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Daffodil International University

Department of Textile Engineering
Faculty of Engineering
Mid-Term Examination, Semester: Fall-2026

Course Code: 0031-321 — Level & Term: L3T2
Course Title: Fundamentals of Research Methodology — Sections: F1, F2, F3
Name & Designation of the Course Teacher:
Maksuda Akter Rubi (MAR), Assistant Professor, Sabina Yesmin (SY), Lecturer
Time: 1.5 hours — **Total Marks: 25**

Answer all the questions:

1. **Explain** research. Explain **Deductive approach** and **Inductive approach** in research reasoning with steps using example. (CO1, PO-1, C/L-2) — 5

2. Briefly **explain** the concept of a **"Research Gap"**. Differentiate between **Qualitative Research** and **Quantitative Research**. (CO1, PO-1, C/L-2) — 5

3. **Outline** the 10 steps of doing a literature review, and **explain** how to search papers smartly using keywords and Boolean operators. (CO2, PO-1, C/L-2) — 5

4. Identify and briefly **explain** the independent and dependent variables in a textile experiment of your choice. Also, list the control variables that should be kept constant throughout the experiment. (CO2, PO-1, C/L-2) — 5

5. ***Compare*** between **Experimental**, **Non-experimental**, and **Simulation** research designs with suitable textile engineering examples. Explain when a researcher should choose a Simulation design over an Experimental design. (CO2, PO-1, C/L-2) — 5