

**Scheme Of Evaluation**  
**Internal Assessment Test 1 – March 2019**

<b>Sub:</b>	Analysis Of Determinate Structures						<b>Code:</b>	17CV42	
<b>Date:</b>	05/03/2019	<b>Duration:</b>	90mins	<b>Max Marks:</b>	50	<b>Sem:</b>	4th	<b>Branch:</b>	CIV

**Note:** Answer Any Three Questions from Part A and one From Part B

Question #	Description	Marks Distribution	Max Marks																		
1	1.a. List of Structural forms Three types	1 m. 1 x 3 = 3	20 M																		
	1.b. Find Reactions force $R_A = 3 \text{ kN}, R_B = 9, H_A = 8$ Find forces in members	2 x 3 = 6																			
	<table border="1"> <thead> <tr> <th>Member</th> <th>Force (kN)</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>AC</td> <td>5</td> <td>C</td> </tr> <tr> <td>AD</td> <td>12</td> <td>T</td> </tr> <tr> <td>DC</td> <td>12</td> <td>T</td> </tr> <tr> <td>DB</td> <td>12</td> <td>T</td> </tr> <tr> <td>BC</td> <td>15</td> <td>C</td> </tr> </tbody> </table>	Member	Force (kN)	Type	AC	5	C	AD	12	T	DC	12	T	DB	12	T	BC	15	C	2 2 2 2 2	16 m.
Member	Force (kN)	Type																			
AC	5	C																			
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2	2.a. Minimum 4 Assumptions	1 x 4 = 4	20 M																		
	$R_A = 5 \text{ N}, R_B = 6 \text{ N}$ Force in each member. <table border="1"> <thead> <tr> <th>Member</th> <th>Force</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>AC</td> <td>3.46</td> <td>T</td> </tr> <tr> <td>AD</td> <td>6.93</td> <td>C</td> </tr> </tbody> </table>	Member		Force	Type	AC	3.46	T	AD	6.93	C	2 2									
Member	Force	Type																			
AC	3.46	T																			
AD	6.93	C																			

	CD	CD 5.2 T				
		CE 5.19 C	$Q \times 7 = 14$	16 m.		
		CB 8.66 T				
		BE 10.7 C				
		ED 7 C				
3	a)	Destination Fund forces in member.	4	4		20 M
	3b.	AB 1.77 C AF 2.25 T ED 1.01 C EF 0.75 T BC 0.34 C BF 1.41 C CD 0.35 C DF 0.3 T	2 x 3	16 m.		
4		$R_A = 25 N, R_B = 75 N$ $F_{AC} = 50$ C $F_{AB} = 43.2$ T $BC = 86.4$ C	4   2 x 3 = 6	10 m		10 M
5		$R_A = 25 N, R_B = 75 N$ $AC = 50$ C $AB = 43.2$ T $BC = 86.4$ C	4  2 x 3 = 6	10 m		10 M