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**UTHM**

Universiti Tun Hussein Onn Malaysia

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2018/2019**

COURSE NAME : WOOD AND NON-WOOD MATERIAL  
COURSE CODE : BPP 20603  
PROGRAMME CODE : BPP  
EXAMINATION DATE : JUNE / JULY 2019  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

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

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**TERBUKA**

- Q1**
- (a) List **FOUR (4)** wood elements used in wood based composite manufacturing. (3 marks)
  - (b) Explain the processes involved in material preparation of wood veneer and wood chip. (4 marks)
  - (c) Illustrate the processes involved in plywood manufacturing. (6 marks)
  - (d) Differentiate **FOUR (4)** properties between oriented strand board (OSB), plywood and medium density fibreboard (MDF). (12 marks)
- Q2**
- (a) Illustrate a cross section of bamboo with labels. (5 marks)
  - (b) Differentiate **THREE (3)** characteristics between rattan and bamboo materials. (9 marks)
  - (c) Illustrate **TWO (2)** parts of oil palm tree that can be used as raw materials for composite with properties. (10 marks)
- Q3**
- (a) Discuss **FIVE (5)** basic ingredients in paints. (10 marks)
  - (b) Differentiate **FIVE (5)** characteristics between lacquer and paint. (10 marks)
  - (c) Explain the properties of **TWO (2)** resins used in plywood manufacturing. (6 marks)

**Q4** Furniture fittings are categorized as furniture accessories. Furniture fittings are products that link parts of furniture together, thus can help the connections to be fixed or movable.

- (a) State **TWO (2)** materials used for fixture and fastening manufacturing. (2 marks)
- (b) Identify **SIX (6)** groups of fittings and fastenings with an example. (9 marks)
- (c) Illustrate **THREE (3)** types of common nails used in furniture manufacturing. (6 marks)
- (d) Illustrate **THREE (3)** types of screws used in furniture manufacturing. (6 marks)

- END OF QUESTIONS -