

## Second Year B.Pharm Degree Supplementary Examinations July 2018

## Mathematics, Biostatistics &amp; Computer Applications

## (2010 SCHEME)

Time: 3 Hours

Total Marks: 100

- Answer all Questions.
- Use ordinary calculators.
- Write section A and section B in separate answer books(32 Pages).  
Do not mix up questions from section A and section B.

QP CODE: 205006 Section A –Mathematics &amp; Biostatistics Marks: 50

Essay (10)

1. The following is the data of number of minutes taken to recover to normal after consuming antacid tablet for acidity complaint in 10 patients. One tablet from each of two different pharmaceutical companies to each of the patients.

Drug	1	2	3	4	5	6	7	8	9	10
A	20	15	18	17	30	25	14	20	26	15
B	14	10	12	11	21	20	9	12	22	16

Test whether there is any significant difference between two drugs at 1% level of significance (Given that the t (tabulated) value is 2.88 with (20-2) d.f at 1% level of significance).

Short notes

(8x5=40)

2. Find  $\frac{dy}{dx}$  if  $x = at^2$ ,  $y = 2at$

3. Find the derivative of  $y = x^{\sin x}$

4. Evaluate  $\int e^{\sqrt{x}} dx$

5. Solve :  $(e^y + 1)\cos x dx + e^y \sin x dy = 0$

6. Solve the equation :  $x \frac{dy}{dx} + \frac{y^2}{x} = y$

7. "What is Correlation? Explain types of correlation."

8. The odds favouring the event of a person hitting a target are 3 to 5. The odds against the event of another person hitting the target are 3 to 2. If each of them fire once at the target, find the probability that

- both of them hit the target
- At least one of them hit the target

9. "Calculate the Standard deviation and coefficient of Variation from the following data:

Class Interval	16-20	21-25	26-30	31-35	36-40
Frequency	4	3	8	9	40

P.T.O

**Essays**

**(2x10=20)**

1. Differentiate primary and secondary memory with suitable examples.
2. Explain in detail the types of computer networks with examples.

**Short notes**

**(6x5=30)**

3. Embedded systems.
4. What is an application software. How is it used.
5. Differentiate internet and intranet.
6. Web browsers.
7. High level languages.
8. Pharmacokinetics.

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