Q.32 Find the cost of fencing a rectangular park of length 150 m and breadth 75m at the rate of Rs. 15 per meter.

Q.33 If the mean of x, x + 3, x + 5, x + 7, x + 10 is 9. Determine the mean of the last three observations.

Q.34 Define random variations and long term variations.

Q.35 Define control charts and their use.

SECTION-D

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

Q.36 Find arithmetic mean for the following data

Marks obtained	8	12	15	18	20
No. of student	3	2	4	7	5

Q.37 Prove that $\log \frac{11}{5} + \log \frac{14}{3} - \log \frac{22}{15} = \log 7$.

Q.38 Calculate the cloth cover or fabric cover of a fabric if Warp count is 20's Ne, weft is 20's Ne EPI = 100 and PPI = 80.

3rd Sem.
Branch : Textile Design
Sub: Textile Mathematics

Time : 3 Hrs.   **M.M. : 100**

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 The area of rectangle is
   a) ½ (Length x Breath)   b) 2 (Length + Breadth)
   c) Length x Breadth   c) None of these

Q.2 Value of 4! Is
   a) 4   b) 8
   c) 12   d) 24

Q.3 Area of a circle is
   a) 2pr   b) ½ rp^2
   c) pr   d) pr^2

Q.4 The mean of the series 5, 10, 15, 20, 10 is.
   a) 12   b) 15
   c) 20   d) None of these

Q.5 The simplest ratio of 25:45 is
   a) 9:5   b) 5:9
   c) 1:9   d) 9:1

Q.6   The side of a square is 4m than its perimeter will be

   a) 4m   b) 12m

   c) 16m   d) None of these

Q.7   10% of 50 =

   a) 10   b) 50

   c0 5   d) 20

Q.8   Value of $^3p_1$

   a) 1   b) 3

   c) 2   d) None of these

Q.9   The mode of series 2, 3, 5, 3, 7, 2, 3 is

   a) 3   b) 2

   c) 5   d) 7

Q.10   If cost of the one pen is Rs 10 than cost of 20 pent is

   a) Rs. 100   b) Rs. 200

   c) Rs. 300   d) Rs. 150

SECTION-B

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

Q.11   Find the median of the series 2, 3, 5, 7, 8.

Q.12   Evaluate $\frac{21!}{10!}$

Q.13   Evaluate $\log_2 16$.

Q.14   Divide Rs. 672 in Riya and siya in the ratio 5:3.

Q.15   Value of ^nP_r is_____.

Q.16   Write the formula for area of triangle.

Q.17   Define mode.

Q.18   Find the average of first five natural number.

Q.19   Find the area of a circle whose radius is 2 cm.

Q.20   Give the formula of volume of cylinder.

SECTION-C

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

Q.21   Find the value of $^{10}C_6$.

Q.22   If $(x+1)! = 12 (x-1)!$ Then find the value of x.

Q.23   Define warp cover and weft cover.

Q.24   Find area of a parallelogram whose base is 10cm and height is 5cm.

Q.25   Find the volume of the cylinder whose radius is 6cm and height is 20cm.

Q.26   If $\log (X+1) + \log 3 = \log 21$ find the value of x.

Q.27   If x:5 = 16:20 find value of x.

Q.28   If cost of a 4 tables is Rs. 2500 then find the cost of 9 tables.

Q.29   if 25% of x = 20% of y, then find x:y.

Q.30   Find mean proportion of 6 and 24.

Q.31   The average of 40 observations is 50 and average of another 60 observations is 55. Find average of all observations.