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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : WEAVING PRODUCTION
TECHNOLOGY II

COURSE CODE : BNH 30603

PROGRAMME CODE : BNH

EXAMINATION DATE : JUNE / JULY 2019

DURATION : 2 HOURS 30 MINUTES

INSTRUCTION : ANSWER ALL QUESTIONS

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

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- Q1**
- (a) Define eccentricity in sley motion. Describe the importance of eccentricity in sley motion. (4 marks)
 - (b) Draw and describe the passage of warp through weaving machine. (5 marks)
 - (c) With the aid of a diagram, explain the loom timing during a loom cycle. (6 marks)
 - (d) Define drop wires and state **TWO (2)** functions of drop wires. (2 marks)
 - (e) Calculate the maximum permissible loom speed if the average shuttle speed in a loom with an effective reed space of 2.2 m is 11.65 m/s. The effective length of the shuttle is 0.30 m and the crankshaft rotation that can be allowed for the passage of the shuttle is 135° . (3 marks)
- Q2**
- (a) Define the terms positive and negative shedding mechanisms. With an aid of diagram, explain the negative tappet shedding mechanism and the type of fabric that can be weave. (7 marks)
 - (b) Explain the steps involved in designing a shedding tappet for $\frac{1}{2}$ twill weave. (6 marks)
 - (c) Picking is the passing process of weft yarn through the warp yarn. Describe the ideal picking condition. (3 marks)
 - (d) Explain the limitations of a shuttle loom that led to the development of shuttleless looms. (4 marks)

- Q3** (a) Compare **THREE (3)** types of shuttleless loom in terms of:
- (i) Insertion rate (pick per minute)
 - (ii) Type of fabric that can be woven
 - (iii) The weft insertion method
- (9 marks)
- (b) Cone over pick and cone under pick mechanisms are two of the conventional picking mechanism. Compare cone over pick with cone under pick mechanism.
- (6 marks)
- (c) State the objectives of checking mechanism and discuss the ideal checking conditions for better weaving operation.
- (5 marks)
- Q4** (a) Distinguish the working mechanism of positive and negative take-up motion.
- (6 marks)
- (b) The positive let-off have better control of warp let-off tension compared to negative let-off. Justify this statement.
- (6 marks)
- (c) Discuss the need for temples in a loom. Explain how installment of temple is beneficial during cloth formation.
- (4 marks)
- (d) Point out the advantages of installing stop motions in weaving machine.
- (4 marks)
- Q5** (a) Describe the function of warp protector. List **TWO (2)** types of warp protectors.
- (4 marks)
- (b) Compare loose reed mechanism with fast reed mechanism in warp protecting motion.
- (4 marks)
- (c) Explain the working principle of mechanical warp stop motion in details.
- (5 marks)
- (d) Discuss a special weaving machine for weaving particular type of fabrics. Give **ONE (1)** example to support your answer.
- (7 marks)

-END OF QUESTIONS-