

# **SWAMI VIVEKANAND UNIVERSITY, SIRONJA, SAGAR (M.P.)**



## **SCHEME**

**For**  
**BACHELOR OF TECHNOLOGY (B.Tech.)**  
**ELECTRICAL & ELECTRONICS**  
**ENGINEERING (EX)**

**Course Code : BTEX**

Department of Electrical & Electronics Engineering  
Faculty of Engineering

|                              |
|------------------------------|
| Duration of Course : 4 Year  |
| Examination Mode : Semester  |
| Examination System : Grading |

Swami Vivekanand University, Sironja Sagar (M.P.)

2016-2017



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering

Department of Electrical & Electronics Engineering

Scheme of Course : B.Tech. - Electrical & Electronics Engineering Course Code : BTEX

Semester :- 3<sup>rd</sup> Sem

| Paper / Subject Code | Title of the Paper / Subject                     | Credit Allotted |           |           | Total Credit | Distribution of Marks |          |            |           |                  |            |          |           |            |                   |                      | Duration of Theory Exam |
|----------------------|--|-----------------|-----------|-----------|--------------|-----------------------|----------|------------|-----------|------------------|------------|----------|-----------|------------|-------------------|----------------------|-------------------------|
|                      |  | L               | T         | P         |              | Theory                |          |            |           |                  | Practical  |          |           |            |                   | Grand Total (I= D+H) |                         |
|                      |  |                 |           |           |              | End Sem.              |          | Internal   |           | Total (D= A+B+C) | End Sem.   |          | Internal  |            | Total (H= E+F+ G) |                      |                         |
|                      |  |                 |           |           |              | Max (A)               | Min      | MST (B)    | TW (C)    |                  | Max (E)    | Min      | LW (F)    | PQ (G)     |                   |                      |                         |
| BTEX-0301            | Mathematics -II                                  | 3               | 1         | -         | 4            | 70                    | 22       | 20         | 10        | 100              | -          | -        | -         | -          | -                 | 100                  | 3 Hrs                   |
| BTEX -0302           | Electromagnetic Theory                           | 3               | 1         | -         | 4            | 70                    | 22       | 20         | 10        | 100              | -          | -        | -         | -          | -                 | 100                  | 3 Hrs                   |
| BTEX -0303           | Electrical Instrumentation                       | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX-0304            | Electronic Devices & Circuits -I                 | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX -0305           | Network Analysis                                 | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX -0306           | Electrical Workshop                              | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | 30         | 09       | 10        | 10         | 50                | 50                   | 3 Hrs                   |
| BTEX -0307           | Self Study (Internal Assessment)                 | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | -          | -        | -         | 50         | 50                | 50                   | -                       |
| BTEX -0308           | Seminar / Group Discussion (Internal Assessment) | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | -          | -        | -         | 50         | 50                | 50                   | -                       |
|                      | <b>Total</b>                                     | <b>15</b>       | <b>05</b> | <b>12</b> | <b>32</b>    | <b>350</b>            | <b>-</b> | <b>100</b> | <b>50</b> | <b>500</b>       | <b>120</b> | <b>-</b> | <b>40</b> | <b>140</b> | <b>300</b>        | <b>800</b>           |                         |



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering

Department of Electrical & Electronics Engineering

Scheme of Course : B.Tech. - Electrical & Electronics Engineering Course Code : BTEX

