

# PRODUCTION AND QUALITY CONTROL IN THE GARMENT INDUSTRY

## STUDY NOTES

- India's **garment industry** is prominence source of clothing at global fashion trends.
- About trillion of garments industry are placed in India.
- One fourth of the volume of government. production in India goes into export market and only three fourth for domestic consumption.
- **Apparel production** takes place in four steps versus procurement and raw material, laying and cutting of fabric, assembly of the product and last one is finishing and packaging of the product.
- **Production** refers to the process by which products can be made in large number using the same process.
- Production is also known as mass production.
- The concept of mass production was first used to make the uniform for American civil war.
- Before the invention of the sewing machine all garments were made by hand.
- Apparel production take place in four stages first one is procurement of raw material, laying and cutting of fabric, assembly of product and last stages finishing and packaging of the garment.
- **Procurement and inspection of raw material** include fabric and trends and to find out default or defects in the fabric. Defects can be arised from yarn fault, weaving fault, dyeing fault, finishing fault.
- To know the fabric stability and level of its acceptance and rejection is known from the fabric inspection and testing.
- Epi refers to ends per inch which is the density of fabric measured by number of warp yarn.
- PPI refers to picks per inch
- GSM means grams per square metre which is the density of knitted fabric.
- Number of work and with the ones in a square inch of woven fabric is called as thread count.
- Second stage is laying and cutting of fabric material which involves the steps of marker plan, spreading, marking, cutting and bundling.
- The second step in the production of garment is the planning and processing of the cutting of the fabric.
- After that garment pieces are sent to the assembly or stitching section in which sewing machines perform their work.
- Single needle or lock stitch machine uses to thread to do the stitching.
- Lock stitch is reversible and very stable and in flexible stage.
- **Process of assembly** is the way in which number of multiple pieces of garments put together to make complete garment. Tailor system, team working and unit production system are the way of making the garment.
- Finishing process includes inspection, stain removal, repair and ironing and folding of the garment.
- Packaging of government can be done as a hanger packed and fold packed; these type of packing is dependent on the specification of the buyer, display technique, bulk of garment, piece of garment etc.
- Quality of the product is defined as fitness for use.
- **Quality of the product** is ensured by adopting proper procedure of work, selection and use of appropriate machinery, training of manpower and inspection of product.
- **Primary requirement** to excel in the garment production are knowledge of the product, working knowledge of process, machinery knowledge, understanding of human resources.
- **Quality inspector**, production planning, quality assurance industrial engineering, man power training and enterprise would be the scope in the field of garment industry.

## QUESTION BANK

### MULTIPLE CHOICE QUESTIONS

- The garment industry of India consists of  
(a) 1 trillion (b) 5 trillion (c) 8 trillion (d) 10 trillion
- What is the overall volume of garment production in India export market?  
(a) One third (b) One fourth (c) One fifth (d) One eighth
- \_\_\_\_\_ refers to a process by which product can be made in multiples using the same process and ensuring that each product made is identical in all respects.  
(a) Production (b) Mass production (c) Product production (d) Process development
- Apparel production is done at \_\_\_\_\_ stages.  
(a) 31 (b) 2 (c) 4 (d) 1
- Which of the following is not the stage of apparel production?  
(a) Procurement and inspection of raw material (b) Laying and cutting off fabric material  
(c) Assembly of product (d) Communication and advertising
- Fabric defects can be classified on the basis of \_\_\_\_\_.  
(a) Defects (b) Inspection (c) Trims (d) Faults
- Which of the following is not included in the source of faults as fabric defects  
(a) Yarn faults (b) Weaving faults (c) Dyeing faults (d) Processed faults
- Which of the following defects arises from yarn faults?  
(a) Coarse end and fine end (b) Fuzz and fuzz balls  
(c) Slub (d) All of these
- Defects arising from weaving faults are \_\_\_\_\_.  
(a) Bar and barre (b) Bias and bowed filling  
(c) Broken end and float (d) All of these
- Which of the following is not a defect arising from dyeing faults?  
(a) Colour run (b) Shaded (c) Bleach (d) Smash
- What are the defects arising from finishing faults?  
(a) Baggy and chafe (b) Tears, crease and wrinkle  
(c) Tenting marks (d) All of these
- What is the most important steps in the process of production as it defines the final quality of the product?  
(a) Fabric inspection (b) Quality (c) Communication (d) Transportation
- Ppi and Epi stands for  
(a) Picks per inch and engine per inch (b) pixels per inch and ends per inch  
(c) Picks per inch and ends per inch (d) None of these
- GSM stands for  
(a) Grab per square metre (b) Grams per square metre  
(c) Griefs per square metre (d) None of these
- The laying and cutting of fabric/material include  
(a) Marker plan and spreading (b) Marking and cutting  
(c) Bundling (d) All of these
- The placement of pattern pieces on fabric in such a manner that the consumption of fabric per garment is optimised is known as  
(a) Spreading (b) Marker (c) Marking (d) Cutting

