Q.32 Define mode and find mode of the following data 110,120,130,120,110,140,130,120,140,120 (CO3)

Q.33 Find the fourth proportional to 4,9,12. (CO4)

Q.34 Evaluate product 3!4!.7! and prove that 3!+4! ¹ 7! (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 Find curved and total surface area of a cylinder whose diameter is 10 cm and height is 14 cm. (CO2)

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

X_i	1	2	3	4	5	6	7	8	9
F_i	8	10	11	16	20	25	15	9	6

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

Daily wages (in Rs.)	70	110	100	130	140
No. of Workers	10	12	13	11	14

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3rd Sem / Textile Design

Subject:- Textile Mathematics

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Mode of following data : 2,3,4,4,4,5,6,7,9,11 is (CO3)

a) 2 b) 4
c) 9 d) 11

Q.2 The median of the series 4,8,6,12,15 is (CO3)

a) 15 b) 4
c) 8 d) 6

Q.3 The value of ${}^{6}C_{0}$ is (CO5)

a) 12 b) 2
c) 6 d) 1

Q.4 If ${}^{n}P_{2} = 20$, the value of n is (CO5)

a) 5 b) 4
c) 6 d) 20

Q.5 The logarithmic forms of $9^3 = 729$ is (CO1)

a) $\log_9 729 = 3$ b) $\log_3 729 = 9$
c) $\log_{729} 3 = 9$ d) $\log_3 9 = 729$

Q.6 The value of $\log_3 3$ is (CO1)

a) 3 b) 1
c) 0 d) 9

Q.7 The area of circle having radius 7 cm is (CO2)

a) 145 cm^2 b) 154 cm^2

c) 451 cm^2 d) none

Q.8 The side of square is 5 cm, then its perimeter will be (CO2)

a) 20 cm b) 10 cm

c) 15 cm d) None

Q.9 30% of 700 is

a) 21 b) 190

c) 490 d) 210

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

a) 10% b) 0.1 %

c) 1% d) 15%

SECTION-B

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

Q.11 Convert $Log_{10}1000 = 3$ into exponential form. (CO1)

Q.12 Find the value of 6! (CO1)

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

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

Q.15 Define random variations. (CO6)

Q.16 Change the base of $Log_2 3$ to 10. (CO1)

Q.17 Calculate the mean of 1,2,3,4,5,6,7. (CO3)

Q.18 Write the formula for surface area of cylinder. (CO2)

Q.19 Write formula of area of aright angle triangle having base b and height h. (CO2)

Q.20 Find the value of $^8C4$. (CO5)

SECTION-C

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

Q.21 Evaluate Log3(9X81). (CO1)

Q.22 The average of 12 observations is 8, later is 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 8 litres of a 20% solution? (CO4)

Q.24 Prove that $Log_{10}12 - 2Log_{10}4 + 2Log_{10}6 = Log_{10}27$, find the value of x. (CO1)

Q.25 The area of circle is 2464 m2, then find its circumference. (CO2)

Q.26 Find the area of circle whose radius is equal to the side of a square whose perimeter is 112 m. (CO2)

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

Q.28 Calculate the area of circular ring whose external and internal radii are 20 cm and 15 cm. (CO2)

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

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

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

X:	9	10	11	12	13	14
F:	3	5	7	6	2	7