Semester :- 4<sup>th</sup> Sem

| Paper / Subject Code | Title of the Paper / Subject                     | Credit Allotted |    |    | Total Credit | Distribution of Marks |     |          |        |                  |           |     |          |        |                   |                      | Duration of Theory Exam |
|----------------------|--|-----------------|----|----|--------------|-----------------------|-----|----------|--------|------------------|-----------|-----|----------|--------|-------------------|----------------------|-------------------------|
|                      |  | L               | T  | P  |              | Theory                |     |          |        |                  | Practical |     |          |        |                   | Grand Total (I= D+H) |                         |
|                      |  |                 |    |    |              | End Sem.              |     | Internal |        | Total (D= A+B+C) | End Sem.  |     | Internal |        | Total (H= E+F+ G) |                      |                         |
|                      |  |                 |    |    |              | Max (A)               | Min | MST (B)  | TW (C) |                  | Max (E)   | Min | LW (F)   | PQ (G) |                   |                      |                         |
| BTEX-0401            | Mathematics III                                  | 3               | 1  | -  | 4            | 70                    | 22  | 20       | 10     | 100              | -         | -   | -        | -      | -                 | 100                  | 3 Hrs                   |
| BTEX -0402           | Electrical and Electronics Material              | 3               | 1  | -  | 4            | 70                    | 22  | 20       | 10     | 100              | -         | -   | -        | -      | -                 | 100                  | 3 Hrs                   |
| BTEX -0403           | Digital Electronics Logic Design -I              | 3               | 1  | 2  | 6            | 70                    | 22  | 20       | 10     | 100              | 30        | 09  | 10       | 10     | 50                | 150                  | 3 Hrs                   |
| BTEX-0404            | Electrical Machine -I                            | 3               | 1  | 2  | 6            | 70                    | 22  | 20       | 10     | 100              | 30        | 09  | 10       | 10     | 50                | 150                  | 3 Hrs                   |
| BTEX -0405           | Electronic Devices and Circuits - II             | 3               | 1  | 2  | 6            | 70                    | 22  | 20       | 10     | 100              | 30        | 09  | 10       | 10     | 50                | 150                  | 3 Hrs                   |
| BTEX -0406           | Electrical Engineering Simulation Lab -I         | -               | -  | 2  | 2            | -                     | -   | -        | -      | -                | 30        | 09  | 10       | 10     | 50                | 50                   | 3 Hrs                   |
| BTEX -0407           | Self study (Internal Assessment)                 | -               | -  | 2  | 2            | -                     | -   | -        | -      | -                | -         | -   | -        | 50     | 50                | 50                   | -                       |
| BTEX -0408           | Seminar / Group Discussion (Internal Assessment) | -               | -  | 2  | 2            | -                     | -   | -        | -      | -                | -         | -   | -        | 50     | 50                | 50                   | -                       |
|                      | <b>Total</b>                                     | 15              | 05 | 12 | 32           | 350                   | -   | 100      | 50     | 500              | 120       | -   | 40       | 140    | 300               | 800                  |                         |



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering

Department of Electrical & Electronics Engineering

Scheme of Course : B.Tech. - Electrical & Electronics Engineering Course Code : BTEX

Semester :- 5<sup>th</sup> Sem

| Paper / Subject Code | Title of the Paper / Subject                     | Credit Allotted |           |           | Total Credit | Distribution of Marks |          |            |           |                  |            |          |           |            |                   |                      | Duration of Theory Exam |
|----------------------|--|-----------------|-----------|-----------|--------------|-----------------------|----------|------------|-----------|------------------|------------|----------|-----------|------------|-------------------|----------------------|-------------------------|
|                      |  | L               | T         | P         |              | Theory                |          |            |           |                  | Practical  |          |           |            |                   | Grand Total (I= D+H) |                         |
|                      |  |                 |           |           |              | End Sem.              |          | Internal   |           | Total (D= A+B+C) | End Sem.   |          | Internal  |            | Total (H= E+F+ G) |                      |                         |
|                      |  |                 |           |           |              | Max (A)               | Min      | MST (B)    | TW (C)    |                  | Max (E)    | Min      | LW (F)    | PQ (G)     |                   |                      |                         |
| BTEX-0501            | Utilisation of Electrical Energy                 | 3               | 1         | -         | 4            | 70                    | 22       | 20         | 10        | 100              | -          | -        | -         | -          | -                 | 100                  | 3 Hrs                   |
| BTEX -0502           | Microprocessors & Micro Controllers              | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX -0503           | Electrical Machine – II                          | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX-0504            | Power Electronics Devices & Circuits             | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX -0505           | Power System - I                                 | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10         | 50                | 150                  | 3 Hrs                   |
| BTEX -0506           | Self study (Internal Assessment)                 | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | -          | -        | -         | 50         | 50                | 50                   | -                       |
| BTEX -0507           | Seminar / Group Discussion (Internal Assessment) | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | -          | -        | -         | 50         | 50                | 50                   | -                       |
| <b>Total</b>         |  | <b>15</b>       | <b>05</b> | <b>12</b> | <b>32</b>    | <b>350</b>            | <b>-</b> | <b>100</b> | <b>50</b> | <b>500</b>       | <b>120</b> | <b>-</b> | <b>40</b> | <b>140</b> | <b>300</b>        | <b>800</b>           |                         |



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering

Department of Electrical & Electronics Engineering

Scheme of Course : B.Tech. - Electrical & Electronics Engineering Course Code : BTEX

