Academic year 2022-2023 (Odd Sem)

DEPARTMENT OF

CIVIL ENGINEERING

Date	23-02-2023	Maximum Marks	50 +10
Course Code	22ES14B	Duration	90 Min (T) + 20 Min (Q)
Sem	I	CIE II	
ELEMENTS OF CIVIL ENGINEERING- (ENGINEERING SCIENCE COURSE)			

PART – A

Q. No.	Questions	Marks	CO	BTL
1.	List any four components of harbour	2	4	1
2	List the materials used for construction of flexible pavement	2	4	1
3	Which type of tunnel is adopted for sewage transportation.	2	4	1
4	What is weathering of rocks	2	1	1
5	Which types of foundation is recommended when the column is close to the property line	2	1	1

PART – B

Q. No.	Questions	Marks	CO	BTL
1.	Explain the classification of roads in India.	10	4	2
2.	With a neat sketch, explain the components and functions of flexible pavements and rigid pavements	10	4	2
3.	Mention the functions and requirements of sleepers	10	4	1
4	List the factors to be considered in selection of foundation.	10	1	1
5	Define shallow and deep foundation. Discuss any two types of shallow foundations and deep foundations.	10	4	2

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	14	**	**	46	30	30	**	**	**	**

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RV Educational Institutions
RV College of Engineering

Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavi

Approved by AICTE, New Delhi

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Academic year 2022-2023 (Odd Sem)

DEPARTMENT OF

CIVIL ENGINEERING

Date	21-03-2023	Maximum Marks	50 +10
Course Code	**22ES14B**	Duration	90 Min (T) + 20 Min (Q)
Sem	I	CIE III	
ELEMENTS OF CIVIL ENGINEERING- (ENGINEERING SCIENCE COURSE)			

PART – A

Q. No.	Questions	Marks	CO	BTL
1.	State Principle of transmissibility of forces	2	3	1
2	Differentiate between resolution and composition of forces	2	3	2
3	What are the SI units for moment, couple, force, resultant?	2	3	1
4	Determine moment of a force system shown in figure 1 with respect to O.	2	3	2
5	List any two characteristics of Couple.	2	3	1

PART – B

Q. No.	Questions	Marks	CO	BTL
1.	Explain various types of idealization assumed in mechanics	10	3	2
2.	Enumerate various types of force system with a neat diagram and examples	10	3	2
3.	Determine the magnitude and direction of the resultant for the system of coplanar concurrent forces shown in figure 2.	10	3	3
4	Two forces acting on a body are 500N and 1000N as shown in figure 3.Determine the third force F such that the resultant of all forces is 1000N directed at 45^0 to the x axis.	10	3	4
5	Determine the magnitude and direction of the resultant for the system of coplanar non concurrent forces shown in figure 4. Also determine the position of resultant with respect to 'O'.	10	3	3

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

Marks Distribution	Particulars		CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
	Test	Max Marks	35	**	15	**	**	20	10	10	10	**

PTO