## 17692

## 15162

3 Hours / 100 Marks
Seat No. $\square$
Instructions - (1) All Questions are Compulsory.
(2) Answer each next main Question on a new page.
(3) Illustrate your answer with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

1. Attempt any FIVE of the following: 20
a) Enlist advantages of rural site selection for textile mill.
b) Illustrate symptoms of bad layout.
c) State objects of material handling and elaborate its importance.
d) Give the concept and importance of energy conservation.
e) Mention the work load of winder and warper.
f) Why and how, the humidity is maintained in a loomshed?
g) Give four health hazards in textile mill and measures to control them.
2. Attempt any TWO of the following: 16
a) Compare product and process layout with respect to textile unit.
b) Give the line sketches of material handling equipments used in blow room and loomshed.
c) Draw layout of 24 ring frames alongwith alleys.
3. Attempt any TWO of the following: 16
a) Draw chart and show the selection of parameters such as speed, $\eta$, waste $\%$ etc for producing $40^{\mathrm{s}} \mathrm{V}$ cotton yarn from blow room to ring frame.
b) Calculate the machinery required for 25,000 spindles of ring frame producing $40^{\mathrm{s}}$, combed cotton yarn upto comber only.
c) Calculate machinery required for $40^{\mathrm{s}}$ combed cotton 25,000 spindles from comber preparatory to blow room.
4. Attempt any TWO of the following:
a) Give speciality and quality particular of cambric, poplin, voile and suiting fabrics.
b) Mention any eight factors considered during selection of weaving machinery.
c) Draw chart of processing parameters for speed, $\eta$ waste $\%$ etc and calculate machinery for producing 10,000 meters of denim cloth per day (up to sizing only)
5. Attempt any TWO of the following:
a) Draw layout of 48 automatic looms. Show passages used in it.
b) Describe the work load of ring frame tenter and doffers.
c) Enlist various quantity and categories of labours required per day for a loomshed having 48 looms.
6. Attempt any TWO of the following:
a) What is energy audit? Write values of power requirements of a spinning mill with 25,000 spindles spinning $40^{\text {s }}$ count.
b) Describe the importance and requirements of $\mathrm{RH} \%$ and temperature in weaving and its preparatory departments.
c) Give causes of industrial accidents and control measures taken in spinning mills.
