

School of Aeronautics (Neemrana)

Question Paper For Back / Re-back Internal Assessment Examination (Theory) - Old Scheme i.e 2012 Syllabus

Instructions For Students / Faculty

Back / Re-back Internal Examination (Total 60 Marks, 2 Hrs, Syllabus From Beginning of The Session)

Total number of questions to be given are 10, each carrying 10 marks and it is compulsory to attend 2 questions from Part A and 4 questions from Part B. There is a choice of two questions out of four in part A and 4 questions out of 6 in Part B. Part A will be theoretical or derivation type (**Not More Than 70 Words For Question**). Part B will be fully numerically oriented questions (**Not More Than 70 Words For Question**), except for the list of subjects given below. No objective type or fill in the blanks shall be given, but subpart of question can be given for both Part A & B.

* **LIST OF ELABORATIVE THEORY QUESTION SUBJECTS:** Aircraft Materials, Aircraft System, Aircraft Rules & Regulation-I, Mechanics of Composite Materials, Aircraft Design, Aircraft Rules & Regulation-II, Avionics-I, Helicopter Theory, Maintenance of Airframe and System Design, Avionics-II, Airlines and Airport Management, Maintenance of Power Plant & Systems

FACULTY MEMBERS, PLEASE ENSURE EXCEPT ABOVE LISTED SUBJECTS, NO THEORETICAL ELABORATIVE QUESTION SHOULD BE GIVEN IN PART 'B' OF QUESTION PAPER

STUDENT IS ALLOWED TO ENTER LATE NOT MORE THAN 15 MIN AFTER STARTING OF EXAM, AND MAY LEAVE THE EXAM HALL ON EXPIRY OF ATLEAST OF 1 Hr FROM THE STARTING TIME OF EXAMINATION

Question Paper & Student Details

Name of Faculty*	<input type="text" value="Deepak Tomar"/>	Date of Submission of QP	<input type="text" value="28/11/2020"/>
Subject*	<input type="text" value="4MH3 - Control Systems (Old)"/>	Date of Examination*	<input type="text" value="02/12/2020"/>
Email Id of Faculty:*	<input type="text" value="Deepaktomar@soaneemrana.org"/>	Course*	<input type="text" value="B.Tech (Mechatronics Engineering)"/>
Phone Number of Faculty*	<input type="text" value="965 454 4096"/>	Semester*	<input type="text" value="Semester : 4"/>

Student Name	<input type="text"/>	Student Reg No.	<input type="text"/>
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Part A

Question : 1*

Explain Open-loop and closed-loop system in detail.

Lesson Plan*

Topic*

Source*

Question : 2*

Explain the signal flow graph in detail with rules.

Lesson Plan*

9

Topic*

Signal flow graph

Source*

Modern Control Engine

Question : 3*

Describe the block reduction technique with rules.

Lesson Plan*

8

Topic*

Block reduction technique

Source*

Modern Control Engine

Question : 4*

Explain the steady-state error in detail.

Lesson Plan*

13

Topic*

Steady-state error

Source*

Modern Control Engine

Part B

Question : 1*

Describe the bode plot and polar plot in detail with an example of each plot.

Lesson Plan*

20

Topic*

Bode plot and polar plot

Source*

Modern Control Engine

Question : 2*

Discuss Routh Hurwitz criterion using an example.

Lesson Plan*

28

Topic*

Routh Hurwitz criterion

Source*

Modern Control Engine

Question : 3*

Explain the Nyquist stability criterion.

Lesson Plan*

31

Topic*

Nyquist stability criterion

Source*

Modern Control Engine

Question : 4*

Explain the use of MATLAB to find partial fraction expansion.

Lesson Plan*

36

Topic*

MATLAB

Source*

Modern Control Engine

Question : 5

Explain gain Margin and Phase -Margin in detail.

Lesson Plan

29

Topic

Gain Margin and Phase -Margi

Source

Modern Control Engine

Question : 6

Discuss how MATLAB is applicable to solve problems in the control system.

Lesson Plan

37

Topic

MATLAB

Source


Modern Control Engine

Upload Scanned Document In Case of Numerical or Diagram for any of the above question

Mention question number with relevant fig / numerical / equations.
Max 150 KB

Choose files or drag here

I have scrutinized the question paper. There is no spelling mistake or any type of irrelevant question.



A handwritten signature in black ink, appearing to be 'J. M.', is written above a horizontal line. The signature is contained within a rectangular box.