Chapter 11 – Introduction to Computerized Embroidery

✅ Part I: Short Questions

Q1. What is the process for duplicating an existing design in Wilcom?

- Select the design → Use **Copy/Paste or Duplicate tool** → Place it in a new location.

Q2. What are the common reasons for duplicating a design in Wilcom?

- To save time, create **mirrored versions**, or reuse designs for different garments.

Q3. How can you modify a duplicated design in Wilcom?

- Change **colors, stitch density, size, effects** to create a unique design.

Q4. What file formats can you import into Wilcom for duplication?

- **.EMB, .DST, .EXP, .PES, .CND**

Q5. Difference between running stitch and satin stitch?

- **Running stitch:** Single line, used for outlines.
- **Satin stitch:** Thick, smooth, shiny stitch used for borders and lettering.

Q6. How do you create a fill stitch in Wilcom?

- Use **Fill tool** → Select area → Adjust stitch type (Tatami/Satin Fill).

Q7. What is a steil stitch?

- A narrow, dense **satin stitch**, commonly used for **borders**.

Q8. How do you adjust stitch density in Wilcom?

- Select object → Go to **Object Properties → Density settings** → Adjust value.

Q9. What is the Travel tool in Wilcom?

- Tool used to **rearrange stitch sequence** and minimize thread jumps/breaks.

Q10. How does the Travel tool help minimize thread breaks?

- By optimizing the **stitching path** to avoid unnecessary jumps.

Q11. Can the Travel tool adjust stitch density?

- ❌ No, it only controls **stitch sequence**, not density.

Q12. Which designs benefit most from Travel tool?

- Large and **complex embroidery designs** with many layers.

Q13. What file formats are supported by the Travel tool?

- Works with **Wilcom native formats (.EMB)** and machine formats like **.DST, .EXP**.

Q14. What is the Generate tool used for?

- To **create stitches automatically** for a given shape or object.

Q15. How many types of stitches are available in Generate tool?

- Satin, Tatami, Zigzag, Fill stitch, etc.

Q16. Difference between Generate tool and Auto-Digitize?

- **Generate:** Manual control over stitch type.
- **Auto-Digitize:** Automatic conversion of an image into embroidery stitches.

Q17. File formats supported by Generate tool?

- **.EMB (native)** and machine formats like **.DST, .EXP, .PES**.

Q18. What is Automatic Digitizing?

- Process of **converting raster images** (JPG, PNG, BMP) into embroidery stitches automatically.

Q19. Which images can be used in Automatic Digitizing?

- High-quality **bitmap or vector images**.

Q20. Advantages of Automatic Digitizing?

- Saves time, easy for beginners, quick design conversion.

Q21. What is Lettering tool in Wilcom?

- Used to add **text/monograms** in embroidery designs.

Q22. How many fonts are available in Lettering tool?

- More than **200 pre-installed embroidery fonts** (varies by version).

Q23. Can special effects be applied to embroidered lettering?

- ✅ Yes, effects like **curved text, shadows, gradients, borders**.

Q24. What file format does Lettering tool support?

- Works with **.EMB** and outputs to machine-readable formats **(.DST, .EXP, .PES, etc.)**

✅ Part II: Long Questions

Q1. How can you duplicate a complex embroidery design with multiple layers?

- Select design → Use **Duplicate tool** → Manage layers (colors, stitches) → Save as new file.

Q2. Steps to create a duplicate design optimized for different fabric?

1. Duplicate design.
2. Adjust **stitch density & underlay** for fabric type.
3. Change thread tension settings.
4. Test stitch-out on sample fabric.

Q3. How can you create 3D embroidery in Wilcom?

- Use **multiple satin stitches, embossed fill, and raised stitch effects** with varying density and depth.

Q4. Process of digitizing complex designs with multiple stitch types?

1. Import artwork.
2. Break into **sections**.
3. Apply **different stitch types** (satin, tatami, zigzag).
4. Optimize sequence with **Travel tool**.

Q5. Explain underlay stitches with examples.

- **Types:** Center run, Zigzag, Edge run.
- Example: Satin lettering → Use **zigzag underlay** for smooth finish.

Q6. How does Travel tool optimize stitching sequence?

- Reduces **jump stitches**, organizes stitching order, minimizes thread cuts.

Q7. Key considerations using Travel tool in large designs.

- Sequence order, minimizing jumps, fabric stretch control.

Q8. How is Generate tool used for complex embroidery?

- Converts shapes into **stitch patterns** like tatami or satin fill, allowing detailed textures.

Q9. Factors to consider when choosing stitch types in Generate tool.

- Fabric type, design complexity, durability, appearance.

Q10. Limitations of Automatic Digitizing.

- Less accurate for **complex logos**, requires manual editing.

Q11. How to improve Automatic Digitizing results?

- Use **high-resolution images**, simplify artwork, apply manual touch-ups.

Q12. Considerations for Automatic Digitizing custom designs.

- Color separation, stitch direction, density adjustment.

Q13. How can Lettering tool be customized?

- Change **font, size, density, special effects, borders, curve text**.

Q14. Factors when choosing embroidery fonts.

- Readability, size of letters, type of fabric.

Q15. Can Lettering tool create curved/multi-line text? How?

- ✅ Yes → Use **Envelope or Curve Text feature** → Arrange letters along path.

🌟 **Extra Exam Practice Questions**

Q1. Difference between Running, Satin, and Tatami stitches?

- Running → Outlines, light stitches.
- Satin → Borders, shiny finish.
- Tatami → Fill large areas.

Q2. Why is stitch density important?

- Affects **fabric stability, thread usage, and final look**.

Q3. Difference between Manual Digitizing and Auto-Digitizing?

- **Manual:** Designer controls every stitch.
- **Auto:** Software generates stitches automatically from image.