Study questions for the Textile Manufacturing section


Sample Objective section questions

1. _____ Which part of the textile manufacturing process was automated first?
   a. cleaning the fibers  
   b. combing/carding the fibers  
   c. spinning the fibers  
   d. weaving the fibers  
   e. sewing the fabric together

2. _____ Which process was being done in the first real factory?
   a. Cast iron and steel was being produced from iron ore.  
   b. Cotton thread was being woven into cloth.  
   c. Seeds were being removed from raw cotton.  
   d. Cotton was being spun into thread.

3. _____ Which of the following a reason to build a factory according to the film; “Pants For All”?
   a. to protect and keep secret the equipment inside the factory  
   b. Royalist forces during the Civil War tended to burn houses but left larger structures alone.  
   c. Parents thought factories would provide their children better learning than working at home.  
   d. Taxes were based on what an individual produced, but not what their workers produced.

4. _____ Which of the following is another reason early factories were first built?
   a. New inventions greatly increased efficiency, but also required very large scale production.  
   b. The invention of coal fired kilns meant the price of bricks fell to about 25% of their former cost.  
   c. In the late 1700’s, inventors learned to mount water wheels vertically rather than horizontally.  
   d. The British military found it easier to procure supplies from large suppliers.

2. Match the machine with the textile process. Each process may be sued for more than one machine. The first two have been done for you.

<table>
<thead>
<tr>
<th>Machine</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bob, the human fashion model.</td>
<td>a. Removing seeds from the fibers</td>
</tr>
<tr>
<td>Robo-Bob, the robot fashion model.</td>
<td>b. combing/carding the fibers</td>
</tr>
<tr>
<td>the Spinning Jenny</td>
<td>c. spinning the fibers</td>
</tr>
<tr>
<td>Cotton Roller / Water Frame</td>
<td>d. weaving the fibers</td>
</tr>
<tr>
<td>the Cotton Gin</td>
<td>e. sewing the fabric together</td>
</tr>
<tr>
<td>the Power Loom</td>
<td>f. modeling textiles</td>
</tr>
<tr>
<td>the Spinning Mule (see the Yorke reading)</td>
<td></td>
</tr>
<tr>
<td>the Spinning Wheel</td>
<td></td>
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</tbody>
</table>
3. _____ In which region (below) were most of the early textile factories? Full credit for the best answer (which is area 5). Partial credit for the 2nd best answer (which is area 8).

4. _____ What’s the second best answer? Where is another region in which there was a lot of early textile manufacturing?
7. __________________________ What is the name of the machine at right?

8. __________________________ What is this machine making or doing? Be as specific as possible?

9. __________________________ What is the name of circled part(s)?

5. ____ Which of the following best describe the “putting out system”?
   a. a system in which England produced wool, but all England did was sheer the wool and wash it. The raw wool was shipped to the Netherlands where it was made into thread and cloth.
   b. a system in which Scotland produced wool, but all Scotland did was sheer the wool and wash it. The raw wool was shipped to England where it was made into thread and cloth.
   c. a tax system in which each sale of wool, spun thread, and cloth were taxed. This tax encouraged people to undertake all the steps in producing cloth themselves in order to avoid the tax.
   d. a system in which an individual merchant or “factor” would buy large quantities of wool, the “put the wool” out to many individual spinners to spin. The factor would pay the spinners for the thread, and “put the thread out” to weavers to be made into cloth.
   e. a system in which raw wool is dyed before being made into thread and cloth. Once the wool was made into cloth, a bleach was applied to “put out” the color and leave a pattern.

7. _____ It’s 1805 and Billy has a job tending a Spinning Jenny. What does this machine do?

8 – 11. It’s 1825 and Elizabeth has a job tending 12 machines like that machine shown at right.

8. __________ What does this machine do?

9. __________ What is the name of this type of machine?

10. _____ What is the name of item 1 in the picture at right?

11. _____ What is the name of item 2 in the picture at right?

12. _____ It’s 1807 and Billy has a job tending a Water Frame. What does this machine do?

13. _____ It’s 1810 and Billy has a job tending a power loom. What does this machine do?
14. _____ It’s 1815 and Billy has a job tending a carding machine. What does this machine do?
   a. It straightens out the de-seeded cotton (or other fiber) so that all the fibers are running the same direction.
   b. a wrong answer
   c. another wrong answer

15. _____ It’s 1820 and Billy has a job tending a cotton gin. What does this machine do?

16. Could you recognize a Spiny Jenny if you saw one?

17. Could you identify the spindle(s) on the above machine?

18. Could you identify the spindle(s) on a spinning wheel (Great Wheel spinning wheel)?

19. Could you recognize an early (hand cranked) Water Frame if you saw one?

20. ________________ Which aspect of textile production was first industrialized. Which aspect of textile production was the first to use advanced machines and large scale production?

21. _____ Which of the following is an explanation, albeit a slightly Marxist one, of why factory based production replaced home production? It’s also an underlying theme in the film “Pants for All”?
   a. Yaddi, daddi, dah
   b. Skippity-do-da-day
   c. Hip, hip, hippity, hop
   d. So the mill owners could better control their workers and could keep more of the surplus (earnings) the new machines and methods generated for society.

22. _____ Which of the following is an explanation of why factory based production replaced home production?
   a. Yaddi, daddi, dah
   b. Skippity-do-da-day
   c. Hip, hip, hippity, hop
   d. The answer is something about the power source that early industry used.

23. _____ Which of the following is an explanation of why factory based production replaced home production?
   a. Yaddi, daddi, dah
   b. Skippity-do-da-day
   c. Hip, hip, hippity, hop
   d. The answer is something about the desire to protect new inventions at a time when patent rights were not always well-enforced.

24. _____ Which of the following is an explanation of why factory based production replaced home production?
   a. Yaddi, daddi, dah
   b. Skippity-do-da-day
   c. Hip, hip, hippity, hop
   d. The answer is something about technology and changes in Minimum Efficient Scale.
25. _____ It’s 1780 and Malcolm has a cotton spinning mill in England. From where does Malcolm likely get his cotton? … and the answer is … **India**

26. _____ It’s 1840 and Mavis has a cotton textile mill in England. From where does Mavis likely get his cotton?

27. _____ What invention allowed cotton to be grown and processed cheaply in the region indicated in #26.

28. _____ If one defines the start of the Industrial Revolution as; “The time when factories came into being, i.e. mass production using machines and all under one roof,”, roughly when did the Industrial Revolution start?
   a. 1688  
   b. 1712  
   c. 1765  
   d. 1801  
   e. 1836  
   f. 1856

29. _____ Once the Spinning Jenny & Water Frame were adopted, output per worker hour in spinning:
   a. remained roughly the same. Now, however, less skilled and much cheaper labor could be used.
   b. increased by about 50%. Output per worker was about $1.5 \times$ what is was before.
   c. increased by about 100%. Output per worker was about $2 \times$ what is was before.
   d. was about $5 \times$ what is was before.
   e. was about $150 \times$, or more, what is was before.