

Course: M.Tech (S.W.C.)

Subject: Advanced Engg.Mathematics

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. (S.W.C.)

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. (S.W.C.)
Subject Name : Advanced Soil and Water Conservation Engineering
Sub. Code : MTAGS-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.

ADVANCED SOIL AND WATER CONSERVATION ENGINEERING

Q.1:-

(a) Define Soil erosion? Write the classification of soil erosion & Explain wind eroion also.

(b) Describe the factor affecting of soil erosion.

Q.2:-

(a) Define Run-off? Explain the factor affecting of run-off.

(b) Define Water erosion? And explain the mechanics of wind and water erosion.



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Course : M.Tech. (S.W.C.)
Subject Name : Advanced Soil and Water Conservation Engineering
Sub. Code : MTAGS-114
Assignment No: II

Due date of submission: 10.11.2016

Instruction

1. Write the responses to the assignment in your own handwriting.
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3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q.1:-

- (a) Describe the types of Water Erosion and its control also.
- (b) Define water Harvesting? Explain the method of water harvesting.

Q.2:-

- (a) Define Flood? Explain the flood control method.
- (b) Describe the farm pond? How many types of Farm storage Pond? Write down essential requirements for developing Reservoir.



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

Course : M.Tech. (S.W.C.)
Subject Name : Soil Erosion, Transportation and Sedimentation
Sub. Code : MTAGS-115
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.

MTAGS-115

Q.1:-

- (a) Define Sediment? Write the importance and source of sediment.
- (b) Define Rill Erosion? Explain Mechanics of soil erosion.

Q.2:-

- (a) Define Water-shed management? Write the principles of integrated Water-shed management.
- (b) Describe the needed and importance of Water-shed management.



MONAD UNIVERSITY HAPUR (UP)
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Course : M.Tech. (S.W.C.)
Subject Name : Soil Erosion, Transportation and Sedimentation
Sub. Code : MTAGS-115
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 the needed of field investigation and survey in soil erosion.
- (b) Explain the Bed load estimation models.

Q.2:-

(a) Explain the Deposition and estimation of transported sediments in channels and reservoirs.

(b) Write the shorts notes:-

- (i) Water harvesting
- (ii) Run-off Farming
- (iii) Percolation Tanks
- (iv) Supplemental Irrigation