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* Maris Brightson C L

Date of Submission of QP 30/11/2020

Subject* 4AN5 - Aircraft Materials (Old)

Date of Examination* 04/12/2020

Email Id of Faculty:* marisbrightson@soaneemrana.org

Course* B.Tech (Aeronautical Engineering)

Phone Number of Faculty* 805 667 7643

Semester* Semester : 4

Student Name

Student Reg No.

Part A

Question : 1* Explain the various types and properties of Aluminium in detail.

Lesson Plan* NA

Topic* Aircraft Materials

Source* George E.F. Titterton,Air

Question : 2*

What are the factors affecting the properties of a composite? Explain in detail.

Lesson Plan* NA **Topic*** Aircraft Materials **Source*** George E.F. Titterton,Air

Question : 3*

Define yield strength and yield point. Explain in brief the procedures used to determine the yield strength of a material.

Lesson Plan* NA **Topic*** Aircraft Materials **Source*** George E.F. Titterton,Air

Question : 4*

State and explain the manufacturing methods of sandwich structures.

Lesson Plan* NA **Topic*** Aircraft Materials **Source*** George E.F. Titterton,Air

Part B

Question : 1*

Explain various heat treatment techniques employed to change the mechanical properties of steel.

Lesson Plan* NA **Topic*** Aircraft Materials **Source*** George E.F. Titterton,Air

Question : 2*

Discuss the properties of carbon steels and alloy steels.

Lesson Plan*	NA	**Topic***	Aircraft Materials	**Source***	George E.F. Titterton,Air

Question : 3*

Explain any three NDT techniques to detect the crack formation on the structures.

Lesson Plan*	NA	**Topic***	Aircraft Materials	**Source***	George E.F. Titterton,Air

Question : 4*

Write short notes on

(1) Ceramic Materials
(2) Super Alloys

Lesson Plan*	NA	**Topic***	Aircraft Materials	**Source***	George E.F. Titterton,Air

Question : 5

How are the internal stresses relieved in Monel? What are the chemical, physical and working properties of Monel?

Lesson Plan	NA	**Topic**	Aircraft Materials	**Source**	George E.F. Titterton,Air

Question : 6

Explain in detail, the classification of composites. Brief each of them along with their advantages, disadvantages and applications.

Lesson Plan	NA	**Topic**	Aircraft Materials	**Source**	George E.F. Titterton,Air

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.