

# School of Aeronautics (Neemrana)

I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

Approved by Director General of Civil Aviation, Govt. of India, All India Council for Technical Education  
Ministry of HRD, Govt of India & Affiliated to Rajasthan Technical University, Kota & BTU, Bikaner Rajasthan

## Question Paper For Internal Assessment Examination (Theory) - Credit 2 / 40

### Instructions For Students / Faculty Mid Term I (Total 40 Marks, 1.5 HRS. Syllabus From Beginning Of Session)

- Part A: Total number of questions to be given are four, each carrying 2 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For Both Question & Answer**), no objective type or fill in the blanks. Total 8 marks.
- Part B: Total number of questions to be given are five, out of which student has to answer any three. They are long answer type (**Not More Than 50 Words For Question Only**), each carrying 6 marks. Total 18 marks.
- Part C: Total number of questions to be given are three, out of which student has to answer any two. They are numerical answer type / fully elaborative type\* (**Not More Than 70 Words For Question Only**), each carrying 7 marks. Total 14 marks.

### Mid Term II & III (Total 60 Marks, 2 HRS. Syllabus From Beginning Of Session)

- Part A: Total number of questions to be given are ten, each carrying 2 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For Both Question & Answer**), no objective type or fill in the blanks. Total 20 marks.
- Part B: Total number of questions to be given are six, out of which student has to answer any four. They are long answer type (**Not More Than 50 Words For Question Only**), each carrying 5 marks. Total 20 marks.
- Part C: Total number of questions to be given are three, out of which student has to answer any two. They are numerical answer type / fully elaborative type (**Not More Than 70 Words For Question Only**)\*, each carrying 10 marks. Total 20 marks.

\* **LIST OF ELABORATIVE THEORY QUESTION SUBJECTS:** 1 FY1 - 04 Communication Skills (Cr 2), 1 FY1 - 05 Human Values (Cr 2), 2 FY1 - 04 Communication Skills (Cr 2), 2 FY1 - 05 Human Values (Cr 2), 3 AN1 - 02 Technical Communication (Cr 2), 4 MH1 - 02 Technical Communications (Cr 2), 4 MH1 - 03 Economics and Financial Accounting (Cr 2), 5 AN5 - 12 Aircraft Maintenance Practices (Cr 2), 6 AN3 - 01 Mechanics of Composite Materials (Cr 2), 6 AN5 - 12 Aircraft Rules and Regulation (Cr 2), 6 MH3 - 01 Automobile Engineering (Cr 2).

**FACULTY MEMBERS, PLEASE ENSURE EXCEPT ABOVE LISTED SUBJECTS, NO THEORITICAL ELABORATIVE QUESTION SHOULD BE GIVEN IN PART 'C' 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

Mid Term	Mid Term 1	Date of Submission	24/10/2020
Name of Faculty	Ms. Tarun Thukral	Date of Examination	31/10/2020
Course	B.Tech (Aeronautical Engineering)	Semester	SEMESTER : 1
Batch	Twentieth (20)	Subject	1 FY3 - 08 Basic Electrical Engineering (Cr 2)

### COURSE OUTCOMES FOR REFERENCE TO FRAME QUESTION PAPER

*(Faculties are required to mention relevant Course Outcome number against the respective question in QP)*

Course Outcome	CO 1. Explain the ground power unit, battery and its connections of an aircraft. CO 2. Exemplify the operation of electrical drives used in aircraft. CO 3. Explain the wiring connection and wiring layout of an aircraft. CO 4. Interpret the lighting systems used in aircraft. CO 5. Attribute the different types of earthing and electrical safety.		
Email I'd	tarunthukral@soaneemrana.org	Phone No.	750-096-6580
Student Name		Student Reg No.	

### Part A

Question : 1	State KCL & KVL.		
Lesson Plan No. - 2	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1

<b>Question : 2</b>	State Thevenin's theorem.		
Lesson Plan No. - 4	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1
<b>Question : 3</b>	Define real power and apparent power.		
Lesson Plan No. - 6	Topic - AC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 2
<b>Question : 4</b>	Define power factor and average value of AC quantity.		
Lesson Plan No. - 6	Topic - AC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 2
<b>Question : 5</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Question : 6</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Question : 7</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Question : 8</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Question : 9</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Question : 10</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Part B</b>			
<b>Question : 1</b>	State and prove maximum power transfer theorem.		
Lesson Plan No. - 5	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1
<b>Question : 2</b>	Define rms value of an AC quantity. Derive its formula for sinusoidal voltage signal.		
Lesson Plan No. - 6	Topic - AC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 2
<b>Question : 3</b>	Analyse and draw the phasor diagram for RL series AC circuit.		
Lesson Plan No. - 7	Topic - AC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 2
<b>Question : 4</b>	Find the value of the currents I <sub>1</sub> , I <sub>2</sub> and I <sub>3</sub> flowing clockwise in the first, second and third mesh respectively.		
Lesson Plan No. - 3	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1
<b>Question : 5</b>	Analyse and compare pure R, L, and C AC circuit.		
Lesson Plan No. - 7	Topic - AC Circuits	Source - A TEXTBOOK OF	CO No. - 2

		ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	
<b>Question : 6</b>			
Lesson Plan No. -	Topic -	Source -	CO No. -
<b>Part C</b>			
<b>Question : 1</b>	Find the value of $V_x$ through 1ohm resistance using superposition theorem.		
Lesson Plan No. - 4	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1
<b>Question : 2</b>	Calculate current through 2 ohm resistor using Thevenin theorem.		
Lesson Plan No. - 4	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1
<b>Question : 3</b>	Calculate the Norton resistance and current in the branch if 5 ohm is the load resistance.		
Lesson Plan No. - 5	Topic - DC Circuits	Source - A TEXTBOOK OF ELECTRICAL TECHNOLOGY VOLUME I 2005 Edition By B. L. Thereja and A.K. Thereja	CO No. - 1
<b>Upload Scanned Document In Case of Numerical or Diagram For Any of The Above Questions. (Mention question number with relevant fig / numerical / equations. Max 150 KB)</b>		<a href="https://www.123formbuilder.com/upload_dld.php?fileid=ce6f2fb75e3b62173d51342fae122448">https://www.123formbuilder.com/upload_dld.php?fileid=ce6f2fb75e3b62173d51342fae122448</a>	
<b>I have scrutinized the question paper. There is no spelling mistake or any type of irrelevant question.</b>		Yes	

# School of Aeronautics (Neemrana)

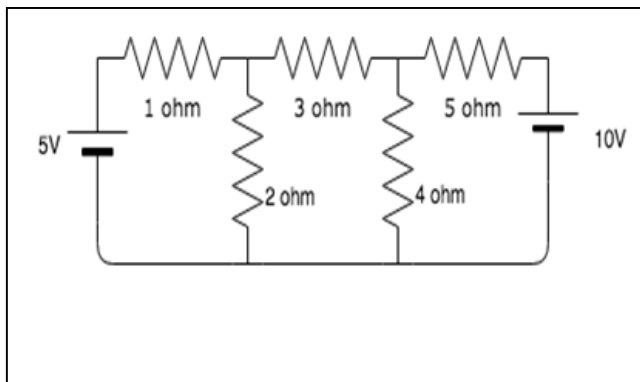
Question Paper For Internal Assessment Examination (Theory) Diagram Sheet

Faculties preparing Question Paper for various examinations, need to draw or insert diagrams as per requirement of questions in the below format and upload the same in upload documents column of the question paper.

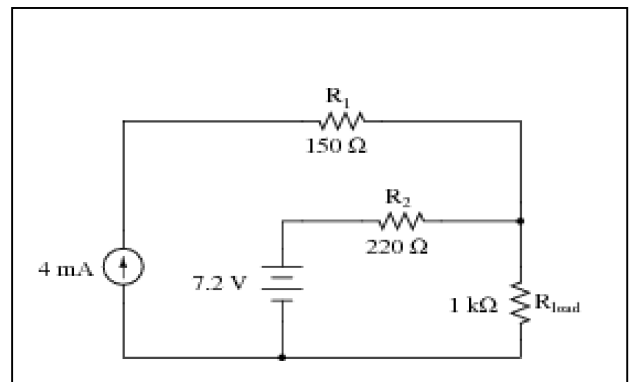
## Question Paper & Student Details

Mid Term *	1	Date of Submission of QP	10/30/2020
Name of Faculty *	Tarun Thukral	Date of Examination *	30/10/2020
Subject *	Basic Electrical Engineering	Course*	B.Tech
Batch	20	Semester *	First
Email Id of Faculty:*	tarunthukral@soaneemrana.org	Phone Number of Faculty*	7500966580
Student Name		Student Reg No.	

