



UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2016/2017**

COURSE NAME : PRODUCT DEVELOPMENT
COURSE CODE : BPC 32403
PROGRAMME CODE : BPB
EXAMINATION DATE : JUNE 2017
EXAMINATION DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

TERBUKA

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

- Q1** (a) Describe the followings:
- (i) Internet dependent lifestyle. (2 marks)
 - (ii) New product concept of wearable computing. (2 marks)
 - (iii) New revolutionary product of Google Glass. (2 marks)
- (b) Determine the following failures of new product concept:
- (i) Harley-Davidson perfume (2 marks)
 - (ii) Ford Pinto (2 marks)
 - (iii) New Coke (2 marks)
- (c) Give example of each nailing machine (nailer) users:
- (i) Lead users (2 marks)
 - (ii) Group users (2 marks)
 - (iii) Individual users (2 marks)
 - (iv) Experts (2 marks)
- TERBUKA**
- Q2** (a) List **FIVE (5)** major steps in the Pugh Concept Scoring Matrix (PCSM) for product concept selection. (5 marks)
- (b) Assess 4 potential cars using the PCSM method that you and your parents are thinking of buying to be used at UTHM, as shown in **Table Q2**. (10 marks)

Table Q2 : Concept Scoring Template

		Student Car							
Selection Criteria	Weight	(Reference) Perodua Axia		Proton Iriz		Kia Picanto		Honda Jazz	
		Rating	Weighted Score	Rating	Weighted Score	Rating	Weighted Score	Rating	Weighted Score
Price	30%								
Engine Power	15%								
Sleek Design	10%								
Internal Space	15%								
Fuel Savings	20%								
Safety Rating	5%								
Resale Value	5%								
	Total Score								
	Rank								
	Purchase?								

- (c) Discuss the main reason for you to purchase the chosen car with highest rank. (5 marks)

- Q3** (a) (i) Illustrate a schematic diagram of DeskJet printer mechanism. (4 marks)
- (ii) Differentiate between product Integral Architecture and Modular Architecture. (4 marks)
- (b) Apply the following modular architectures, as shown in **Figure Q3**, in the respective products' application as listed below:

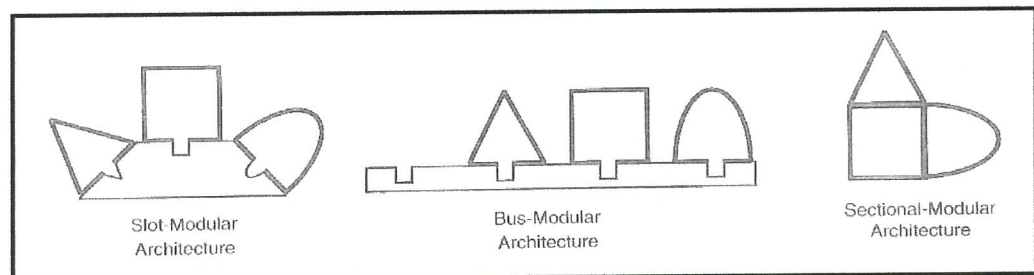


Figure Q3: Typical Types on Product Architecture

- (i) Slot-modular architecture product in automobile. (4 marks)
- (ii) Bus-modular architecture product in personal computer. (4 marks)
- (iii) Sectional-modular architecture product in office environment. (4 marks)

TERBUKA

- Q4** (a) Since the early 1990s, Nokia's Strategic Intent was to build distinctive competency in product innovation, rapid response, and global brand management, as shown in **Figure Q4**. Its strategic intent required rapid growth in the core businesses of mobile phones and telecommunications networks. This goal was achieved by Nokia's development of new products and expansion into new markets. By the end of 2003, Nokia was the clear market leader in the mobile phone industry in terms of sales and profitability, and way ahead of giant telecommunications companies like Motorola and Ericsson.

(Source: Nokia Business Strategy, 2005)



Figure Q4: Nokia GSM best sellers

Analyse **THREE (3)** most important factors of above Nokia GSM mobile communication success.

(12 marks)

- (b) Compare the perspectives of end customers on how industrial designs of Mercedes car and Lexus car could establish their corporate identities.

(8 marks)

- Q5** (a) Define the followings;

(i) Intellectual property

(2 marks)

(ii) Rapid Prototyping

(2 marks)

(iii) Design for Manufacturing

(2 marks)

(iv) Design for Environment

(2 marks)

TERBUKA

- (b) (i) State **THREE (3)** purposes of constructing a technical prototype for new product development project. (3 marks)
- (ii) Compare the roles of 3D printer to produce small-to-moderate sized parts with conventional approach producing with molds. (9 marks)

TERBUKA

- END OF QUESTIONS -