Instructions : (1) *All* questions are *compulsory*.

(2) Attempt *all* questions including Question No. *1* which is *compulsory*.

(3) Answer *each* next main question on a *new* page.

(4) Illustrate your answers with neat sketches *wherever* necessary.

(5) Figures to the *right* indicate *full* marks.

(6) Assume suitable data, if *necessary*.

(7) Use of Non-programmable Electronic Pocket Calculator is *permissible*.

(8) Mobile Phone, Pager and any other Electronic Communication devices are *not* permissible in Examination Hall.

Marks

1. Attempt **any five** of the following : **(5×4=20)**

   a) Calculate the resultant count of 20^sNe, 30^sNe and 36^sNe yarn.

   b) Write any four differences between drum winding machine and precision winding machine.

   c) Write the limitations of ring spinning.

   d) What is back doubling ? Write the advantage of back doubling.

   e) Write the difference between ring and rotor yarn.

   f) Write the objects of self twist spinning process.

   g) Write the difference between unconventional spinning and ring spinning process.

2. Attempt **any two** of the following : **(2×8=16)**

   a) With neat sketch explain two for one twister.

   b) Write the effect of direction and amount of twist in doubling on properties of doubled yarn.

   c) How sewing threads are produced ? Write the properties and end-uses of sewing threads.

3. Attempt **any two** of the following : **(8×2=16)**

   a) Write yarn tensioning and tension control in winding process.

   b) Write the drawbacks of weavers and fisherman's knots.

   c) Write main features of winding machine.

P.T.O.

Marks

4. Attempt **any two** of the following :   **(8×2=16)**

    a) With neat sketch describe passage of material through O.E. (rotor) spinning.

    b) Write the effect of rotor groove, diameter and speed on O.E. yarn.

    c) Write any eight properties of O.E. (rotor) yarn.

5. Attempt **any two** of the following :   **(8×2=16)**

    a) Write the modern developments in O.E. (rotor) spinning.

    b) Write the end-uses of O.E. yarn.

    c) With neat sketch explain DREF – II friction spinning.

6. Attempt **any two** of the following :   **(8×2=16)**

    a) With neat sketch explain SIRO spinning.

    b) With neat sketch explain Bobtex process.

    c) Write the object of compact spinning, also write the properties of yarns produced by compact spinning.

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