

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Minutes of the Board of studies of Department of EEE meeting held on 25-07-2020 (online platform) held at 11:00 AM.

The following members were present in the meeting.

S.No	Name of the Member	Designation
1	Dr. Vaskar Sarkar	Assoc. Prof., IIT Hyderabad
2	Dr. P.V.N. Prasad	Prof(Rtd.) EED, OUCE
3	Pradeep Nirgude,	Additional Director, CPRI
4	Dr. J.S.R. Prasad	Prof., Dept. of Sanskrit, UoH
5	Dr. K Srinivas	Asst. Prof., EED, JNTUH Jagityal
6	Er. G. Rama Krishna	Vice-Preident, DOL, Mumbai
7	Dr. Sudhir Agrawal	Group GM, PGCIL
8	Er. Varunesh G. Kumar	Chairman and MD, Veeral controls Absent
9	Dr U.K Chowdary	Director I&I, Professor, EEE, CBIT
10	Dr. K. Krishna Veni	Internal BoS Member
11	Dr. P.V Prasad	Internal BoS Member
12	Dr.M. BalaSubba Reddy	Internal BoS Member
13	Dr B.Suresh Kumar	Internal BoS Member
14	Mr. K.Krishna Reddy	Internal BoS Member
15	Dr. N.V.Phaneendra Babu	Internal Coordinator, BoS
16	Dr.G.Suresh Babu	Chairman BoS

The meeting has commenced with welcoming the External BoS members including Special invitees by the Chairman, Board of Studies. He thanked the contributions made by members in the curriculum development so far. He requested the members to introduce themselves and they did so. Later, the BOS members are requested to switch on their Video, along with Faculty, to take the snap shot. He, then, read out the agenda of the meeting and started the meeting.

Minutes:

I.	To approve the Course Outcomes (COs) of the Courses in V&VI Semesters of B.E.(EEE) under R-18 Regulation of CBCS curriculum modified according to AICTE Examination Reforms Policy
	V Semester: <ol style="list-style-type: none"> 1) 18EEEC14-Elctrical Machines: It is recommended to change the wordings of CO's(not to use high wordings like Evaluate) The remaining syllabus is approved as it is . 2) 18EEEC15- Power system: 3) 18EEEC16- Power Electronics

	<p>4) 18EEE01-Wind and Solar Energy: 5) 18EEE02-: Optimization Techniques 6) 18EEE03- Electrical Engineering Materials 7) 18EEE04-Electronic Instrumentation 8) 18EEE05- STEE 9) 18EEE06-: Energy Conservation and Auditing. 10) 18EEE07: Industrial Electrical Systems 11) 18EEE08: Electrical Estimation and Costing: 12) 18EEEC17- Electrical Machines Lab II 13) 18EEEC18-Power system lab -1 14) 18EEEC19- Power electronics lab</p> <p style="text-align: center;">Noted and Approved .</p> <p><u>VI Semester:</u> The Chairman presented the syllabi of subjects of VI semester viz;.</p> <p>Professional Core:</p> <ol style="list-style-type: none"> 1. Control Systems – 18EEEC20 2. Microprocessor- 18EEEC21 3. Power system Operation and Control – 18EEEC22 4. Core Elective-3 <ol style="list-style-type: none"> 1) Power Quality- 18EEE09 2) Advanced power converters – 18EEE10 3) Electrical Distribution Systems- 18EEE11 4) HVDC Transmission System-18EEE12 5. Core Elective-4 <ol style="list-style-type: none"> 1) Industrial Electrical Systems- 18EEE13 2) Electric Hybrid Vehicles-18EEE14 3) FACTS- 18EEE15 4) Special Electrical Machines-18EEE16 <p>b). The Chairman also presented the syllabi of Laboratory offered during VI semester. The titles of the Laboratories are;</p> <p>Professional Core Lab:</p> <ol style="list-style-type: none"> 1) Control Systems Lab- 18EEEC23 2) Microprocessor Lab -18EEEC24
II.	<p>To approve the Course Outcomes (COs) of the Courses in VII & VIII Semesters of B.E.(EEE) under R-18 Regulation of CBCS curriculum modified according to AICTE Examination Reforms Policy</p>
	<p><u>VII-Semester Syllabi</u> a). The Chairman presented the syllabi of subjects of VII semester viz;.</p> <p>Professional Core:</p> <ol style="list-style-type: none"> 1. Power system Protection – 18EEEC25 2. Electrical Drives – 18EEEC26 3. Signals and systems- 18EEEC27 4. Core Elective-5

