Q.32 How to set a 'S' and 'Z' twist on ring frame?

Q.33 Calculate weight of a 4000 metre warper's beam in kgs, if it has 1200 ends of 20 Ne cotton yarn. Calculate crimp% and take-up% of a fabric.

Q.34 What do you mean by Yarn numbering system.

Q.35 A winding drum with 12 cm dia rotates at 2650 rpm. Calculate rpm of cheese at start when empty cheese dia is 5 cm. Also calculate winding rate is mts/min.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Calculate the loom production / 8 hour in square metre of fabric produced with following particular: Picks/cm-20, Reed width 140 cm, Loom speed 210 picks/min, Warp crimp 6%, Weft crimp 10%, Loom running efficiency-80%.

Q.37 A plain cotton fabric has following particulars.

Warp 25 tex, 28 ends/cm Weft: 15 tex, 30 picks/cm

Calculate warp and weft fractional cover, fabric cover factor with warp and weft cover factor.

Q.38 Draw the neat & clean diagram of 5-wheel and 7-wheel take-up motion and mention any five differences between the two motions.

No. of Printed Pages : 4 32531

Roll No. .....

Textile Design
Subject:- Textile Calculations

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Weight in grams of 1000-meter length of yarn is known as_____

a) Denier b) English count

c) Tex d) None

Q.2 5 - wheel & 7 - wheel are the types of_____ motion.

a) Let-off b) Take-up

c) Beat-up d) None

Q.3 The formula for weft cover factor is_____

a) $\frac{EPI}{\sqrt{warp\ count}}$ b) $\frac{PPI}{\sqrt{weft\ count}}$

c) $\frac{EPC}{\sqrt{weft\ count}}$ d) None

Q.4 _____ are produced by twisting together two or more singles yarns

a) Cable yarn b) Single yarn

c) Plied yarn d) None

Q.5 Number of turns per inch is also known as_____

a) TPI b) TPC

c) TPM d) None

Q.6 Universal yarn numbering system is_____

a) Denier b) Metric

c) Tex d) None

Q.7 The length of yarn wound on weaver's beam is known as

a) Tape length b) Beam length

c) Yarn length d) None

Q.8 Number of ends per inch in a given fabric sample is

a) EPC b) EPM

c) EPI d) None

Q.9 TM=_____√Count

a) TPI b) EPI

c) PPI d) None

Q.10 Loom is a machine used for_____

a) Knitting b) Weaving

c) Both a & b d) None

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 _____is a direct yarn numbering system

Q.12 Define English count.

Q.13 If two yarn of 30 tex are doubled, what is resultant count of yarn.

Q.14 How to calculate production of a warping machine.

Q.15 Define reed count.

Q.16 What is a S-twist?

Q.17 What is the significance of TM?

Q.18 Give the formula to calculate weight of weft in fabric.

Q.19 Give the formula to calculate yarn diameter.

Q.20 Give the relation to calculate Crimp%.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Calculate the dividend of 7-wheel take upmotion.

Q.22 How to calculate warp cover factor?

Q.23 Mention the dividend of a 5-wheel take-up motion.

Q.24 Convert 10 tex into Ne and Denier.

Q.25 What is the function of take-up motion on a loom?

Q.26 Draw a neat & clean diagram of 5-wheel take up motion.

Q.27 Derive a relation between metric and english count.

Q.28 Discuss different system of yarn numbering with giving example of each system.

Q.29 If two yarn of 30 tex are doubled, what is resultant count of yarn.

Q.30 Derive a relation between TM and tex twist.

Q.31 Calculate the yarn diameter in 'inches' and 'mm' for a 16 tex yarn.