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 THEORITICAL 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* Deepak Tomar

Date of Submission of QP 28/11/2020

Subject* 6AN1- Digital Techniques (Old)

Date of Examination* 07/12/2020

Email Id of Faculty:* deepaktomar@soaneemrana.org

Course* B.Tech (Aeronautical Engineering)

Phone Number of Faculty* 965 454 4096

Semester* Semester : 6

Student Name

Student Reg No.

Part A

Question : 1*

1. Convert the given decimal number into a binary number: (37) base10
2. Convert 2479 to hexadecimal.

Lesson Plan* 3   **Topic*** Conversion   **Source*** Modern Digital Electron

Question : 2* What is the difference between BCD and Binary Code? Give the BCD and Binary Equivalent for (15) base 10.

Lesson Plan* 2   **Topic*** Binary Code   **Source*** Modern Digital Electron

Question : 3* Build basic gates AND, NOT, OR using NOR gate.

Lesson Plan* 5   **Topic*** Basic gates   **Source*** Modern Digital Electron

Question : 4* What is Karnaugh's map? Give the structure of two, three, and four variable Kmap. How a quad eliminates two variables?

Lesson Plan* 17   **Topic*** Kmap   **Source*** Modern Digital Electron

Part B

Question : 1* What is a race around condition in JK flip-flop? Explain how it is avoided in JK master-slave FF.

Lesson Plan* 34   **Topic*** JK flip-flop   **Source*** Modern Digital Electron

Question : 2* What is a decoder? What is the importance of IC 7447?

Lesson Plan* 31   **Topic*** Decoder   **Source*** Modern Digital Electron

Question : 3*

What is demultiplexer? Explain the working of a 1:4 demultiplexer with a logic diagram.

Lesson Plan* 32   **Topic*** Demultiplexer   **Source*** Modern Digital Electron

Question : 4*

What is a multiplexer? Draw circuit diagram of 8: 1 multiplexer. Explain its working in brief.

Lesson Plan* 29   **Topic*** Multiplexer   **Source*** Modern Digital Electron

Question : 5

List out the applications of comparators?

Lesson Plan 30   **Topic** Comparators   **Source** Modern Digital Electron

Question : 6

Write short notes on
a) Half Adder b) Full Adder

Lesson Plan 26   **Topic** Adder   **Source** Modern Digital Electron

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.