INSTRUCTION:
This section consists of **FOUR (4)** structured questions. Answer ALL questions.

ARAHAN:
Bahagian ini mengandungi **EMPAT (4)** soalan struktur. Jawab SEMUA soalan.

QUESTION 1
SOALAN 1

CLO1 C1 (a) Describe the meaning of balanced and unbalanced density of threads in the fabrics.
Huraikan maksud kepadatan seimbang dan tidak seimbang benang dalam fabrik.

[2 marks]
[*2 markah*]

CLO1 C2 (b) Based on the sample of fabric structure given in Figure 1(b), identify,

i. number of warp repeat
ii. number of weft repeat
iii. number of weave repeat size
iv. number of shift
iv. type of weave structure

Berdasarkan sampel struktur fabrik yang diberikan pada Rajah 1(b), kenalpasti,

i. bilangan ulangan benang 'warp'
ii. bilangan ulangan benang 'weft'
iii. bilangan saiz ulangan tenunan
iv. bilangan anjakan
v. jenis struktur tenunan

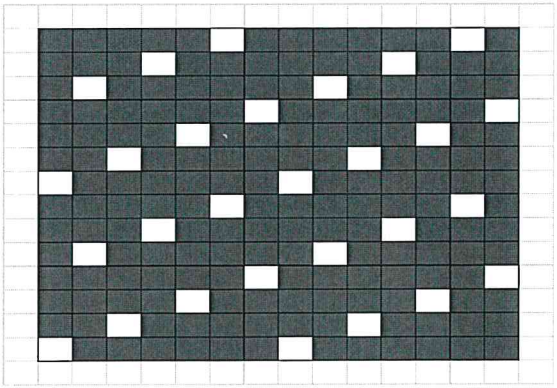


Figure 1(b) / Gambarajah 1(b)

[5 marks]
[*5 markah*]

CLO1 C3 (c) Figure 1(c) shows the interlacing of warp and weft yarn in a fabric. Based on the figure,

i. identify the type of fabric being produced.

ii. sketch the cross-section of warp and weft for thread number one.

iii. draw a schematic diagram to show the harness motion for thread filling number one.

Gambarajah 1(c) menunjukkan persilangan antara benang 'warp' dan 'weft' di dalam fabrik. Berdasarkan gambarajah,

i. kenalpasti jenis fabrik yang dihasilkan.

ii. lakar keratan rentas arah warp dan weft bagi benang nombor satu.

iii. lukis gambarajah skematik bagi menunjukkan gerakan harness bagi benang filling nombor satu.

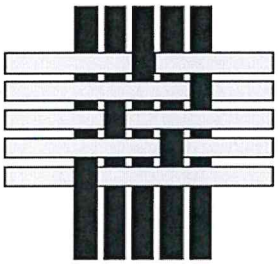


Figure 1(c) / *Gambarajah 2(c)*

[8 marks]

[*8 markah*]

CLO1 C4 (d) Based on sample fabric given in Figure 1(d), differentiate the arrangement of weaving plan using:

Berdasarkan sampel fabrik yang diberi pada Gambarajah 3, bezakan aturan pelan tenunan menggunakan:

i. six harness

ii. ten harness

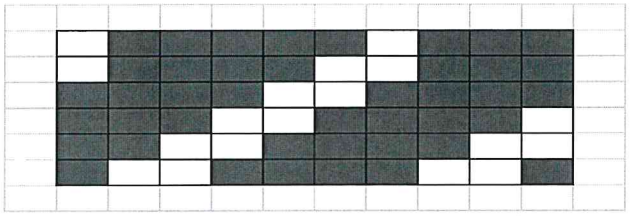


Figure 1(d) / Gambarajah 1(d)

[10 marks]

[*10 markah*]

QUESTION 2

SOALAN 2

CLO1 C1 (a) How many sets of yarn are used in a weaving process?

Berapa set benang yang digunakan didalam proses menenun?

[2 marks]

[*2 markah*]

CLO1 C2 (b) Based on Figure 2(b), identify which of the following is irregular sateen design? Give a reason for your answer.

Berdasarkan Gambarajah 2(b), kenalpasti yang mana satu merupakan rekabentuk sateen tidak teratur? Berikan sebab berpandukan jawapan anda.

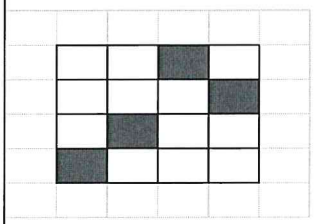
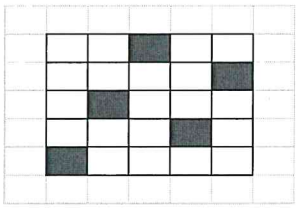
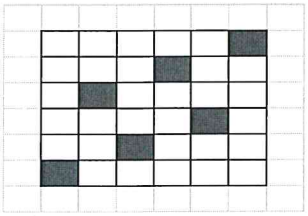
Type of design		
X	Y	Z
		

Figure 2(b) / Gambarajah 2(b)

[4 marks]

[*4 markah*]

CLO1 C2 (c) Based on Figure 2(c), construct a draft and lifting plan using four (4) shafts.
Berdasarkan Gambarajah 2(c), bina 'draft' dan 'lifting plan' dengan menggunakan empat (4) aci sahaja.

