

Itgs exam questions and full mark answers

[Sociology](#), [Communication](#)



ITGS Homework Area of impact-Science and the environment A) Identify two input devices that are required in order for Jules to interact with a real person. There is several input devices required in order for Jules to interact with a real person, these include a microphone, a web cam or digital camera, normal camera and speakers so the person can hear Jules. B) Describe the steps that Jules would take in order to follow the movement of the person talking to him. There are several steps that Jules would take to interact with a real person. . Jules could capture the initial image of any human being using its camera or webcam sensors to capture an image. 2. Jules would have to use facial recognitions software to determine the parts of the face to face tracked (reference points) or identify different parts of the face such as skin colour or your eyes. Laptops these days also have sensors built into them. 3. Record an initial position; of the face which is to be tracked/ set the position of the human in relation to the robots own position. 4. Recording of time lapse intervals 5.

Capture images at new positions 6. Determine the location of the new position 7. If there is no movement, then no movement is detected and there is no adjustment. 8. Jules can adjust to the movement if there is one 9. Jules can now communicate with the human being 10. So this process can be repeated. C) Jules may have difficulty understanding a sentence in a conversation with a human, explain why this could happen. If a word that is said that is not in the language database of the robot the sentence that is said by the human will not be comprehended by the robot.

Unusual grammar and sentence structure that is not programmed in Jules language database will cause difficulties. Jules may understand only one type

of accent and may struggle to communicate if Jules communicates with someone with a different accent. Colloquial expression was used. Unclear speech due to unclear conversion of human sound converted to digital sound files which cannot be matched will cause Jules to not understand the human being. Background noises can cause Jules to misinterpret human voices. Linguistic differences- Words may have different meanings depending on the context.

D) Evaluate whether the organizers should go ahead with this decision to replace human umpires with robotic umpires such as tennis-umpire There are several positives and negatives of this. Positives include 1. The robot would consistently determine the outcome of each play, so human reaction is not present. So reviews won't be needed. 2. Any robot will not ever get tired or struggle due to physical conditions. (Reactions of crowd, weather). 3. There is no chance that a robot will be biased towards another player, something that can be present when a human referee is officiating.

So they don't care who win. Robots are more likely to make the right calls first time so this will save time from reviews. 4. Another positive is that robots will not face pressures of the crowd when making a decision because they feel no pressure due to their lack of emotions. Negatives include. 1. Even though robots may be accurate, because of the quick movement of the ball, it may take time for the robot to make the decision; this will make games go a lot slower. 2. Players may block the view of the ball or other obstacles which the robot will find impossible to avoid. . There are ethical issues present as well because the robots can actually replace human umpires if several of them are present within a game. 4. Cost maintenance

of robots are very high, example are a lot harder/ more expensive to maintain than human umpires. 5. Players and the crowd might react negatively to robot umpires as they have never been used before. 6. Robot umpires are not designed to argue with players so if any supporter or player disagrees with the ref even with their accuracy what happens then? 7.

Robots will not be able to detect any misconduct any player does during the match, something that humans are capable to do because robots do not understand human emotions. 8. Robots aren't programmed to do the unexpected so anything that happens not regarding to tennis for example a fan interrupting the game by running onto the court, robots will not be able to do anything about or they might hurt the fan that runs onto the court. 9. If let's say a player wasn't ready for the ball, a human umpire could call a replay. This is something a Robot cannot interpret.