

2002 HIGHER SCHOOL CERTIFICATE EXAMINATION
Design and Technology

Section II

15 marks

Attempt Question 11

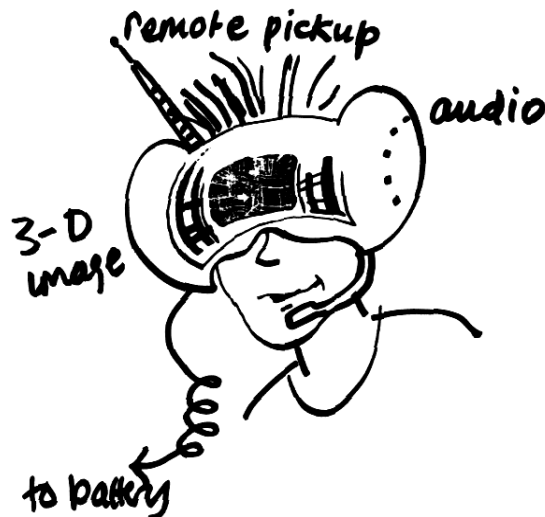
Allow about 35 minutes for this section

Answer the question in the spaces provided.

Marks

Question 11 (15 marks)

Frankie Fastrack has developed a concept for a virtual reality playstation.



Conceptual sketch

Proposal
management
development &
realisation
evaluation

You have been given the task of managing Frankie's ideas from concept to the marketplace. Using your understanding of project management, answer parts (a)–(d).

- (a) Outline the key elements required in project management.

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...key elements required in project management are
ongoing evaluation of testing and research to determine
the most suitable outcome. Management also establishes
time, finances and action plans to help with the
smooth running of the process

Question 11 continues on page 10

Question 11 (continued)

- (b) Explain how good project management can enhance product quality. 3

Project Management could be described as the 'nuts' of the process and essentially could be identified as the hardest and most time consuming part hence the reason it is so important. Management involves extensive research and testing which leads to a better product it also ensures that each element is finished on time and gives an estimate of the cost time frames involved. It is particularly important as Frankie's Innovation includes ergonomics therefore it needs to be comfortable for the user.

- (c) By referring to the playstation project, explain how evaluation could be established and carried out for TWO features of the project. 4

Since Frankie's playstation is something that involves human interaction the evaluation of the effectiveness of this innovation would need to be conducted using people from the target market.

Remote Pick-up - Frankie could test this himself by moving to all different areas to see if the reality playstation still works without interruptions, he needs to evaluate whether it is effective in that it is accessible in all areas.

3D Image - Frankie needs to ask some people in the target market to evaluate this aspect to see if it is effective. To do this he could write a free response survey and give it to all who test the playstation it could include questions such as 'Is the image clear? does it seem real? Are the colours effective?'

Question 11 continues on page 11

Question 11 (continued)

- (d) Life cycle analysis is a process used to identify key environmental issues in product development and commercialisation. 6

Explain the process of life cycle analysis and discuss how it could be applied to the development of Frankie's virtual reality playstation.

Life cycle analysis is commonly known as 'cradle to grave' and addresses environmental issues not only whilst the innovation is in use but also the manufacture of materials to produce the innovation and the disposal at the end.

Frankie needs to do extensive research into the materials, tools, techniques and resources needed to complete the task then he needs to assess what sort of impact each will have on the environment, the aim is to decrease the impact and try to make it more positive. The fact that Frankie uses batteries instead of electricity helps as it decreases the depletion of natural resources such as coal. He also needs to take into consideration where each product is manufactured for example the plastic for the casing would have been produced in a factory which would be pollution intense due to noise, waste water run-off and smog. Life cycle analysis is extensive but essential as society and the environment will benefit from **End of Question 11** it.