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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2014/2015**

COURSE NAME : TEXTILE DYEING AND FINISHING
COURSE CODE : BNH 30403
PROGRAMME : 3 BNH
EXAMINATION DATE : JUNE 2015 / JULY 2015
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

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- Q1** (a) Munsell System is a colour classification method with huge collection of printed coloured samples. Explain the **THREE (3)** attributes presented in this method. (6 marks)
- (b) With the aid of an example, define how do human eyes perceive the colour of a textile material at day light. (4 marks)
- Q2** (a) In textile coloration, dyes can be classified according to their ionic nature.
- (i) Name the only dye which is positively charged. Identify the most suitable fibre to be dyed with this colorant. (2 marks)
- (ii) Explain the main problem associated with the dye in Q2(a)(i). (3 marks)
- (iii) Illustrate and investigate the mechanism of **THREE (3)** types of retarder used in order to control the problem asked in Q2(a)(ii). (9 marks)
- (b) Explain the possibility of dyeing polyester with disperse dye at 100°C.. (4 marks)
- Q3** Azoic dye and vat dye are two types of dye which are insoluble. Analyse the differences of these dyes in terms of their dyeing mechanism on cellulosic fibre. (10 marks)
- Q4** (a) Illustrate and explain the process of dyeing loose fibres. (8 marks)
- (b) Analyse the problem of 'preferential absorption' during continuous dyeing process in comparison with exhaust dyeing. (4 marks)
- Q5** Develop the pre-treatment processes for a white woven cotton fabric. Among other points should be included in the summary are such as objectives of each process and the method used in brief. (15 marks)

- Q6** (a) It has been estimated that some 60% of all fires in the home start with a textile material, thus the inhibition of burning in textiles has been one of the most important tasks and has occupied an important place in textile research.
- (i) Describe the advantages and disadvantages of Pyrovatex process over Proban process in giving fire retardant properties to textile materials. (2 marks)
- (ii) Other than home furnishings, suggest other **THREE (3)** textile products which are relevant to be treated with flame or fire retardant finish. (3 marks)
- (b) Describe the objectives of the following mechanical finishings.
- (i) Calendaring
(ii) Embossing
(iii) Raising (6 marks)
- Q7** As a production manager in wet process department in a textile company which is supplying fabrics for Malaysian Airlines' cabin crew uniforms, you are responsible in monitoring the whole production processes starting from planning until quality check. Develop any possible processes and/or finishes that could be applied on the fabrics and relate these finishes with the properties that a flight crew uniform should possess. (12 marks)
- Q8** Textile wet processing has been reportedly as one of the major contributors to the poor quality environment.
- (a) Point out any **THREE (3)** negative impacts of textile wet processing to the environment. (6 marks)
- (b) Recommend any **TWO (2)** possible ways in order to help to reduce these negative impacts. (4 marks)

- END OF QUESTION -