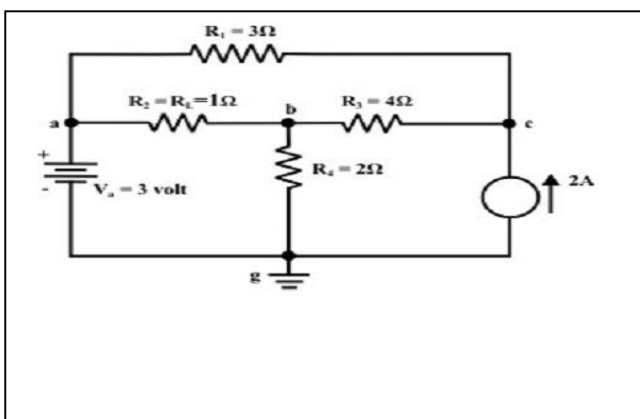
Part No. B, Question Number 1.



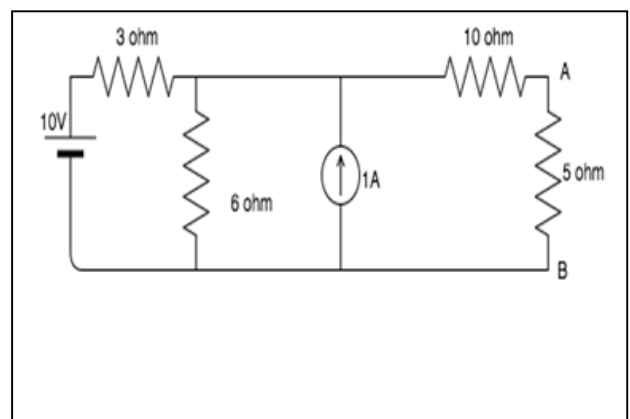
Part No. C, Question Number 1 .



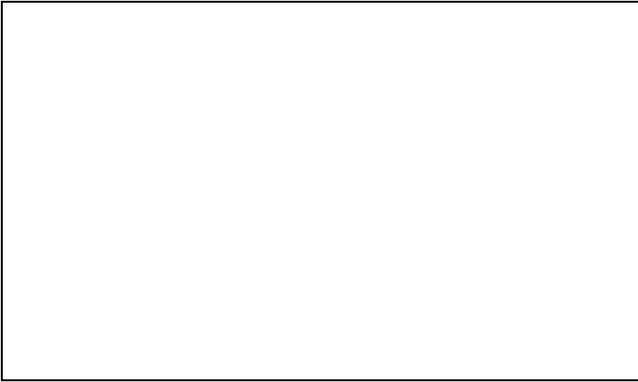
Part No. C, Question Number 2 .



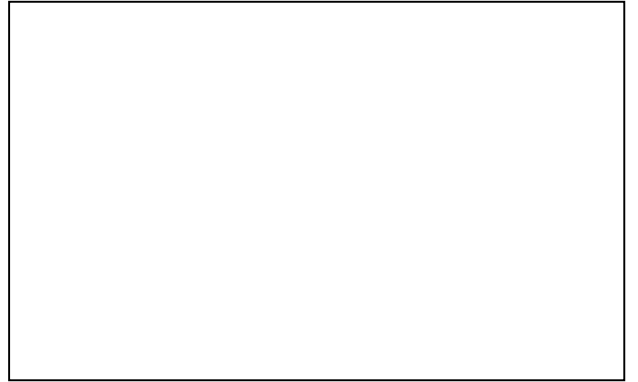
Part No. C, Question Number 3



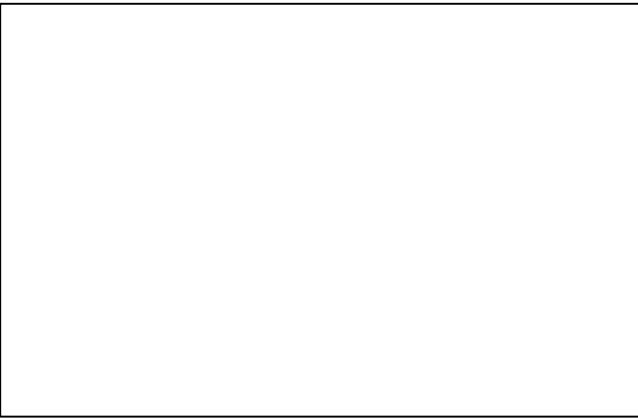
Part No. \_\_\_\_, Question Number \_\_\_\_ .



Part No. \_\_\_\_, Question Number \_\_\_\_ .



Part No. \_\_\_\_, Question Number \_\_\_\_ .



Part No. \_\_\_\_, Question Number \_\_\_\_ .

