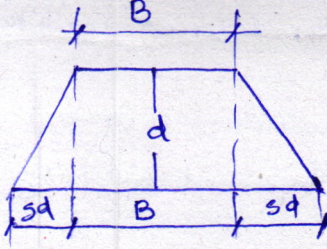


Qn. No.	Scoring Indicators	Split score	Total score														
I	<p>1. Quantity surveying is the calculation of the quantities of the various items of work, ascertaining rates and estimating the cost.</p> <p>2. Rate is provided for certain small items for which detailed quantities cannot be taken easily - lumpsom - Lumpsum amount provided for the petty items - sundries -</p> <p>3. Cent to cent method and long wall short wall (independently)</p> <p>4. It is a book in which the rates of all materials at sources and wages of labour, conveyance charges of materials etc were fixed by the competent authority for each year. Adoption of various govt departments</p>	2															
	<p>5.</p> <table border="1" data-bbox="188 879 1150 1106"> <thead> <tr> <th>Item (1)</th> <th>Description (2)</th> <th>Qty (3)</th> <th>Unit (4)</th> <th>Rate (5)</th> <th>Amount (6)</th> <th>Remarks (7)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Item (1)	Description (2)	Qty (3)	Unit (4)	Rate (5)	Amount (6)	Remarks (7)								2	10
Item (1)	Description (2)	Qty (3)	Unit (4)	Rate (5)	Amount (6)	Remarks (7)											
	PART-B																
II	<p>1. Revised estimate is a detailed estimate, should be accompanied by a comparative statement showing the variations of each item of works, its quantity, rate and cost under original and revised side by side, the excess or saving and reason for variations.</p> <p>1. When original sanctioned estimate exceed the amount of administrative sanction by more than 5%.</p> <p>2. When expenditure on a work exceeds the amount of sanctioned administrative sanction by more than 10%.</p> <p>3. Material deviation from the original proposal, even though the cost may be met from the sanctioned amount.</p>	1 1/2															
	<p>2. Sectional area A = Area of central portion + area of two side portion</p> <p>$A = Bd + 2(\frac{1}{2}sd \times d) = Bd + sd^2$</p>	4 1/2															
		<p>Fig: 2</p> <p>2</p> <p>2</p>	6														
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4.	Plain cement concrete Pcc 1:4:8 1. around																																						
	1	29.2	0.9	0.2	5.256																																		
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1	6.3	0.9	0.2	1.134																																			
Cross wall (2)																																							
1	8.3	0.9	0.2	0.592																																			
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5.	For 8 cm compacted layer loose soil is 12 cm. So Qty of metal = 1000 x 4.2 x 12 cm = <u>504 m³</u>																																						
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Under side plaster of roof slab.																																							
1. Hall																																							
2. Bed																																							
3. Kitchen.																																							
7.	<p>The measurement shall be itemwise for the finished items of work. = booking dimensions, the order shall be in the sequence of length-breadth, height</p> <ul style="list-style-type: none"> - Dimensions shall be measured to the nearest 0.01 m - Areas shall be measured to the nearest 0.01 m² - cube contents shall be worked out up to the nearest of 0.01 m³. - The work under different conditions and nature shall be measured separately. - The bill of quantities shall fully described materials, proportions and workmanship and accuracy represent the work to be executed 							1 1/2 x 4 = 6	6																														
III a.	<p>Part C Plinth area estimate:- Plinth area is the built up covered area of a building measure at floor level of any storey. It is calculated by taking the external dimensions of the building at the floor level excluding</p>																																						

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	<p>Plinth offset if any. The approximate cost can be arrived by multiplying the plinth area of the building with the plinth area rate.</p> <p>Cubical content estimate :- In this method the cost of the structure is calculated approximately by finding the cubical volume or content - length x width x height and multiplied with rate. The height of the building should be in between plinth level and upto the top of roof slab in case of RCC flat roof and for pitched roof height is taken from plinth level to the chaff gable end.</p>	3	
b.	<p>Plinth area = 150 m^2</p> <p>Plinth area rate = $2000/\text{m}^2$</p> <p>Cost = $2000 \times 150 = \text{Rs } 300000$</p> <p>1% architectural treatment = $300000 \times \frac{1}{100} = 3000$ ✓</p> <p>8% water supply & sanitary = $300000 \times \frac{8}{100} = 24000$ ✓</p> <p>8% electricity & L&M charge = $300000 \times \frac{8}{100} = 24000$ ✓</p> <p>2% supervision charge = $300000 \times \frac{2}{100} = 6000$ ✓</p> <p>Total Cost = <u><u>357000</u></u> ✓</p>	4	7
IV a.	<p><u>Duties</u> of a quantity surveyor.</p> <ul style="list-style-type: none"> - Preparation of Bill of quantities - Visiting the site and assess the quantity and quality of work. - Preparation of adjustment of bills - May required to give advice in arbitration or Legal cases in solving court cases. <p><u>Requirements</u></p> <ul style="list-style-type: none"> - able to read plan and mark them on the ground. - Familiar with modern construction procedure and techniques - thorough knowledge of procedure and practice. - accurate in his work, calculations, and taking measurements - sound knowledge of building materials and construction 	3 x 1 = 3	8
		4 x 1 = 4	7

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b.	$d_1 = 5.5$ $d_2 = 3.2$ $d_3 = 2$ $d_4 = 1.2$ $d_5 = 1$	$A_1 = Bd + sd^2 = 10 \times 5.5 + 2 \times 5.5^2 = 115.5$ $A_2 = " = 10 \times 3.2 + 2 \times 3.2^2 = 52.48$ $A_3 = " = 10 \times 2 + 2 \times 2^2 = 28$ $A_4 = " = 10 \times 1.2 + 2 \times 1.2^2 = 14.88$ $A_5 = " = 10 \times 1 + 2 \times 1^2 = 12$	$d = 1$ $Area = 2$ $Frap = 2 \frac{1}{2}$ $Simp = 2 \frac{1}{2}$																																																																																																																																
	<p>Trapezoidal Rule</p> $= \frac{d}{2} [(1^{st} + Last) + 2 (Remaining Area)]$ $= \frac{30}{2} (115.5 + 12) + 2 (52.48 + 28 + 14.88)$ $= 4773.3 m^3$ <p>Simpson's rule</p> $= \frac{d}{3} [(1^{st} + 2^{nd} + 3^{rd}) + 2 (odd) + 4 (even)]$ $= 45 \frac{30}{3} [(115.5 + 12) + 2 (28) + 4 (52.48 + 14.88)]$ $= 4529 3$ $= 4529 m^3$		8.																																																																																																																																
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