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Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2021/2022**

- COURSE NAME** : FURNITURE FINISHING AND PACKAGING
- COURSE CODE** : BPP 31003
- PROGRAMME CODE** : BPP
- EXAMINATION DATE** : JULY 2022
- DURATION** : 3 HOURS
- INSTRUCTIONS** :
1. ANSWER ALL QUESTIONS.
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK**.
 3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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TERBUKA

- Q1** (a) Finishing system is a process of which coating material is transformed from the bulk state (liquid or powder) onto a prepared substrate namely wood or wood-based products. In the case of liquid coatings, there are distinctive principle between contact method and atomising method.
- (i) Describe the principle of contact method and atomising method. (4 marks)
- (ii) Explain **TWO (2)** techniques for both contact method and atomising method. (8 marks)
- (b) You are appointed as an Assistant Supervisor in a new section namely finishing line at ABC Furniture Sdn. Bhd. You need to assist in the development of a new spray booth section. However, the building has an issue on floor loading.
- Propose **ONE (1)** type of spray booth with minimal costing operation. (6 marks)
- (c) Differentiate **TWO (2)** uses of calibration sanding and contact sanding. (6 marks)
- (d) Illustrate the structure of sand paper with labels. (4 marks)
- Q2** You are a Production Supervisor at XYZ Furniture Sdn. Bhd., Batu Pahat. Recently, you are appointed as a decision maker for product finishing. The company decided to launch a brand new dining table using Acacia slab as a table top.
- (a) Explain **TWO (2)** abrasive grains used for wooden Acacia table top. (4 marks)
- (b) Suggest **ONE (1)** sanding machine for massive production of wooden Acacia table top. (6 marks)
- (c) Illustrate the sequences of operation, method and materials used for each technique of clear finish and stained finish. (8 marks)
- (d) Determine **ONE (1)** finishing for fabrication of modern Acacia slab river dining table. (4 marks)

- Q3** (a) Explain the importance of coating evaluation. (4 marks)
- (b) Describe **FOUR (4)** basic characteristic of uncured coatings. (8 marks)
- (c) Explain **THREE (3)** tests to determine the cured coating of wood finishes. (9 marks)
- (d) As an intern student at ZigZag Furniture Sdn. Bhd., you are required to observe the finishing task for a dining chair. The supervisor ask you to suggest the causes and solutions of sagging defect that frequently occur after the finishing process.
- Determine **TWO (2)** causes and solutions for this defect. (6 marks)

- Q4** (a) State **THREE (3)** mechanical strength tests of paperboard used in packaging. (3 marks)
- (b) **Figure Q4(b)** shows distorted boxes after a week of storage in a storage room. The boxes contain of wood dowel for wood jointing application.

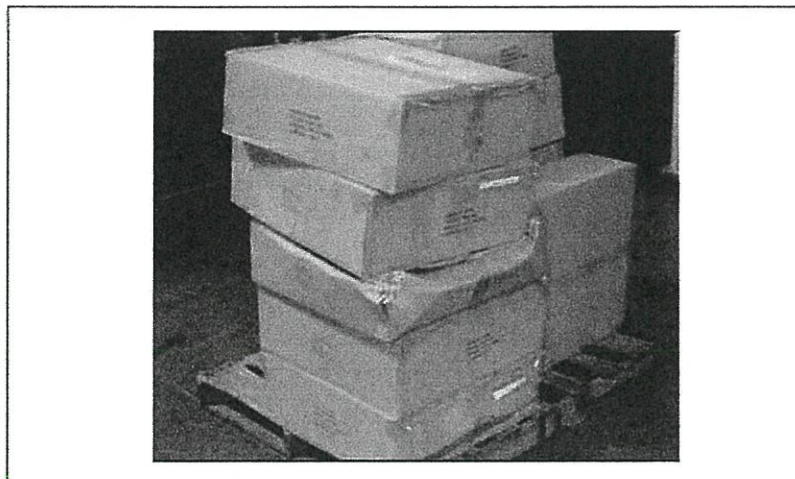


Figure Q4(b): Distorted boxes

- (i) Describe **THREE (3)** methods for maintaining corrugated boxes form. (6 marks)
- (ii) Explain **TWO (2)** transportation methods of this packages to Middle East countries with examples. (6 marks)

- (c) Outline the packaging design for the rattan sofa as shown in **Figure Q4(c)**.
(8 marks)



Figure Q4(c): Rattan Sofa

- END OF QUESTIONS -