

Family name: ..... Student ID (Matrikelnummer): .....

Please use an empty sheet of paper (or the printed questions) to write down your name and your answers (also write the number of question). Adjust your camera so that you can be seen when writing. This is not an open-book exam, it is not allowed to use any notes, texts or other resource materials.

You have 30 minutes for the answers, then please take a photo or scan your answers and upload them to TUWEL or send via Email to [paul.panek@tuwien.ac.at](mailto:paul.panek@tuwien.ac.at). Stay connected until confirmation that your answers are readable.

S1: 19-17

U2: 16,5-14,5

B3: 14-12

G4: 11,5-10

N5: 9,5-0

Please only give SHORT answers especially if no description is requested, it's not the length that counts!

1. Which **aids for using money** do you know for blind persons? List two of them! (2 Pt.)

a) .....

b) .....

2. **Accessibility features** for augmented input & output are integrated in today's operating systems (Windows, Android, MacOS, iOS etc.). Give 4 examples of typical accessibility features and briefly describe the benefit for certain user groups. (4 Pt.)

a) .....

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b) .....

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c) .....

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d) .....

.....

3. Estimate roughly the **amount of disabled people** in the population. Why is it often difficult to compare national statistics on disability from different countries? (2 Pt.)

Percentage (%) of total population: .....

Difficulties comparing statistics: .....

4. **Cataract, Macular Degeneration and Glaucoma** cause impairments of different parts of an organ. Name the organ and describe the effect(s). (2 Pt.)

Organ affected: .....

Effect(s) of a Cataract: .....

Effect(s) of Macular Degeneration: .....

Effect(s) of a Glaucoma: .....

5. What important changes did the **ICF** implement over **ICIDH**? (1 Pt.)

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6. Describe the **operating principle** of an electro-magnetic Braille display and an advantage and a disadvantage (2 Pt.)

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7. What environment/design **requirements do blind persons have** and why? (2 Pt.)

- a) .....
- .....
- b) .....
- .....
- c) .....
- .....
- d) .....
- .....

8. List **principles of Universal Design** with short description (2 Pt.)

- a) .....
- .....
- b) .....
- .....
- c).....
- .....
- d) .....

9. The technical requirements on **Speech output** are different for blind persons (as users) vs. speech impaired persons (as users). Which **requirements** exist and why? (2 Pt.)

a) Requirements for blind people:

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b) Requirements for speech impaired people:

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