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Daffodil International University
Faculty of Engineering
Department of Textile Engineering
Program: B.Sc. in Textile Engineering
Final Examination, Semester: Summer-2026

Course Code: 0723-225 | **Course Title: Yarn Manufacturing-II**
Credit Hours: 3.0 | **Total Marks: 40**
Time: 2 hours.
Name & Designation of the Examiner: Md. Mashud Raihan(MR), Assistant Professor
Date and Time of the exam: 19.08.2026, 03:00 PM

[Answer the questions sequentially]

1. Answer any **Eight (8)** of the following Nine *[CO-1, PO-1, C/L-2]* **8×4 = 32**

a) Relate the equation with increasing bobbin dia, bobbin speed will be decreases by mentioning their principles.
b) Classify drafting systems with different aspects for ring spinning system.
c) Summarize the features of roving frame technology and explain their impact on the spinning process.
d) Outline the Uster Classimat yarn faults with necessary diagram.
e) Draw and sketch a spindle, and state the recommended traveler numbers for various yarn counts.
f) Demonstrate the principles of Servo Motor Drives for Drafting Rollers, and Flyers Work in a Speed Frame.
g) Explain the necessity of using a speed frame between the draw frame and ring frame.
h) Explain how yarn count, spindle speed and ring diameter affect the selection of a traveller.
i) Describe the major components of an auto-coner and explain their functions in the winding process.

2. Answer the question *[CO-2, PO-2, C/L-3]* **4×2=8**

a) A speed frame has **144 flyers** running at **1250 rpm** with **88% efficiency**. It produces **1.8 Ne roving** with a twist multiplier of **1.0. Calculate its production in kg per 8-hour shift.**
b) In a Ring frame 36 Ne carded knit yarn is to be spun in which spindle speed is 16000 rpm and there are 1200 working spindles. If the machine runs at 92% efficiency and the twist multiplier is 3.68 Finds out its production in grams per spindle (GPS) per hour.