17. The final product of the spreading process is called  
 (a) Edge (b) Lay (c) Monitor (d) None of these
18. The process of assembly includes  
 (a) Tailor system (b) Team working or module system  
 (c) Unit production system (d) All of these
19. \_\_\_\_\_ is the process of preparing any product for dispatch from one place to another.  
 (a) Finishing (b) Packaging (c) Transportation (d) Warehouse
20. The quality of the product is ensured by  
 (a) Adopting proper procedure of work (b) Use of appropriate machinery  
 (c) Trained manpower (d) All of these
21. \_\_\_\_\_ is the loose fibres from the yarns.  
 (a) Coarse end (b) Fuzz balls (c) Slub (d) Bar
22. Cost of raw material in garments is \_\_\_\_\_% .  
 (a) 40 (b) 50 (c) 70 (d) 90
23. Number of warp and weft yarn in a square inch of woven fabric is called  
 (a) GSM (b) Thread count (c) EPI (d) PPI
24. Which of the following is the cheapest and easily available mechanised cutting apparatus?  
 (a) Straight knife machine (b) Band knife  
 (c) Round knife (d) None of these
25. Which of the following is an incorrect way to ensure quality of the product?  
 (a) Procedure of work (b) Use of machinery  
 (c) Price of the product (d) Inspection of product at various stages
26. \_\_\_\_\_ is the process of solving the problem with the aim to get zero defect product.  
 (a) Quality assurance (b) Quality control (c) Quality management (d) Problem of quality
27. TQM refers to  
 (a) Totality Quantity Management (b) Total Quantity Management  
 (c) Total Quality Management (d) Total Quality Monitoring
28. Which term is used to define the garment as “fitness for use”?  
 (a) Quality of the product (b) Quantity of product  
 (c) Monitoring of product (d) Controlling of product
29. The finishing process of garments does not include  
 (a) Stain (b) Ironing (c) Pricing (d) Folding
30. The packaging of the garment differs from packaging.  
 (a) False (b) True  
 (c) Can't say (d) Sometimes true sometimes false
31. Arrange the steps of planning and processing of fabric cutting in sequence  
 1. Spreading 2. Marker plan 3. Cutting 4. Bundling 5. Marking  
 Choose correct option.  
 (a) 1, 2, 4, 3, 5 (b) 2, 1, 3, 4, 5 (c) 2, 3, 1, 5, 4 (d) 2, 1, 5, 3, 4
32. Which technique should be used for marker planning?  
 (a) CAD system (b) CDA system (c) ADC system (d) Auto designing
33. Which type of machine uses two threads to do the stitching in which one enters the fabric from the top and another enters from the bottom through bobbin?  
 (a) Chain stitch (b) Lock stitch machine  
 (c) Reversible machine (d) Computerized machine
34. Garment manufacturing industries uses \_\_\_\_\_ system to make a complete garment.  
 (a) Tailor (b) Manpower (c) Unit production (d) Module

35. Which of the following Indian institute provides education in field of textile and fashion industry?  
 (a) National Institute of Fashion Technology (b) Pearl Academy of Fashion Delhi  
 (c) Ambedkar University, Delhi  
 (d) Apparel and Leather Technique Training College, Ahmedabad
36. Which type of finishing is done on Denim fabric?  
 (a) Sand wash (b) Light wash (c) Mud wash (d) Hand wash
37. Lock stitch is reversible, strong and inflexible \_\_\_\_\_.  
 (a) Stitching (b) Embroidery (c) Cutting (d) Weaving
38. \_\_\_\_\_ refers to the density of fabric measured by number of yarn in one inch of woven fabric.  
 (a) PPI (b) EPI (c) GSM (d) EFI
39. In which year sewing machine was invented?  
 (a) 1843 (b) 1863 (c) 1833 (d) 1933
40. First mass production in textile industry was used for  
 (a) Uniform of American civil war (b) Uniform of citizen  
 (c) Dress for king (d) Dress for queen
41. Chafe defects refer to  
 (a) Finishing is not uniform (b) Fabric has been damaged by abrasion  
 (c) Fabric not lie flat (d) Short length of fabric
42. The lengthwise yarns in a woven fabric are known as  
 (a) Wales (b) Weft yarn (c) Warp yarn (d) Courses
43. Yarn count is denoted by \_\_\_\_\_  
 (a) Ag (b) Gm (c) Xe (d) Ne

### Input Text Based MCQs

Read the passage and answer the questions that follow (44 to 45).

Apparel industry is fashion driven and continuously changing with the trend. Consumers are more aware and demanding with the development of media and advertisement. Now a days consumer have more choices in quality design and price due to large apparel industry. When fabric is free from any fault or different then it is considered as "OK" fabric. The acceptance or rejection of fabric depends on the final product of the garment i.e. style, functionality, performance etc. Various test are also conducted to know the suitability of the fabric colour fastness test, thread count, fabric, weight shrinkage, flame retardant etc.

44. \_\_\_\_\_ are the characteristics of the product that are certified figure given by standardised and recognised agencies which is mandatory to followed.  
 (a) Tolerance (b) Standard (c) Quality assurance (d) Quality control
45. What is the use of inspection in garments industry?  
 (a) Check the quantity (b) Check the quality (c) Control the quality (d) Control the quantity

### ANSWERS

#### Multiple Choice Questions

1. (a) 2. (b) 3. (a) 4. (c) 5. (d) 6. (d) 7. (d) 8. (d) 9. (d) 10. (d)  
 11. (d) 12. (a) 13. (c) 14. (b) 15. (d) 16. (b) 17. (b) 18. (d) 19. (b) 20. (d)  
 21. (b) 22. (c) 23. (b) 24. (a) 25. (c) 26. (b) 27. (c) 28. (a) 29. (c) 30. (b)  
 31. (d) 32. (a) 33. (b) 34. (d) 35. (c) 36. (a) 37. (a) 38. (b) 39. (c) 40. (a)  
 41. (b) 42. (c) 43. (d)

#### Input Text Based MCQs

44. (b) 45. (c)

