

2020

SERICULTURE**Paper : Course-10 (Gr. A & B)****(Applied Statistics & Sericulture Economics)**

Full Marks : 60

Time : $2\frac{1}{2}$ Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***GROUP-A****(Marks: 30)****(Applied Statistics)**

1. Answer any **five** of the following : $1 \times 5 = 5$
- Define correlation co-efficient.
 - What is DMRT?
 - Give examples of binary data which follows generally binomial distribution.
 - Write formulae of best measures of dispersion for raw data.
 - Give example of continuous variables in sericulture research.

[Turn Over]

f) What is the major applicability of Chi square test?

g) What is cumulative frequency?

2. Answer any **three** of the following : $5 \times 3 = 15$

a) Write down the roles of statistics in sericulture science.

b) What are methods of data collection? Explain in brief.

c) Define regression. Write down a formulae of intercept and regression co-efficient. When regression line follows Y on X (i.e., $Y = \mu + \beta X + e$)?

d) Elucidate Normal Distribution including its application in sericultural data analysis.

e) What are the differences between t-test and F-test?

3. Answer any **one** of the following : $10 \times 1 = 10$

a) Calculate $cov(x,y)$, if we have $r=0.603$, $S_x=2.12$ and $S_y=2.345$? Write the properties of correlation coefficient. Explain the test statistic t .

b) Explain about RBD and complete the following ANOVA table in connection with

a varietal trial on mulberry which was laid under RBD with eight mulberry varieties in three replications.

Sources of Variation (SV)	Degrees of Freedom (df)	Sum of Squares (SS)	Mean Squares $MS = \frac{SS}{df}$	Computed F	Tabulated F
Replication or Block		75.25			
Variety		250.50			2.76
Error		200.25			
Total		526.00			

GROUP-B

(Sericulture Economics)

(Marks : 30)

4. Answer any **five** of the following: $1 \times 5 = 5$
- Define Cost.
 - What is Yield Gap Analysis in Sericulture ?
 - Give examples of fixed resources in silkworm cocoon production.
 - List out the export of silk products from India.
 - What is B:C ratio in silkworm cocoon production?

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[Turn Over]

- What is total variable cost in mulberry production?
- Draw a graph of Total Cost incurred for silk production.

5. Answer any **three** of the following : $5 \times 3 = 15$

- Write the role of economics in sericulture science.
- Explain types of production function.
- Explain the relationship between Marginal Cost, Average Cost and Average Variable Cost graphically.
- Bring out employment opportunities in silk industry.
- Do you agree with silkworm cocoon market is perfectly competitive? If yes/no justify?

6. Answer any **one** of the following: $10 \times 1 = 10$

- Estimate cost of production per kg of mulberry leaf as well as cocoon and B:C ratio

[Given: 17 MT was average mulberry leaf production per acre and its production cost was around Rs.61566 and requirement of

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mulberry leaf was around 11 MT for 710 dfls; Rs.102599 was production cost to obtain cocoons 342 kg and all the cocoons were sold in Kaliachak market at rate of Rs. 350 per kg].

- b) Explain the comparative advantage theory in the context of sericulture?

Date of Examination:

17.7.2021, Time: 12:00 Noon – 02:30 PM