## Design, Technology and Innovation, May 2024

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## **Assignment 8**

W8A8Q1-MSQ: Haptic output is comparatively better than auditory output because.

- 1. A Visually impaired person is naturally more sensitive to haptic outputs
- 2. It does not go out loud in public
- 3. It does not get subdued in traffic noise
- 4. Haptic outputs are much cheaper than auditory outputs

W8A8Q2-MCQ: Smart canes have what novel feature?

- 1. Usage of ultrasound to detect obstacles
- 2. Usage of laser to detect obstacles
- 3. Detection of objects above a certain height only
- 4. Detection of manholes

W8A8Q3-MCQ: In the very first prototype of the Smart cane, what was wrong as pointed out by the users?

- 1. The centre of gravity of the device was off
- 2. The shape of the device was small and compact
- 3. The material of the device was skin friendly
- 4. The colour of the device was not appealing

W8A8Q4-MCQ: What is the problem with the waterproof cane during the rains?

- 1. It will start beeping as it detects raindrops as objects
- 2. It will fail after a while
- 3. It will have leakage due to heavy rainfall
- 4. It will become inactive

W8A8Q5-MSQ: Why did the first prototype of Smart cane by Computer science students was not up to the mark despite brilliant software programming & computational abilities?

- 1. Because the Smart cane was unable to detect obstacles appropriately
- 2. Because the students could not work on the center of gravity & other physical attributes of the Smart cane
- 3. Because they lacked material knowledge
- 4. Because they had to settle with substandard materials due to lack of funds

W8A8Q6-MSQ: Why is the detachability factor of the Smart cane important?

- 1. In case the white cane gets damaged, the smart cane is safe
- 2. There is no need to buy a separate white cane to use the smart cane
- 3. It is efficient to clean the white cane when it is dirty
- 4. To keep the Smart cane dry when it starts raining

W8A8Q7-MSQ: Why do the other solutions like Goggles, Torch etc. fail miserably to solve what Smart Cane had been solving?

- 1. Because they underestimated the power of the existing cane design and its usage behavior
- 2. Because the alternatives are very expensive
- 3. Because the visually impaired people developed uneasiness while using the wearables
- 4. Because they die out of battery sooner

W8A8Q8-MCQ: Why were foreign mobility products for visually challenged individuals discarded besides usability issues?

- 1. The foreign products were extremely colorful & vibrant
- 2. They were not durable
- 3. They required battery charging frequently which the blind found it to be annoying
- 4. They were super-expensive

W8A8Q9-MCQ: How does one know if the product is actually affecting the health of the user?

- 1. The smart cane production team self certifies the product as safe
- The smart cane innovation team manually tests the product and certifies it to be safe
- 3. The smart cane is certified with CE & FDA, which means it is safe to use
- 4. The smart cane is certified by health experts from the Ministry of health

W8A8Q10-MCQ: As was talked about in the "Smart Cane for the Blind" lesson, why was the total length of the attaching device cut shorter to fit blind canes that fold in 5 segments instead of 4?

- 1. So that it would be convenient to carry by the users
- 2. So that it would provide better grip to the users
- 3. So that women users could keep the cane in their purse comfortably
- 4. So that it can be more ergonomic

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