



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2011/2012**

COURSE NAME : WOOD PROCESSING AND PROTECTION
COURSE CODE : BFK 4023
PROGRAMME : BFF
EXAMINATION DATE : JUNE 2012
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF SIX (6) PAGES

- Q1** (a) Evaluate and explain in detail the roles of the following terms in timber processing.
- (i) Headrig
 - (ii) Labelling
 - (iii) Log yard
 - (iv) Bucking
- (8 marks)
- (b) Explain in detail together with flow chart the process of sawn timber from headrig to timbershed.
- (10 marks)
- (c) Explain the difference between primary breakdown system and secondary breakdown system in timber processing
- (7 marks)
- Q2** (a) Explain the difference between fibreboard and particleboard and give **two (2)** examples.
- (7 marks)
- (b) Explains in detail together with flow chart the medium density fibre (MDF) processing from raw material to marketing.
- (10 marks)
- (c) Explain in detail with figure the following items:
- (i) Laminated Veneer Lumber (LVL)
 - (ii) Glulam
 - (iii) Blockboard
 - (iv) Medium Density Fibreboard (MDF)
- (8 marks)
- Q3** (a) Briefly describe the meaning of the following items:
- (i) Plywood
 - (ii) Peeling
 - (iii) Multi opening
 - (iv) Veneer
- (8 marks)

- (b) Explains in detail together with flow chart the plywood processing.
(10 marks)
- (c) (i) Illustrate the schematic diagram the structural of veneer in **two (2)** types of plywood.
(4 marks)
- (ii) Explain the difference between marine plywood and overlaid plywood.
(3 marks)

Q4 Company XYZ Sdn Bhd export the sawn timber to China with 17 tons species of kapur 3" x 4" x 12', 30 tons of kempas with treatment and size 4" x 5" x 12', 50 ton of Chengal with 4" x 4" x 120" and 40 tons of keruing with size 2' x 4" x 14'. If the purchase price of kapur is RM 1800 per ton, RM 2050 per ton for kempas, Chengal is RM4500 per ton and keruing is RM 1800 per tons and treatment is RM 50 per ton, Calculate:

- (a) Total sawn timber of every species that XYZ Sdn Bhd purchase.
(8 marks)
- (b) Total price that XYZ Sdn Bhd should be paid.
(5 marks)
- (c) Calculate the profit/loss if XYZ Sdn Bhd sell the all sawn timber with price RM 2.50 per ft for kapur with size 3" x 4" x 12, kempas with size 4" x 5" x 12' RM 4.00 per ft, Chengal 4" x 4" x 120" with RM 6.20 per ft and keruing 2" x 4" x 14' with RM4.50 per ft.
(12 marks)

TERJEMAHAN BAHASA MALAYSIA

- S1** (a) Berikan penilaian dan penjelasan apakah peranan perkara-perkara berikut dalam teknologi pemprosesan kayu:
- (i) *Headrig*
 - (ii) *Labelling*
 - (iii) *Log yard*
 - (iv) *Bucking*
- (8 markah)
- (b) Lukiskan aliran proses penghasilan kayu gergaji bermula dari proses *headrig* sehingga ke penyimpanan.
- (10 markah)
- (c) Nyatakan perbezaan diantara sistem pemotongan balak diperingkat primer dan pemotongan diperingkat sekunder
- (7 markah)
- S2** (a) Nyatakan perbezaan diantara papan serpaian dan papan gentian dan berikan **dua (2)** contoh bagi setiap satunya.
- (7 markah)
- (b) Dengan bantuan carta alir, terangkan proses pembuatan papan gentian berketumpatan sederhana dari bahan utama sehingga pemasaran.
- (10 markah)
- (c) Terangkan dengan jelas serta gambarajah istilah berikut:
- (i) *Laminated Veneer Lumber (LVL)*
 - (ii) **Glulam**
 - (iii) *Blockboard*
 - (iv) **Papan gentian sederhana (MDF)**
- (8 markah)

- S3** (a) Terangkan dengan jelas istilah berikut:
- (i) Papan Lapis
 - (ii) Peeling
 - (iii) Multi opening
 - (iv) Venir
- (8 markah)
- (b) Lakarkan aliran proses pembuatan papan lapis
- (10 markah)
- (c) (i) Nyatakan dan lukiskan susunan venir bagi **dua (2)** jenis papan Lapis.
- (4 markah)
- (ii) Nyatakan perbezaan diantara *Marine plywood* dan *Overlaid plywood*.
- (3 markah)
- S4** Syarikat XYZ Sdn Bhd bercadang untuk mengexport kayu gergaji ke China sebanyak 17 tan kayu kapur bersaiz 3" x 4" x 12', 30 tan kayu kempas yang telah di awet bersaiz 4" x 5" x 12' dan kayu Chengal 4" x 4" x 120" sebanyak 50 tan serta 40 tan kayu keruing bersaiz 2' x 4" x 14'. Dengan harga belian kayu kapur sebanyak RM 1800 per tan serta kempas sebanyak RM 2050 per tan dan kayu chengal sebanyak RM 4500 per tan serta keruing RM1800 per tan dan upah awet sebanyak RM50 per tan, Kirakan
- (a) Jumlah bilangan kayu gergaji bagi setiap saiz kayu yang dibeli oleh Syarikat XYZ Sdn Bhd.
- (9 markah)
- (b) Kirakan jumlah harga yang harus dibayar oleh Syarikat XYZ Sdn Bhd bagi mendapatkan kesemua saiz kayu yang di tempah.
- (4 markah)
- (c) Kirakan jumlah keuntungan/kerugian bagi syarikat tersebut jika ianya menjual semula kesemua kayu kapur yang dengan saiz 3" x 4" x 12' dengan harga RM2.50 per kaki, kayu kempas bersaiz 4" x 5" x 12' dengan harga RM 4.00 per kaki dan kayu Chengal 4" x

4" x 120" dengan harga RM 6.20 per kaki dan keruing 2" x 4" x 14' pada harga 4.50 per kaki.

(12 markah)