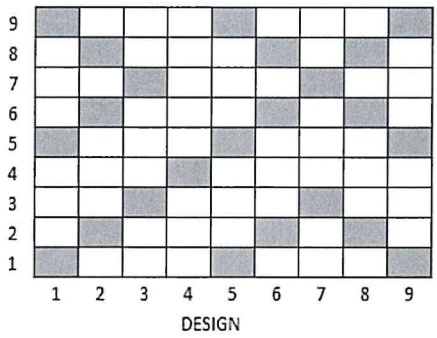


Figure 2(c) / Gambarajah 2(c)

[7 marks]
[*7 markah*]

CLO1 C3 (d) Construct a back warp weave using twill 4/2 as a base. Complete the answer with the diagram of weaving plan.
Bina tenunan 'back warp' dengan menggunakan twill 4/2 sebagai asas. Lengkapkan jawapan dengan rajah pelan tenunan.

[12 marks]
[*12 markah*]

QUESTION 3
SOALAN 3

CLO1 C1 (a) State the purpose of notation diagram in a weft knit production.
Nyatakan tujuan gambarajah 'notation' di dalam pengeluaran fabrik kait.

[3 marks]
[*3 markah*]

CLO1 C2 (b) Describe the **THREE (3)** effects of tucks and floats in knitting fabric.
*Terangkan **TIGA (3)** kesan 'tuck' dan 'float' dalam fabrik kait.*

[6 marks]
[*6 markah*]

CLO1 C2 (c) Based on Figure 3(c), explain the type of loop produced according to the location of swing cam in position A, B and C.

Berdasarkan Gambarajah 3(c), jelaskan jenis 'loop' yang dihasilkan mengikut lokasi 'swing cam' pada kedudukan A, B & C.

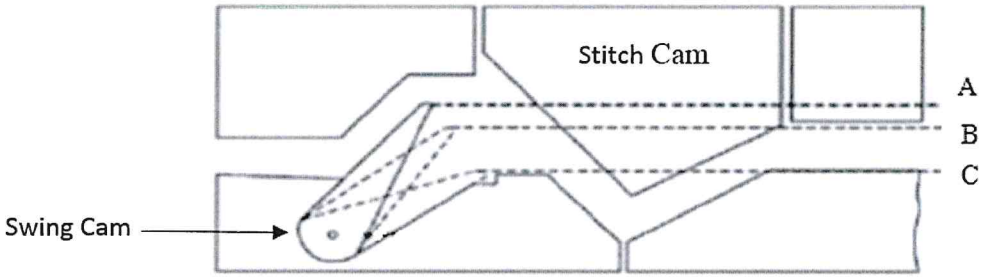


Figure 3(c) / Gambarajah 3(c)

[8 marks]

[*8 markah*]

CLO1 C3 (d) Based on Figure 3(d), sketch the cam and needle arrangement for:

Berdasarkan Gambarajah 3(d), lakarkan susunan 'cam' dan jarum untuk:

i. Single Cross Tuck	ii. Mock Rib	iii. Weft lock knit

Figure 3(d) / Gambarajah 3(d)

[8 marks]

[*8 markah*]

QUESTION

SOALAN 4

CLO1 C1 (a) State **TWO (2)** applications for the following technical textiles:

*Nyatakan **DUA (2)** aplikasi bagi teknikal tekstil berikut:*

i. Geotextiles

ii. Safety textiles

[5 marks]

[*5 markah*]

CLO1 C2 (b) State how the yarn dyeing process is done.

Nyatakan bagaimana proses pewarnaan benang dilakukan.

[5 marks]

[*5 markah*]

CLO1 C2 (c) "The preparation for coloured warp yarn using weaver's beam can be prepared in sectional warping by arranging the coloured bobbins on the creel".

According to the statement above, explain the working principles of sectional warping.

"Penyediaan benang 'warp' berwarna menggunakan 'weaver's beam' boleh disediakan di dalam 'sectional warping' iaitu dengan menyusunkan 'bobbin' berwarna pada creel".

Berdasarkan pernyataan di atas, terangkan prinsip kerja 'sectional warping'.

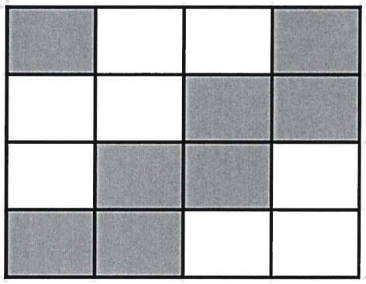
[5 marks]

[*5 markah*]

CLO1 C3

(d) Based on Figure 4(d), construct a pattern from thge given weave and colour repeats.

Berdasarkan Gambarajah 4(d), bina corak daripada tenunan dan ulangan warna yang diberi.



Weave

Warp and weft			
□	2	2	
■	4		
repeat			8

Colour repeats

Figure 4(d) / Gambarajah 4(d)

[10 marks]

[*10 markah*]

SOALAN TAMAT