

Monad University

Village & Post Kastla, Kasmabad, P.O Pilkhuwa - 245101
Tehsil Hapur (U.P), India
E.C Department

Course: Electromagnetic Field Theory/E.M.F.T. (EEC-232)

Assignment: 2

Due date of submission: 10/11/2016

Instructions:

1. Write the response to the assignment in your own handwritings.
2. Submit the response to your H.O.D. within the due date.
3. Write your name, program and enrollment no. clearly at the top of the page.

Q1 (a). Use Ampere's Law to determine Magnetic field at any point due to current flowing in a long cylindrical wire.

Q1 (b) Write Short note on (a) Biot Savart Law (b) Magnetic Torque and Magnetic Moment.

Q2 (a) Classify magnetic materials on the basis of their properties with Examples.

Q2 (b) Define and Classify polarizations or Explain polynting Theorem with mathematics.

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Course: ENGINEERING MATHEMATICS-III (EEM-236)

Assignment No: 2

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 Enrolment No. clearly at the top of this page.

Q.1

- a) Prove $\Delta \nabla = \nabla \Delta - \nabla$
- b) find the root of $(17)^{\frac{1}{3}}$ correct up to three decimal places

Q.2

- a) If θ be the acute angle between to the two regression lines in the case of two variable x and y. Show that

$$\tan \theta = \frac{1-r^2}{r} \frac{\sigma_x \sigma_y}{\sigma_x^2 + \sigma_y^2}$$

- b) A sample of 100 dry cells tested to find the length of life produced the following results: $\bar{x} = 12$ hours, $\sigma = 3$ hours
Assuming the data to be normally distributed, what percentage of battery cells are expected to have life-
 - (i) More than 15 hours
 - (ii) Less than 6 hours
 - (iii) Between 10 and 14 hours?

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Course: Fundamentals of Electronic Devices (EEC-233)

Assignment No: 2

Due date of submission: 10.11.2016

Instructions

4. Write the responses to the assignment in your own handwriting.
5. Submit the responses to your HOD within the due date.
6. Write your Name, Programme and Enrolment No. clearly at the top of this page.

Q.1

- a) What do you mean by transistor? What are its advantage and disadvantages?
- b) What do you mean by current gain? Find the relation between α , β and γ ?

Q.2

- a) What do you mean by FET? Write the relation between BJT and FET?
- b) What is Zener Diode? Write the difference between LED and LCD?

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Course: Industrial Sociology (EIS-235)

Assignment No: 2

Due date of submission: 10.11.2016

Instructions

7. Write the responses to the assignment in your own handwriting.
8. Submit the responses to your HOD within the due date.
9. Write your Name, Programme and Enrolment No. clearly at the top of this page.

Q.1

- (a) Define Indian Industrial Policy 1948.
- (b) Describe 1956 Industrial Policy Resolution.

Q.2

- (a) Describe Grievance Handling Procedure.
- (b) Explain Bipartite and Tripartite Agreement.

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Course: Digital Electronics (EEC-234)

Assignment No: 2

Due date of submission: 10.11.2016

Instructions

10. Write the responses to the assignment in your own handwriting.
11. Submit the responses to your HOD within the due date.
12. Write your Name, Programme and Enrolment No. clearly at the top of this page.

Q.1

a) (I) Plot Boolean expression on Karnaugh map;

(i) $Y = (\overline{A} + B + C + \overline{D}) (A + \overline{B} + \overline{C} + D) (A + B + \overline{C} + \overline{D}) (A + B + C + D)$

(ii) $Y = \overline{A}\overline{B}\overline{C}\overline{D} + \overline{A}B\overline{C}\overline{D} + \overline{A}B\overline{C}D + \overline{A}B\overline{C}D + \overline{A}B\overline{C}\overline{D}$

(II) Reduce the following function using K- map technique

(i) $f(A,B,C,D) = \sum m (0,1,4,8,9,10)$

(ii) $f(A,B,C,D) = \prod M (0,2,3,8,9,12,13,15)$

b) (i) Design a logic circuit to convert the 8421 BCD to Excess-3 code.

(ii) What do you mean by half- adder and full- adder? Implement full-adder using half-adder?

(iii) Compare between combinational and sequential circuits.

Q.2

a) (i) What is race around condition? Explain the operation of JK flip-flop with truth table.

(ii) Draw and explain the operation of T flip- flop.

b) (i) What is counter? Compare synchronous and asynchronous counters.

(ii) What is multiplexer? Design 16:1 multiplexer using 4:1 multiplexers.

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Course: Network Analysis and Synthesis (EEC-231)

Assignment No: 2

Due date of submission: 10.11.2016

Instructions

13. Write the responses to the assignment in your own handwriting.
14. Submit the responses to your HOD within the due date.
15. Write your Name, Programme and Enrolment No. clearly at the top of this page.

Q.1

- a) Derive the condition for Series transmission of two 2- port networks.
- b) Define Hurwitz polynomial and write its properties

Q.2

- a) Write the properties of;
 1. L-C immittance functions
 2. R-C impedance or R-L admittance functions
 3. R-L impedance or R-C admittance functions
- b) i) Check whether the given polynomial;
 $P(s) = s^3 + 2s^2 + 3s + 6$ is Hurwitz or not.

ii) Explain the terms Causality and Stability.