



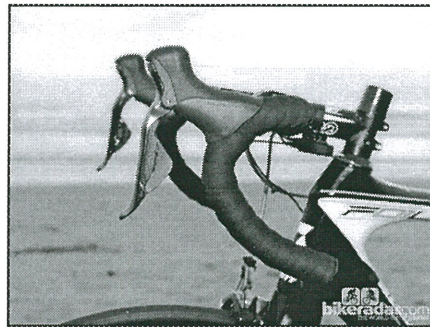
**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2014/2015**

COURSE NAME : PRODUCT DEVELOPMENT  
COURSE CODE : BPC 32403  
PROGRAMME : 3 BPA/ 3BPB  
EXAMINATION DATE : JUNE 2015/JULY 2015  
DURATION : 2 HOURS AND 30MINUTES  
INSTRUCTIONS : ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

- Q1** (a) List the **FIVE (5)** major steps in Stuart Pugh's Concept Scoring Matrix (CSM).  
(5 marks)
- (b) Assess by using the CSM method for 5 smartphones that you are thinking of buying. State the reasons for you to buy the chosen smartphone.  
(15 marks)
- Q2** (a) Explain the **FIVE (5)** major concept communication methods that your group project team will apply to promote your designed book shelf cabinet to potential customers.  
(15 marks)
- (b) Calculate the estimated Quantity (Q) of your designed book shelf cabinets could possibly be sold in the state of Johor market, given purchasing probability is at a value of 0.23.  
(5 marks)
- Q3** Product architecture based on solid-built block with function sharing is termed as "integral architecture", as shown here as bicycle brake and control shifting unit, in **Figure Q3**.



**Figure Q3**

- (a) Explain this integral architecture unit.  
(4 marks)
- (b) Elaborate **FOUR (4)** motives for product change that affects product architecture.  
(8 marks)
- (c) Sketch a schematic diagram for a mechanical paper stapler, showing flow of forces and material.  
(8 marks)

- Q4** (a) In July 2008, Apple Inc. launched a faster processor smartphone that led to a very successful integrated mobile phone models, known as iPhone 3G and later emerged as more popular 3GS which was as fast as Intel 386 computer microprocessor. This is an example of excellent industrial design and styling in recent decade.  
(source: Wikipedia)

Describe **FOUR (4)** factors of the Apple iPhone mobile communication success.  
(8marks)

- (b) List **FOUR (4)** critical goals of industrial designers when developing for new products.  
(4marks)
- (c) Describe approach to industrial designs of Mercedes car and TAG Heuer watch could establish their corporate identities.  
(8 marks)

- Q5** (a) (i) Contrast between the two major techniques in mass-manufacturing.  
(7 marks)

(ii) Analyse the advantages and disadvantages of Design for Manufacturing (DFM) and Design for Environment (DFE).  
(7marks)

- (b) Explain the impact of reducing the number of parts in new motorcycle assembly, might reduce overall production costs.  
(6 marks)

- END OF QUESTIONS -