1. The method of ___________ two or more single yarns is called doubling or folding or ply twisting.  
   (TSC/ N03011)  
   a) Spinning  
   b) Interlocking  
   c) interlooping  
   d) **Twisting**

2. The shift operator should reach the work place at least __________ minutes early. (TSC/ N0309)  
   a) 5 - 10  
   b) 10 – 15  
   c) 15 -20  
   d) 20 - 25

3. The ___________ should check the condition of different running spindles. (TSC/ N0309)  
   a) House keeping incharge  
   b) Security  
   c) **Shift operator**  
   d) Managing Director

4. Ensure proper passage of yarn through _____________ to avoid twist variations and defective package. (TSC/ N0309)  
   a) Straight guide  
   b) **Pig tail guide**  
   c) Horizontal guide  
   d) Linear guide

5. __________ is applied in some twisting machines, in order to reduce the effect of friction on the yarns. (TSC/ N03011)  
   a) Oil  
   b) Grease  
   c) Water  
   d) **Waxing**

6. One of the below mentioned point is not the function of a protection pot around the yarn package. (TSC/ N03011)  
   a) Protect the feed package from damage  
   b) Facilitate start-up of the balloon  
   c) Separate the balloon and the feed yarn to avoid abrasion and  
   d) **Self cleans itself**

7. For a yarn to show good __________, the ply twist must be in the opposite direction to the single twist (S/Z). (TSC/ N03011)  
   a) Weight  
   b) Shine  
   c) **Balance**  
   d) Thickness
8. __________ is a parallel wound cylindrical package of yarn which is ideal for two for one twister. *(TSC/ N03010)*
   a) Reel
   b) **Cheese**
   c) Creel
   d) Package

9. Spindle break is operated to stop the spindle during breakage for ________. *(TSC/ N03010)*
   a) Knotting
   b) Oiling
   c) Greasing
   d) Winding

10. The function of the drop wire is to ________ the winding automatically as soon as a thread breaks. *(TSC/ N03011)*
    a) Slow down
    b) **Stop**
    c) Speedup
    d) Run

11. __________ is carried out to replace the empty cones when the plied and twisted yarn cones become full. *(TSC/ N03011)*
    a) Creeling
    b) Knotting
    c) Winding
    d) **Doffing**

12. Soft packages, stained packages, tail end missing, back stitches are the defects in __________. *(TSC/ N03010)*
    a) Feeding yarn package
    b) **TFO wound packages**
    c) Yarn winding package
    d) Cheese package

13. The function of the ________ is to stop the winding automatically as soon as a thread breaks. *(TSC/ N03010)*
    a) Winder
    b) drop wire
    c) **Cradle**
    d) Tension variator

14. Always __________ the ends using Knotter. *(TSC/ N03011)*
    a) Cut
    b) Squeeze
    c) **Knot**
    d) Smoothen

15. Ensure the size of knot / splice is _______ *(TSC/ N03011)*
    a) **Minimal**
    b) Maximum
    c) Round
    d) Square
16. Do not carry any ______ parts into the TFO area during machine running as there are chances of fire and damage to machine parts. (TSC/N03012)
   a) Plastic
   b) Wooden
   c) Metallic
   d) Rubber

17. One of the following is not a work and safety practice that is adopted in in the TFO section. (TSC/N03012)
   a) Do not opening the doors of the machine
   b) **Do not apply brake to stop the spindle**
   c) Do not cleaning the moving parts
   d) Do not take any choked material when the machine is in running condition

18. Clean the inner pot using ______. (TSC/N03012)
   a) Cloth
   b) Paper
   c) Water
   d) Oil

19. Soft packages, stained packages, tail end missing, back stitches are the defects that occur in the ______. (TSC/N03010)
   a) Feeding yarn package
   b) TFO wound packages
   c) Cradle
   d) Cheese pot

20. Reporting should be done only to the supervisor or higher authority in case of ______. (TSC/N03012)
   a) Shift change
   b) **Emergency**
   c) Leave
   d) Yarn fault

### Practical

Candidates will be asked to do any one of the below mentioned tasks:

1. Identify the defects in the feeding yarn package and TFO wound packages. (TSC/N 0309)
2. Check that the yarn passage and doubled yarn formation is proper. (TSC/N 0309)
3. Ensure colour coding of feed in the creel is correct. (TSC/N 0310)
4. Doffing the cone package. (TSC/N 0311)
5. Carry out the cleaning activities as per the schedule. (TSC/N 0312)

### Viva

1. What are the objectives of doubling? Why is doubling done? (TSC/N03010)
   The object of doubling is to double the individual threads. Doubling avoids unevenness and the strength of doubled yarn is correspondingly better than the single thread. So doubled yarns are preferred.

2. Explain the tasks that a TFO Tenter is expected to perform. (TSC/N03010)
• Carry out tenting activities in TFO machine
• Attend the machine for creeling
• Creel the cheese package/paralleled yarn
• Attend the breaks and knotting/splicing the yarn
• Doff the doubled cone package
• Clean the machine on a regular basis and carrying out preventive maintenance activities.

3. List the main objectives of providing protection pot in a TFO tenter. *(TSC/ N03011)*

The main objectives of providing protection pot are to:
▪ protect the feed package from damage
▪ facilitate start-up of the balloon
▪ separate the balloon and the feed yarn to avoid abrasion and
▪ protect the feed yarn from dust and fly

4. Mention the types of spindle drives the TFO twisters are working with. *(TSC/ N03010)*

Generally, TFO twisters are working with the following two types of spindle drive arrangements.
   i) Tangential belt drive
   ii) Four spindle tape drive

5. Why doubled yarns are twisted? *(TSC/ N03011)*

The purpose of this operation is to unite, by twisting, two or more doubled yarn ends, in order to obtain a stronger yarn. It is a two-stage process namely doubling and twisting.