Engineering Design Workshop (PC109)

Instructors

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Purpose

- To excite your creativity
- To make you understand that there is much more than technology and/or engineering that goes into design of a final product
- To expose you to some basic tools and techniques of visualization (creative design), understanding electronics and mechanical design
- To make you use AutoCAD, PCB design, PCB making, Lathe machine, CNC machine and 3D Printer
Imagination, Creative thinking, Ideation

Sensors, Embedded systems

Data, Computing

Packaging, Ergonomics

Usability, User Experience

Value for Money

All go into the roll out of a final product!
Some Scenarios
Find out Creativity in Product Design

- Cartoon Strip from *The Zen Pencil*
- Music Track by *The Black Eyed Peas*
- Music Track by *Red Hot Chilli Pepper*
- Movie *Winged Migration*
- Game of *Angry Bird*
- Daan Roosegarde’s Presentation video
Tell me about yourself
1. Name
2. ID
3. No. of siblings
4. Where did you reside during last 2 years before coming to DA-IICT (rural/small town/city)?
5. Did you self-study or went to a tuition/coaching class during XI & XII studies?
6. Did you study in a dummy school?
7. Which school did you study at, a govt. school, a pvt. School?
8. What was the medium of instruction there (e.g., Hindi, English, any vernacular/native language)?
9. Did you get a chance to go to any lab classes during last two years?
10. Which experiment do you still remember that you loved to do?
11. What was the learning of that experiment?
12. Have you used a computer before (answer should be 'Yes' only if you have used the computer for programming, designing (viz., photoshop), preparing a document in word/ppt/xls, learning through Google or any portal, etc.)?
13. Which mobile phone do you use (name of the make/company)?
14. What are its salient features (OS, RAM, ROM, Camera, Screen size, WiFi, price, etc.)?
15. Why did you buy it (somebody gifted it, it is a high-end phone that connects with status, because of its RAM, price, look and feel, screen size, weight, best value for money, dual SIM feature, 4G phone, best phone for selfie, best phone for social networking, etc.)?
16. What is your social media quotient (name all the social networking sites where you have an active account, viz., FB, Instagram, WhatsApp, Twitter, LinkedIn, Google+, etc.)?
17. How much time do you spend on social networking daily (> 2 hrs., 1-2 hrs., less than an hour, hardly any)?
18. How much time do you spend on live chat (messenger), live video chat (viz., Google hangout, Instagram Live, FB Live, Skype, etc.)?
19. Can you tell the name of your hostel room mate?
20. Which city/town does he/she belong to?
21. What do his/her parents do?
22. Do you love playing online games?
23. Which game is your favourite?
24. Do you love watching movie on laptop?
25. Do you love writing?
26. Have you written any short story or a poem?
27. Do you love reading?
28. Which type of writing do you read most: novels, poetries, plays, autobiographies, biographies, travelogues, political commentary, any other?
29. Give names of three of your best readings?
30. Give the names of two of your favourite authors?
31. Do you read magazines?
32. Print or online?
33. Name the magazine that you read more often?
34. Do you love photography?
35. Which camera do you use (even your answer could be 'a mobile camera')?
36. Can you tell the specs of this camera?
37. Would you like to share your 5 favourite photos with this class?
38. Do you sketch, paint, draw?
39. Do you maintain a scrap book?
40. Have you ever dreamt of one of your own inventions/discoveries/designs?
41. Can you write about it, in brief (not exceeding 150 words or 10 lines)?
42. Tell us about one of your craziest/weirdest ideas that you hesitate to share (related to your creative imagination only) such as drawing electricity from braking car tyres, converting the kinetic energy of falling raindrops on leaves and ground surface into electrical energy/current, charging giant capacitors by people walking on the footpaths, capturing electrical energy from lightning falls etc.
Submit your response