	<p>1) Power system dynamics and control – 18EEE17 2) Line commutated and active PWM rectifiers-18EEE18 3) Electrical Machine Design- 18EEE19 4) High Voltage Engineering- 18EEE20</p> <p>After discussing various aspects of the syllabi, the committee passed the following resolution.</p> <p>Resolution (3): The members after thorough discussion approved the syllabi of VII Semester subjected to the following minor changes subject wise.</p> <p>Noted and Approved.</p> <p><u>VIII Semester Syllabi</u></p> <p>a). The Chairman presented the syllabi of subjects of VIII semester viz;.</p> <p>Professional Core:</p> <p>1. Core Elective-6 1) Advanced Electric Drives – 18EEE21 2) Digital Signal Processing- 18EEE22 3) Smart Grid- 18EEE23 4) Switch Mode Power Converters-18EEE24</p> <p>2. Open Elective-3</p> <p>b). The Chairman also presented the syllabi of Laboratory offered during VIII semester. The titles of the Laboratories are;</p> <p>Professional Core Lab:</p> <p>1) Technical Seminar- 18EEEC31 2) Project Part-2 18EEEC32</p> <p>After discussing various aspects of the syllabi, the committee passed the following resolution.</p> <p>Resolution (4): The members after thorough discussion approved the syllabi of VIII Semester subjected to the following minor changes Course wise.</p> <p>Noted and Approved.</p>
III.	<p>To approve the Course Outcomes (COs) of the Courses in III & IV Semesters of B.E.(EEE) and Service Courses offered by EEE Department under R-18 Regulation of AICTE Model curriculum modified according to AICTE ExaminationReformsPolicy</p>
	<p>The members after thorough discussion approved the syllabi of III Semester subjected to minor changes.</p> <p>After discussing various aspects of the syllabi, the committee passed the following resolution</p> <p>Resolution (5): The members after thorough discussion approved the open electives of UG.</p>
IV.	<p>To approve the Proposal of introducing Emerging subjects like AI,Data Science and Block Chain technology is presented before BOS.</p>
	<p>The members after thorough discussion approved the syllabus of Artificial Intelligence Techniques in Electrical Engineering (18EEE 12);</p> <p>The members after thorough discussion decided that due to scarcity of the relevant</p>

	literature, the non availability of EXPERTS in this field in current society, the courses i.e. Data Analytics and Block chain Technology with particular application to ELECTRICAL ENGINEERING is not possible under this board at present; However basics of the courses can be facilitated through OPEN ELECTIVE under any board to the interested students.
V.	The structure of revised syllabus R-20 which has major topics like changes made in credits distribution was presented to the BOS by Director Academics Prof K. Krishnaveni. The following Courses offered by EEE department as Core for all other departments got approved with little modifications
	Basic Electrical Engineering 20EE C01 BEE Lab 20 EE C 02
VI.	BOS experts group had been intimated about Honors Degree and Minor Degree Awarded to candidates who have interest in certain special subjects. Resolution: Student can be given choice to select a course[other than taken by him/her during conventional Program of study] from the list of electives offered by the department. As the ONLINE Courses being dynamic, the courses can be approved by internal BoS.
VII.	To discuss PSOs and PEOs under R-20 Regulation of BE (EEE) program
	BoS approved the modified PSOs and PEOs of the UG Program.
VIII.	To discuss Vision & Mission statements of the Department
	BoS approved the modified Vision and Mission of the department
IX.	Any other item with the permission of chair
	ME R-19 Scheme only TWO courses which are offered in the 3rd semester are approved with certain modifications 1.Waste to Energy (19EEE O 101) only Cos modified 2.Electric and Hybrid Vehicles. (19 EEE 116): minor changes in syllabus

The members are requested to offer the comments, if any, If no comments are received, the minutes will be taken as confirmed.



Dr.G.Suresh Babu,
Head and Chairman BoS
Dept. of EEE

Copy to:

1. Members ofBoS
2. Principal forinformation

Resolution (2): The members after thorough discussion approved the syllabi of III Semester subjected to the following minor changes subject wise.

- 1) 18EEEC20 : Control Systems
- 2) 18EEEC21: MPMC
- 3) 18EEEC22: PSOC
- 4) 18EEEE09: Power Quality
- 5) 18EEEE10: Advanced Power Converters
- 6) 18EEEE11: Electrical Distribution Systems
- 7) 18EEEE12: HVDC Transmission Systems
- 8) 18EEEE13: AI techniques In Electrical Engineering
- 9) 18EEEE14: Electric Hybrid Vehicles
- 10) 18EEEE15: FACTS
- 11) 18EEEE16: Special Electrical Machines
- 12) 18EEEC23:Control Systems Lab
- 13) 18EEEC24: Microprocessor Lab

Noted and Approved.

