

Design, Technology and Innovation, May 2024

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Assignment 4

W4A4Q1-MSQ: What is the benefit of using sheet metal deep drawn process instead of welding pipes?

1. It eliminates the need for manual labor
2. It speeds up the manufacturing of the cycles
3. It reduces the cost of manufacturing by 75%
4. It reduces wastage

W4A4Q2-MSQ: What were the problems with the Letter Box that Prof. B. K. Chakravarthy observed at IIT Campus?

1. Unable to touch it because it gets scalding hot during noon
2. Rusted and broken
3. Soggy letters inside due to rain penetration
4. It was a hindrance to commuters

W4A4Q3-MCQ: How did Prof. B. K. Chakravarthy manage to lower the cycle's production cost while he was creating Hero cycles?

1. He used the car industries manufacturing technique called deep drawing
2. He used plastic sheets in the manufacturing pipeline
3. He reduced the size of the wheel to reduce the raw materials used
4. He reduced the number of spokes

W4A4Q4-MCQ: Why did welding affect the design & performance of the cycles?

1. It makes the frame super-hot
2. It reduces the weight of the frame extremely
3. It makes the frame uneven due to which the joints suffer from cracks
4. It makes the cycle more rugged on the surface, hurting the cyclist's thighs

W4A4Q5-MCQ: What is a montage?

1. A canvas required to cover the prototype from dust
2. A colorless mock-up
3. A one side mock-up of a symmetrical product
4. 3D renders

W4A4Q6-MCQ: What was the product brief for the design of the New Hero Cycle?

1. Design a bicycle that can be compared to the new scooter
2. Design a bicycle that is cost effective
3. Design a bicycle that can be used in both hilly and city traffic
4. Design a bicycle that is powered

W4A4Q7-MSQ: What was the value that the Electronic Voting Machine provided to the users?

1. It mitigated the fear illiterate voters had
2. It made the voting process quick
3. It allowed users to vote from home
4. It did not add any value

W4A4Q8-MCQ: How did Prof. B. K. Chakravarthy improvise the first Letter Box design which looked like a dustbin?

1. By assuming himself that it appears to him as a dustbin
2. By studying design books, he realized that the Letter Box was indeed looking like a dustbin
3. By conducting user observation & taking feedback from users
4. By watching Instagram reels & YouTube videos trolling the design

W4A4Q9-MCQ: The failure of the first post box could be considered as:

1. The 1st Pitfall (Research to Design)
2. The 2nd Pitfall (Design to Prototype)
3. The 3rd Pitfall (Prototype to Pilot Production)
4. The 4th Pitfall (Pilot to Mass Production)

W4A4Q10-MCQ: What strategy was used to ensure that the dual chambered bottle discussed in Prof. B K Chakravarthy's lecture is completely resistant to leaks?

1. The shutter of the bottle was made with rubber
 2. The shutter of the bottle was tapered so as to lock the bottle
 3. The shutter of the bottle was automatically locked
 4. The shutter of the bottle was added with grease
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