

School of Aeronautics (Neemrana)

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

AME Semester -5

S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	CN-II (7)	SONIA SARKAR (760)	Weather Radar * Need for Wx radar * Principle for working of WX radar * Turbulence * Wind sheer * Application of Wx radar	24-9-2016
02	CN-II (7)	AMIR MOAZZAM (762)	Wx radar characteristics & features (I) * Frequency * Pulse width * Pulse repetition frequency * Power output * Beam width	24-9-2016
03	CN-II (7)	MUGBES HUSSAIN (769)	Wx radar characteristics & features (II) * Tilt & stabilization * Contour * Sensitivity time control * Automatic gain control * Display * Scanner	08-10-2016
04	CN-II (7)	PRATEEK SINGH (776)	Weather radar controls * Range switch * Function switch	08-10-2016

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
05	CN-II (7)	PRAVESH KUMAR (782)	<ul style="list-style-type: none">* Gain control* Test switch Digital Wx Radar	19-11-2016
06	CN-II (7)	SAWAN SINGH (802)	<ul style="list-style-type: none">* Need for Digital Wx Radar* Rho Theta Display* Principle working* Block diagram* Application Application of Wx Radar	19-11-2016
07	CN-II (7)	SAGAR RAJ GAUTAM (803)	<ul style="list-style-type: none">* Mapping* Drift Indication* Beacon Interrogation* Multifunctional Display Radio Altimeter	26-11-2016
			<ul style="list-style-type: none">* Introduction* Basic Principle* Types of altimeter* Application of radio altimeter	

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08	CN-II (7)	KULDEEP TOMAR (713)	ACARS <ul style="list-style-type: none">* Need for ACARS* History* General description* Satellite communication* Application	26-11-16
09	CN-II (7)		On board maintenance system <ul style="list-style-type: none">* Introduction* Control* Display* Printing* Structure monitoring	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	Electrical System	AMIR MOAZZAM (762)	Batteries installation and operation <ul style="list-style-type: none">* Location of batteries in Aircraft* Battery connection* Installation of battery in Aircraft* Typical battery system* Battery charging from external power* On board battery charge	03-9-2016
02	Electrical System	MUGEES HOSSAIN (769)	D.C. Power generation <ul style="list-style-type: none">* Fundamental principle of D.C. Power generation* Construction* Generator characteristics* Salt excited shunt wound generator	03-9-2016
03	Electrical System	PRATEEK SINGH (776)	D.C. Generator construction <ul style="list-style-type: none">* Yoke* Inter pole & compensation wdg* Engine frame* Rectified power supply* Generator/engine coupling* Cooling of generator* Armature reaction* Commutation	10-9-2016

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04	Electrical System	PRAVESH KUMAR (782)	A.C. Power generation <ul style="list-style-type: none">* Cycle frequency generation* Instantaneous & amplitude values* Phasing & phase relationships* AC Generation ratings* AC Generation construction* Principle of aircraft alternate* Light aircraft alternator	10-9-2016
05	Electrical System	SAWAN SINGH (802)	A.C. Power generator <ul style="list-style-type: none">* Alternator construction* C.S.D.* Field excitation of alternator* Frequency wild generator* Air driven generator	17-9-2016
06	Electrical System	SAGAR RAJ GAUTAM (803)	Emergency power generation <ul style="list-style-type: none">* DC Emergency* Transformer rectifier unit* Operation/control and indication & operation* AC Emergency* A constant speed motor/ generator (CSM/G) including a hydronic motor, AC generator* GCU and its operation	17-9-2016

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07	Electrical System	KULDEEP SINGH (713)	Voltage Regulation <ul style="list-style-type: none">* Principle of voltage Regulation* Vibrating construct regulation, current regulator* Carbon pile volt regulator	03-12-2016
08	Electrical System	PRAPHULL POSTI (740)	Voltage regulation <ul style="list-style-type: none">* Three unit regulation* Voltage regulation of alternator* Frequency wild* Transistorized	03-12-2016
09	Electrical System		Power distribution <ul style="list-style-type: none">* Wires cables, routing of wires* Special purpose cables* Earthing & grounding* Cable termination* Plugs & sockets and potting method* Electrical banding* Static discharge.	
10	Electrical System		Rectifiers Power conversion <ul style="list-style-type: none">* Equipment rectifiers* Selenium rectifiers* Silicon rectifiers	

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11	Electrical System		<ul style="list-style-type: none"> * Silicon controlled rectifiers. * Rectifiers circuit connections <p>Transformers</p> <ul style="list-style-type: none"> * Principle of operation * Circuit connections * Current transformer * Auto transformer * Transformer rating 	
12	Electrical System		<p>Inverters</p> <ul style="list-style-type: none"> * Rotary converting equipment * W Static inverter * Application of invertors 	
13	Electrical System		<p>Circuit protection</p> <ul style="list-style-type: none"> * Fuse, current, limiter * Limiting resistor * Circuit breaker * Protection against reverse current * Reverse current cutout relay * Switched reverse current relay * Over volt and under voltage protection * Differential current protection * Mcr3 price protection 	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
14	Electrical System		External/ground power DC System Three pin Receptacle system AC System * APU Starting * AC External power supply * Auxiliary power unit	
15	Electrical System		Light (ATA-33) * External Lighting - Navigation - Anti collision - Landing and taxing light - ice inspection * Internal Light - Cockpit lighting - Internal Integral, pillar - Bridge & flood lighting - Elector lemniscate lighting - Cargo Lighting - Emergency Lighting	

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S.No	Subject	Name of Student	Seminar Topic	Date of Seminar
01	AASS (IS)	KULDEEP TOMAR (713)	Measurement of Pressure <ul style="list-style-type: none">* Definition* Absolute Pressure and gauge Pressure.* Methods of Measuring Pressure* U Tube Manometer & Barometer* Pressure/ weight balancing (dead weight tester)* Elastic Pressure sensitive elements (Diaphragm, capsule, bellow, bounden tube)* Aneroid pressure measuring instrument (Direct reading pressure gauge)* Mechanical transmitting type pressure indicating system.* Electrically operated pressure indicating system Design type (text and indicator) radiometer type (text and indicator)	06-8-16
02	AASS (IS)	PRAPHULL POSTI (740)	Altimeter <ul style="list-style-type: none">* Aneroid Barometer principle* Altimeter mechanism* Altimeter Dial presentation* Barometer pressure setting* Q codes for altimeter setting* Types of altimeter* Sensitive altimeter* Servo altimeter* Encoding altimeter (altitude reporting unit)* Cabin altimeter	06-8-16

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03	AASS (IS)	SONIA SARKAR (760)	<ul style="list-style-type: none"> * Radio altimeter * Altitude alerting unit Vertical speed indicator <ul style="list-style-type: none"> * Purpose and principle * Working Mechanism * Metering unit * Dial Presentation * Instantaneous VSI * Calibration and maintenance 	13-8-16
04	AASS (IS)	AMIR MOAZZAM (762)	Air speed indicator <ul style="list-style-type: none"> * Purpose principle and different types of errors in ASI * Air speed terminology indicated airspeed, computed airspeed calibrated airspeed, equivalent airspeed true airspeed. * Square law, its effects and compensating methods. * Rocking lever verses sector arm * Banana slot method * Turning spring method * Calibration and maintenance 	13-8-16

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05	AASS (IS)	MUGEES MOSSAIN (769)	Air data computer * Purpose and principle * Transducer * Different modules and their operation * Indicators * Failure warning * Digital ADC quarter crystal transducer Digital indicator (LCD, LED OR CRT TYPE)	20-8-16
06	AASS (IS)	PRATEEK SINGH (776)	Measurement of Temperature * Different methods of measuring * Fundamental interval * Various scale of Temperature * Measurement of Air temperature * Measurement of oil/fuel temperature * Measurement of engine temperature - Cylinder head temperature - Exhaust gas temperature - Turbines gas temperature - Thermo couple - Indicators - Moving coil type - Radiometer type - Servo operated type	20-8-16

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07	AASS (IS)	PRAVESH KUMAR (782)	Fuel quantity indicating system <ul style="list-style-type: none">* Design type indicating system* Draw backs of design type* Capacitance type basic indicating system* Probes (construction, location and connection)* Error in measurement by volume measurement of fuel by weight* compensated method* Fail safe and test circuit* Calibration empty and full adjustment	27-8-2016
08	AASS (IS)	SAWAN SINGH (802)	Gyroscopic Principle and uses <ul style="list-style-type: none">* Definition & Gimbal system* Properties (Rigidity & precession)* Types of Gyroscope* Limitation of Gyroscope (Apparent drift, real drift, Transport wander, Gimbal Lock Gimbal Error)* Different methods of operating Gyroscope* Various uses of Gyroscope<ul style="list-style-type: none">- Attitude indicator- Direction indicator- Rate of turn indicator	27-8-2016

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09	AASS (IS)	SAGAR RAJ GAUTAM (803)	Stall Warning System * Angle of attack * Critical angle of attack * Angle of attack indicator - Stall warning indicator - Stick shaker - Knuckle beater - Stick pusher	5-11-16.
10	AASS (IS)	KULDEEP TOMAR (713)	Flight data recording system * Accelerometer and Fatigue meter * Methods of Recording. - Scratch method/Trace method - Photographic method - Magnetic method * Data recovery Analysis * Protection of flight data recorder * Aircraft integrated data system.	05-11-2016

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11	AASS (IS)	PRADHULL POSTI (740)	Compass system <ul style="list-style-type: none">* Direct Reading compass* Construction* Acceleration and turning error* Remote reading compass* Flux detector* Gyroscope* Modes of operation* Radio Magnetic indicator	12-11-16
12	AASS (IS)	SONIA SARKAR (760)	Ground Proximity system <ul style="list-style-type: none">* Purpose and principle of operation* Different modes of operation* Different types of warning* Priority of warning* Interfacing with other system	12-11-16
13	AASS (IS)	/	Inertial and Navigation system <ul style="list-style-type: none">* Definition and fundamental principle* Gyrostabilizer platform* Gimballed platform arrangement* Ins operation* Alignment Sequencing	

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14	AASS (IS)		<ul style="list-style-type: none">* Action code* Malfunction code <p>Command Signal Processing of AFCS</p> <ul style="list-style-type: none">* Role of AFCS* Component of AFCS* Fundamental of Automatic Control* Signal Processing- Synchronization- Limiting- Gain Ratio- Programming- Feed Back- Integration- Differentiation- Modulation- Demodulation- Amplification	
15	AASS (IS)		<p>Modes of operation of AFCS</p> <ul style="list-style-type: none">* Altitude hold mode* Airspeed hold mode* Mach Hold mode* Vertical speed hold mode* Heading hold mode* VOR Mode* ILS Mode	