1. Analyze the characteristics of Diodes, transistors and MOSFETS.
2. Understand biasing techniques of transistor and its application as differential and multi stage amplifier
3. Understand the basic characteristics of op-amps and their significance.
4. Analyze different linear application circuits of operational amplifiers
5. Analyze different non-linear application circuits of operational amplifiers

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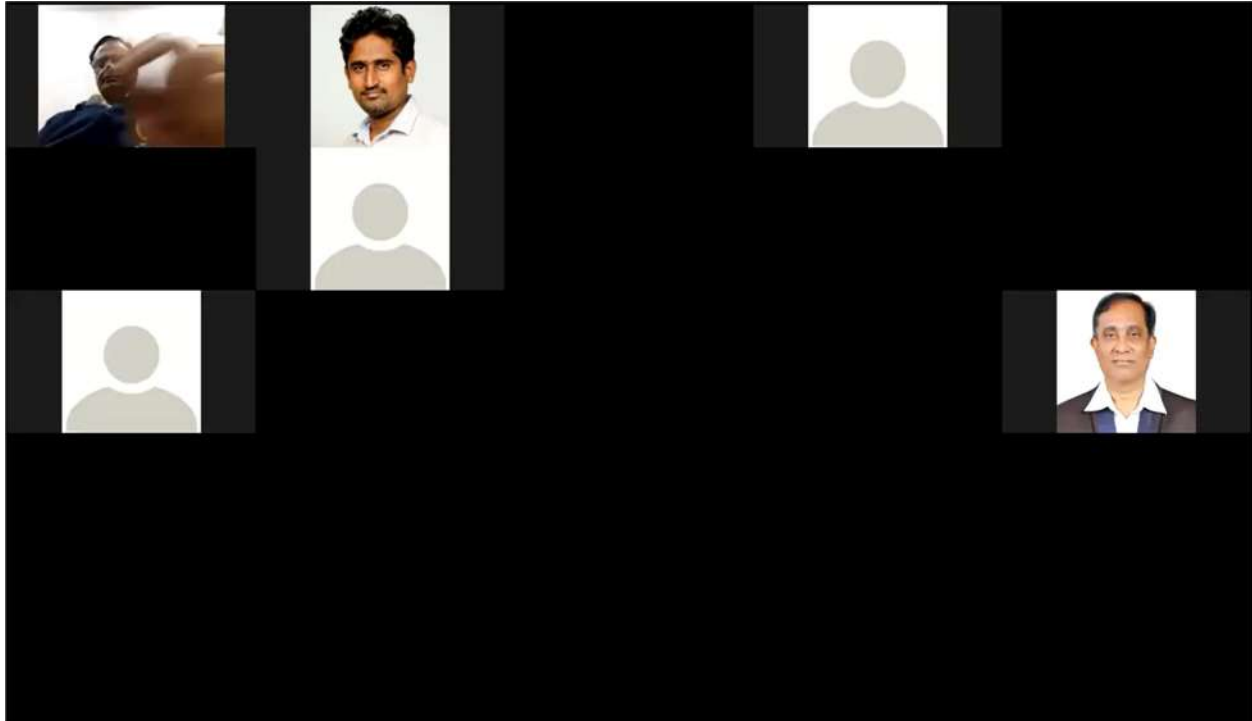
1. Understand the V-I characteristics of Diode, transistor, MOSFET and the biasing techniques of transistors.
2. Design the biasing techniques of MOSFETS and acquire knowledge in different operating configurations of MOSFET.
3. Apply the knowledge of differential amplifiers to Understand the basic characteristics of Op-Amps and their significance.
4. Analyze different linear application circuits of Op-Amp.
5. Analyze different non-linear application circuits of Op-Amps.

UNIT-I

Diode circuits and BJT Circuits: P-N junction diode, I-V characteristics of a diode; review of half-wave and full-wave rectifiers, Zener diode, Structure and I-V characteristics of a BJT; BJT as a switch, BJT as an

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UNIT-IV

Modeling and Simulation of Protection Schemes: CT/PT modeling and standards, Simulation of transients using Electro-Magnetic Transients (EMT) programs, Relay Testing.

Circuit Breakers: Need for circuit breakers (CBs), Arc Properties, Principles of arc quenching theories, Recovery and Re-striking voltages, Ratings of CBs, Current chopping, capacitive switching, Resistance switching, Derivations of RRRV, Types of circuit breakers, Oil, Air, SF₆ and Vacuum circuit breakers, Testing of circuit breakers.

Circuit Breakers and Fuses: Arc interruption, Restriking voltage, recovery voltage, resistance switching, current chopping, classification of circuit breakers, selection of circuit breakers

Over voltage protection: causes for over voltages, protection of transmission lines against direct lightning strokes, ground wires, arcing horns, lightning arrestors, surge absorbers, peterson coils, insulation coordination

UNIT-V:

System Protection: System Protection Schemes, Synchro-phasors, Phasor Measurement Units, and Wide-Area Measurement Systems (WAMS), Application of WAMS for improving protection systems

Basics of Numerical Protection: Block diagram of numerical relay, Sampling theorem, Least Error Square Technique, Digital Filtering, Numerical Relaying for overcurrent, Differential and distance protection.

Text Books:

