

**SCHEME OF EXAMINATION FOR  
B.TECH. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION / ELECTRONICS ENGINEERING (CBCS)  
(SEMESTER – VII)**

Code	Subject	Teaching Scheme				Credit				MARKS					Minimum Passing Marks	
										Theory		Practical		Total Marks	Theory	Practical
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ	Internal	Univ			
BEETC-701PE-T	PEC-III	3		1T	4	3		1	4	30	70			100	45	
BEETC-701PE-P	PEC-III		2		2		1		1			25	25	50		25
BEETC-702PE-T	PEC-IV	3		1T	4	3		1	4	30	70			100	45	
BEETC-702PE-P	PEC-IV		2		2		1		1			25	25	50		25
BEETC-703PE	PEC-V	3	-		3	3	-		3	30	70	-	-	100	45	
BEETC-704OE	OE-II	3	-		3	3	-		3	30	70	-	-	100	45	
BEETC-705P	PROJECT PHASE-1	-	2	-	2	-	1	-	1	-	-	50	-	50		25
BEETC-706A	IPR	1		1A	2	-	-	-	-	-	-	-	-	AUDIT **		
	<b>Total</b>	<b>13</b>	<b>6</b>	<b>2T+1A</b>	<b>22</b>	<b>11</b>	<b>3</b>	<b>3</b>	<b>17</b>	<b>120</b>	<b>280</b>	<b>100</b>	<b>50</b>	<b>550</b>		

**Note:** Seminar will be taken on the basis of Project phase I.

**\*\*IPR (AUDIT COURSE):** Award of Grades for Audit Courses

Marks Range (for Max 50 marks)	Grade
$X \geq 46$	AA
$46 > X \geq 42$	AB
$42 > X \geq 38$	BB
$38 > X \geq 34$	BC
$34 > X \geq 30$	CC
$30 > X \geq 25$	CD
$X < 25$	FF
Absent	ZZ

*S. C. Bodpal*  
*N. G. Bawane*

*Dr. V. K. Talewale*



# LIST OF ELECTIVE COURSES

Semester	Elective Type	Subject
V	Program Elective-I	1. Operating Systems
		2. Information Theory and Error Correcting Codes
		3. Electronic Design Techniques With HDL
		4. Sensors and Systems
VI	Program Elective-II	1. Computer Architecture
		2. Database Management Systems
		3. Antennas & Wave Propagation
		4. Control System Engineering
	Open Elective-I	1. Consumer Electronics
		2. Industrial Electronics
VII	Program Elective-III	1. Audio and Video Engineering
		2. Web Technologies
		3. Wireless & Mobile Communications
		4. Robotics and Automation
	Program Elective-IV	1. Mixed Signal Design
		2. Data Science & Cloud Computing
		3. Microwave & Radar Engineering
		4. PLC and SCADA
	Program Elective-V	1. Soft computing
		2. Fundamentals of Machine Learning
		3. Optical Communication
		4. Biomedical Engineering
	Open Elective II	1. Mechatronics
		2. Bioengineering
VIII	Program Elective -VI MOOC/NPTEL Course	1. CMOS VLSI Design
		2. Artificial Intelligence
		3. MEMS
	Program Elective -VII MOOC/NPTEL Course	1. VLSI Signal Processing
		2. Android Mobile Application Development
		3. Satellite Communication

*[Signature]*  
N.G. Bawa

*[Signature]*  
(V. K. Takande)

**B.TECH. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION / ELECTRONICS ENGINEERING (CBCS)**  
**SCHEME OF EXAMINATION FOR**  
**(SEMESTER - VIII)**

Code	Subject	Teaching Scheme				Credit				MARKS					Minimum Passing Marks	
		L	P	T/A	Total	L	P	T/A	Total	Theory		Practical		Total Marks	Theory	Practical
										Internal	Univ	Internal	Univ			
BEETC-801PE	Program Elective -VI MOOC/NPTEL Course	4	-	-	4	4	-	-	4	30	70	-	-	100	45	
BEETC-802PE	Program Elective -VII MOOC/NPTEL Course	4	-	-	4	4	-	-	4	30	70	-	-	100	45	
BEETC-803P	Project Phase -II	-	12	-	12	-	6	-	6	-	-	75	75	150		
<b>Total</b>		<b>8</b>	<b>12</b>		<b>20</b>	<b>8</b>	<b>6</b>		<b>14</b>	<b>60</b>	<b>140</b>	<b>75</b>	<b>75</b>	<b>350</b>		<b>75</b>

**Note:**

1. PE VI & PE VII should be undertaken through online mode by using NPTEL/SWAYAM /MOOCS Platforms OR through regular classroom teaching in Department of Electronics & Telecommunication / Electronics & Communication / Electronics Engineering of affiliated Colleges. Examinations will be conducted by RTMNU
2. In continuation to semester VII project phase I, the group of the students shall collect all necessary information pertaining to the project and analyses it. The group of the students shall prepare and submit a detailed report on the project. The report shall be type written on A4 size papers and hard bound as per prescribed norms. Broadly the report shall include: Introduction, Literature Review, Problem definition, Data collection and analysis, Results (Numerical / Experimental), Conclusions and discussions. Acquaintance with literature survey and research methods and their use in conducting systematic investigations, use of data analysis tools, computational methods and style of report, preparation and presentation shall form basis of evaluation. The group shall prepare and present a seminar based on this work before an external examiner.

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		3. Wireless & Mobile Communications
		4. Robotics and Automation
	Program Elective-IV	1. Mixed Signal Design
		2. Data Science & Cloud Computing
		3. Microwave & Radar Engineering
		4. PLC and SCADA
	Program Elective-V	1. Soft computing
		2. Fundamentals of Machine Learning
		3. Optical Communication
		4. Biomedical Engineering
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