Engineering Mathematics–I	BSC	4	4	100	70	20	5	5
Basic Electrical Engineering	ESC	4	4	100	70	20	5	5
Engineering Mechanics	ESC	3	3	100	70	20	5	5
Engineering Chemistry Lab	BSC	1	2	50	35	5	5	5
Basic Electrical Engineering Lab	ESC	1	2	50	35	5	5	5
Engineering Mechanics Lab	ESC	1	2	50	35	5	5	5
Engineering Graphics& Design	ESC	2	4	50	35	5	5	5
TOTAL		19	24	600	420	100	40	40

SEMESTER I (Group-B)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Engineering physics	BSC	4	4	100	70	20	5	5
Engineering Mathematics –I	BSC	4	4	100	70	20	5	5
Programming for Problem Solving	ESC	3	3	100	70	20	5	5
English for Communication	HSMC	3	3	100	70	20	5	5
Constitution of India	MC	0	2	50	35	10	2.5	2.5
Engineering physics Lab	BSC	1	2	50	35	5	5	5
Programming for Problem Solving Lab	ESC	2	4	50	35	5	5	5
Workshop Practices	ESC	2	4	50	35	5	5	5
TOTAL		19	26	600	420	105	37.5	37.5

SEMESTER II (Group-A)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Engineering physics	BSC	4	4	100	70	20	5	5
Engineering Mathematics – II	BSC	4	4	100	70	20	5	5
Programming for Problem Solving	ESC	3	3	100	70	20	5	5
English for Communication	HSMC	3	3	100	70	20	5	5
Constitution of India	MC	0	2	50	35	10	2.5	2.5
Engineering physics Lab	BSC	1	2	50	35	5	5	5
Programming for Problem Solving Lab	ESC	2	4	50	35	5	5	5
Workshop Practices	ESC	2	4	50	35	5	5	5
TOTAL		19	26	600	420	105	37.5	37.5

SEMESTER –II (Group-B)

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Engineering Chemistry	BSC	3	3	100	70	20	5	5
Engineering Mathematics– II	BSC	4	4	100	70	20	5	5
Basic Electrical Engineering	ESC	4	4	100	70	20	5	5
Engineering Mechanics	ESC	3	3	100	70	20	5	5
Engineering Chemistry Lab	BSC	1	2	50	35	5	5	5
Basic Electrical Engineering Lab	ESC	1	2	50	35	5	5	5
Engineering Mechanics Lab	ESC	1	2	50	35	5	5	5
Engineering Graphics& Design	ESC	2	4	50	35	5	5	5
TOTAL		19	24	600	420	100	40	40

SEMESTER-III

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Engineering Mathematics - III	BSC	4	4	100	70	20	5	5
Biology for Engineers	BSC	3	3	100	70	20	5	5
Surveying & Geomatics	PCC	3	3	100	70	20	5	5
Mechanics of Solid	PCC	3	3	100	70	20	5	5
Introduction to Civil Engineering	HSMC	3	3	100	70	20	5	5
Environmental Science	MC	0	2	50	35	10	2.5	2.5
Surveying & Geomatics Lab	PCC	1	2	50	35	5	5	5
Mechanics of Solid	PCC	1	2	50	35	5	5	5
Computer Aided Civil Engineering Drawing	ESC	2	4	50	35	5	5	5
TOTAL		20	26	700	490	125	42.5	42.5

SEMESTER-IV

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Material Testing & Evaluation	PCC	3	3	100	70	20	5	5
Engineering Geology	PCC	3	3	100	70	20	5	5
Fluid Mechanics	PCC	3	3	100	70	20	5	5
Structural Analysis - I	PCC	3	3	100	70	20	5	5
Geotechnical Engineering	PCC	3	3	100	70	20	5	5
Civil Engineering- Societal & Global Impact	HSMC	3	3	100	70	20	5	5
Material Testing & Evaluation	PCC	1	2	50	35	5	5	5
Engineering Geology Lab	PCC	1	2	50	35	5	5	5
Geotechnical Engineering Lab	PCC	1	2	50	35	5	5	5
Fluid Mechanics Lab	PCC	1	2	50	35	5	5	5
TOTAL		22	26	800	560	140	50	50

SEMESTER V

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Hydraulic Engineering	PCC	3	3	100	70	20	5	5
Structural Analysis II	PCC	3	3	100	70	20	5	5
Hydrology & Water Resource Engineering	PCC	3	3	100	70	20	5	5
Environmental Engineering-I	PCC	3	3	100	70	20	5	5
Open Elective I	HSM C	3	3	100	70	20	5	5
Humanities I								
Professional Practice, Law & Ethics								
Organizational Behavior								
Disaster Preparedness & Planning	PCC	3	3	100	70	20	5	5
Essence of Indian Knowledge Tradition	MC	0	2	50	35	10	2.5	2.5
Hydraulic Engineering Lab	PCC	1	2	50	35	5	5	5
Structural Analysis II Lab	PCC	1	2	50	35	5	5	5
Internship / Industrial Training/Vocational Training (3-4 week)	PROJ	2	0	50	35	15	0	0
TOTAL		22	24	800	560	155	42.5	42.5

SEMESTER VI

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Construction Engineering & Management	PCC	3	3	100	70	20	5	5
Transportation Engineering-I	PCC	3	3	100	70	20	5	5
Engineering Economics, Estimation & Costing	PCC	3	3	100	70	20	5	5
Elective I	PEC	3	3	100	70	20	5	5
Rock Mechanics								
Foundation Engineering								
Elective II	PEC	3	3	100	70	20	5	5
Environmental Engineering II								
Rural water supply & Onsite Sanitation System								
Elective III	PEC	3	3	100	70	20	5	5
Design of Steel Structure								
Earthquake Engineering								
Design of Concrete Structures-I	PCC	3	3	100	70	20	5	5
Transportation Engineering I Lab	PCC	1	2	50	35	5	5	5
TOTAL		22	23	750	525	145	40	40

SEMESTER VII

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA*	Attendance
Elective IV	PEC	3	3	100	70	20	5	5
Air and Noise Pollution and Control								
Solid and hazardous Waste Management								
Elective V	PEC	3	3	100	70	20	5	5
Design of Concrete Structure - II								
Prestressed Concrete								
Open Elective II	OEC	3	3	100	70	20	5	5
Metro System & Engineering								
History of Science & Engineering								
River Engineering	PCC	3	3	100	70	20	5	5
Minor Project	PROJ	3	6	100	70	30	0	0
Summer Internship – II –(4-6 Week)	PROJ	3	0	100	70	30	0	0
TOTAL		18	18	600	420	140	20	20

SEMESTER VIII

Name of the Subject	Type of Paper	Credit	Contact Hours Per Week	Total Marks	End Term Theory/Practical Exam	Mid Term Theory/Practical Exam	CIA *	Attendance
Elective VI	PEC	3	3	100	70	20	5	5
Bridge Engineering								
Ground Water Engineering								
Elective VII	PEC	3	3	100	70	20	5	5
Railway Engineering								
Traffic Engineering and Management								
Open Elective III	OEC	3	3	100	70	20	5	5
Soft Skills and Interpersonal Communication								
Human Resource Development and Organizational Behavior								
Open Elective IV	OEC	3	3	100	70	20	5	5
Civil Engineering Design-I								
Geographic Information Systems and Science								
Major Project	PROJ	8	16	200	140	60	0	0
Extra-Curricular/ Co-Curricular Activity	PROJ	0	0	100	70	30	0	0
TOTAL		20	28	700	490	170	20	20