

- Q.33 If $x:y = 3:4$, Find $(4x+5y):(5x-2y)$. (CO4)
 Q.34 If $\frac{1}{8!} + \frac{1}{9!} = \frac{x}{10!}$ Find x. (CO5)

Q.35 Solve the equation $(n+1)! = 12n!$ (CO5)

SECTION-D

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

- Q.36 A solid cylinder has total surface area of 462 sq cm and curved surface area is $\frac{1}{3}$ rd of its total surface area. Find the volume of the cylinder. (CO2)

Q.37 Calculate the median of the following data (CO3)

Marks	20	9	25	50	40	80
Numbers of students	6	4	16	7	8	2

- Q.38** Find the mean of daily wages of 60 workers in a factory as per data given below: (CO3)

Daily wages (in Rs.)	80	120	110	130	140
No. of Workers	12	14	13	11	10

(Note: Course outcome/CO is for office use only)

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Roll No.

**3rd Sem / Textile Design
Subject:- Textile Mathematics**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- c) 0 d) 9

Q.7 The area of rectangle having length 7cm and breadth 5cm is (CO2)

a) 35 cm^2 b) 45 cm^2
c) 25 cm^2 d) none

Q.8 The side of square is 6 cm, then its perimeter will be (CO2)

a) 18 cm b) 36 cm
c) 24 cm d) None

Q.9 40% of 800 is (CO4)

a) 32 b) 190
c) 840 d) 320

Q.10 What is the percentage of 20 g of 1 kg? (CO4)

a) 20% b) 0.2%
c) 2% d) 0.02%

SECTION-B

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

- Q.11 Convert $\log_{10} 0.01 = -2$ into exponential form. (CO1)

Q.12 Calculate $5!$ (CO1)

Q.13 Write formula of a circle having radius R. (CO2)

Q.14 Define cover factors of a fabric. (CO7)

Q.15 Define random variations. (CO6)

Q.16 Change the base of $\log_5 5$ to 10. (CO1)

Q.17 Calculate the mean of 1,2,3,4,5,6. (CO3)

Q.18 Write the formula for area of a trapezoid. (CO2)

Q.19 Write formula of surface area of a cylinder having radius r and height h. (CO2)

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- Q.20 Find the value of 7C_4 . (CO5)

SECTION-C

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

Q.21 Evaluate $\log_2(8 \times 16)$. (CO1)

Q.22 The average of 12 observations is 8, later it was observed that one observation 10 is wrongly written as 13. What is the correct average observation? (CO4)

Q.23 How many litres of pure acid are there in 4 litres of a 10% solution? (CO4)

Q.24 If $\log x + \log (6+x) = \log 16$, find the value of x. (CO1)

Q.25 The sides of a triangle are 8 m, 10 m and 6 m, then find the area of the triangle. (CO2)

Q.26 Find the perimeter of a square, if the sum of diagonals is 144cm. (CO2)

Q.27 Describe different types of variations. (CO6)

Q.28 The diameter of a circular pond is 40 m. there is a path around this pond of width 5m. Find the area of the path. (CO2)

Q.29 Describe the uses of control charts. (CO6)

Q.30 Differentiate between warp cover and weft cover. (CO7)

Q.31 Find arithmetic mean for the following. (CO3)

x: 10 11 12 13 14 15

F: 2 6 8 6 2 6

Q.32 Define mode and find mode of the series. (CO3)

15, 16, 15, 13, 14, 15, 14

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