

Course: M.Tech (F.M.P.E.)

Subject: Advanced Engg.Mathmatics

Subject Code: MTAGF-111

Assignment No: 1

Due date of submission: 10.11.2016

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme and Enrollment No. clearly at the top of page.

Q.1

a) Find the value of $\int_0^1 \frac{dx}{1+x^2}$ by Simpson's 1/3rd rule if h = 0.25.

b) Obtain the Fourier Series for the function $f(x) = x^2$, $-\pi < x < \pi$
Hence show that

$$\frac{1}{1^2} + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \dots = \frac{\pi^2}{6}$$

Q.2

a) State and Prove Weirestrass theorem in finite products.

b) Solve the equation $e^x - 4x = 0$ by Newton Raphson method.



MONAD UNIVERSITY HAPUR (UP)

Course: M.Tech(FMPE)

Subject Name: *Statistics-I*

Subject code: MT-AGF-112

Assignment No: 1

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Program me, and Enrolment No. clearly at the top of the page.

Q.1:-

- (a) A more extensive examination of the readership was undertaken after the initiation of a one-year advertising program, designed to increase the readership age range.

Following are the data collected from this more extensive study. Draw the theoretical distribution of the ages of the readers.

Ages	Frequency
20 - 24	26
25 - 29	45
30 - 34	87
35 - 39	30
40 - 44	8
45 - 49	4.

- (b) A bag contains 5 white balls and 7 black balls. Two balls are chosen at random from the bag (without replacement). What is the probability that one is white and the other is black?

Q.2:-

- (a) Jeremy sells a magazine which is produced in order to raise money for homeless people. The probability of making a sale is, independently, 0.09 for each person he approaches. Given that he approaches 40 people, find the probability that he will make 2 or fewer sales.

- (b) An investigator has determined that the correlation between measures of anxiety and depression is +.45. There are 42 people in the sample. What is the proportion of overlap between the two variables?



MONAD UNIVERSITY HAPUR (UP)

Course: M.Tech(FMPE)

Subject Name: *Statistics-I*

Subject code: MT-AGF-112

Assignment No: II

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Program me, and Enrolment No. clearly at the top of the page.

Q.1.

- (a) If A and B are independent, with $p(A|B) = 1/4$ and $p(A \cap B) = 1/32$, what are $p(A)$ and $p(B)$?
- (b) Eight friends take a picnic to a cricket match. As her contribution to the picnic, Hilda buys eight sandwiches at a supermarket. She selects the sandwiches at random from those on display. The probability that a sandwich is suitable for vegetarians is independently 0.3 for each sandwich. Find the probability that, of the eight sandwiches, the number suitable for vegetarians is 2 or fewer.

Q.2

- (a) One of the responsibilities of John's job in the antique shop is to keep track of the closing price of a certain portrait. His recorded over the past ten weeks are as follows (in dollars): 89 94 99 95 96 95 88 96 96 96. Compute the coefficient of variation.
- (b) Two regular six-sided dice are rolled. What is the probability that the sum is at most four?



MONAD UNIVERSITY HAPUR (UP)
(SCHOOL OF AGRICULTURE SCIENCE & ENGINEERING)

Course : M.Tech. (FMPE)
Subject Name : Farm Machinery and Power Management
Sub. Code : MTAGF-114
Assignment No: I

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q.1:-

- (a) Explain farm power availability and productivity in India.
- (b) What do you mean by Farm mechanization index? Explain the Computation of mechanization index.

Q.2:-

- (a) Describe Cost of Operation of Farm Equipment?
- (b) A machine costing Rs. 3, 00,000 has a total life of 15 years. If the rate of inflation is taken as 5% constant throughout its life period, find the future price of machine, total depreciation, remaining value and annual depreciation charge at the end of 12th year. Take salvage value as 10% of inflated price.



MONAD UNIVERSITY HAPUR (UP)
(SCHOOL OF AGRICULTURE SCIENCE & ENGINEERING)

Course : M.Tech. (FMPE)
Subject Name : Farm Machinery and Power Management
Sub. Code : MTAGF-114
Assignment No: II

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q.1:-

- (a) Explain Selection of matching farm equipment.
- (b) What do you mean by inventory control of spare parts? Explain.

Q.2:-

- (a) What do you mean about Economic performance of machine-power-labour combination? Explain.
- (b) Describe Recent development history in farm machinery inside and outside India.