Semester :- 6<sup>th</sup> Sem

| Paper / Subject Code | Title of the Paper / Subject                     | Credit Allotted |    |    | Total Credit | Distribution of Marks |     |          |        |                  |           |     |          |        |                   |                      | Duration of Theory Exam |
|----------------------|--|-----------------|----|----|--------------|-----------------------|-----|----------|--------|------------------|-----------|-----|----------|--------|-------------------|----------------------|-------------------------|
|                      |  | L               | T  | P  |              | Theory                |     |          |        |                  | Practical |     |          |        |                   | Grand Total (I= D+H) |                         |
|                      |  |                 |    |    |              | End Sem.              |     | Internal |        | Total (D= A+B+C) | End Sem.  |     | Internal |        | Total (H= E+F+ G) |                      |                         |
|                      |  |                 |    |    |              | Max (A)               | Min | MST (B)  | TW (C) |                  | Max (E)   | Min | LW (F)   | PQ (G) |                   |                      |                         |
| BTEX-0601            | Communication Engineering                        | 3               | 1  | -  | 4            | 70                    | 22  | 20       | 10     | 100              | -         | -   | -        | -      | -                 | 100                  | 3 Hrs                   |
| BTEX -0602           | Control Systems                                  | 3               | 1  | 2  | 6            | 70                    | 22  | 20       | 10     | 100              | 30        | 09  | 10       | 10     | 50                | 150                  | 3 Hrs                   |
| BTEX -0603           | Switchgear & Protection                          | 3               | 1  | 2  | 6            | 70                    | 22  | 20       | 10     | 100              | 30        | 09  | 10       | 10     | 50                | 150                  | 3 Hrs                   |
| BTEX-0604            | Electronic Instrumentation                       | 3               | 1  | 2  | 6            | 70                    | 22  | 20       | 10     | 100              | 30        | 09  | 10       | 10     | 50                | 150                  | 3 Hrs                   |
| BTEX -0605           | Energy Conservation & Management                 | 3               | 1  | -  | 4            | 70                    | 22  | 20       | 10     | 100              | -         | -   | -        | -      | -                 | 100                  | 3 Hrs                   |
| BTEX -0606           | Minor Project                                    | -               | -  | 2  | 2            | -                     | -   | -        | -      | -                | 30        | 09  | 10       | 10     | 50                | 50                   | 3 Hrs                   |
| BTEX -0607           | Self study (Internal Assessment)                 | -               | -  | 2  | 2            | -                     | -   | -        | -      | -                | -         | -   | -        | 50     | 50                | 50                   | -                       |
| BTEX -0608           | Seminar / Group Discussion (Internal Assessment) | -               | -  | 2  | 2            | -                     | -   | -        | -      | -                | -         | -   | -        | 50     | 50                | 50                   | -                       |
|                      | Total  | 15              | 05 | 12 | 32           | 350                   | -   | 100      | 50     | 500              | 120       | -   | 40       | 140    | 300               | 800                  |                         |



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering

Department of Electrical & Electronics Engineering

Scheme of Course : B.Tech. - Electrical & Electronics Engineering Course Code : BTEX

Semester :- 7<sup>th</sup> Sem

| Paper / Subject Code | Title of the Paper / Subject                 | Credit Allotted |           |           | Total Credit | Distribution of Marks |          |            |           |                  |            |          |           |           |                   |                      | Duration of Theory Exam |
|----------------------|--|-----------------|-----------|-----------|--------------|-----------------------|----------|------------|-----------|------------------|------------|----------|-----------|-----------|-------------------|----------------------|-------------------------|
|                      |  | L               | T         | P         |              | Theory                |          |            |           |                  | Practical  |          |           |           |                   | Grand Total (I= D+H) |                         |
|                      |  |                 |           |           |              | End Sem.              |          | Internal   |           | Total (D= A+B+C) | End Sem.   |          | Internal  |           | Total (H= E+F+ G) |                      |                         |
|                      |  |                 |           |           |              | Max (A)               | Min      | MST (B)    | TW (C)    |                  | Max (E)    | Min      | LW (F)    | PQ (G)    |                   |                      |                         |
| BTEX-0701            | Power System-II                              | 3               | 1         | -         | 4            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10        | 50                | 150                  | 3 Hrs                   |
| BTEX -0702           | Electrical Drives                            | 3               | 1         | -         | 4            | 70                    | 22       | 20         | 10        | 100              | 30         | 09       | 10        | 10        | 50                | 150                  | 3 Hrs                   |
| BTEX -0703           | Digital Signal Processing                    | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | -          | -        | -         | -         | -                 | 100                  | 3 Hrs                   |
| BTEX-0710            | Elective-I (Refer Table Below)               | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | -          | -        | -         | -         | -                 | 100                  | 3 Hrs                   |
| BTEX -0720           | Elective-II (Refer Table Below)              | 3               | 1         | 2         | 6            | 70                    | 22       | 20         | 10        | 100              | -          | -        | -         | -         | -                 | 100                  | 3 Hrs                   |
| BTEX -0704           | Major Project (Planning & Literature survey) | -               | -         | 4         | 4            | -                     | -        | -          | -         | -                | 60         | 18       | 20        | 20        | 100               | 100                  | 3 Hrs                   |
| BTEX -0705           | Industrial Training (two weeks)*             | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | 30         | 09       | 10        | 10        | 50                | 50                   | -                       |
| BTEX -0706           | Self study (Internal Assessment)             | -               | -         | 2         | 2            | -                     | -        | -          | -         | -                | -          | -        | -         | 50        | 50                | 50                   | -                       |
|                      | <b>Total</b>                                 | <b>15</b>       | <b>05</b> | <b>12</b> | <b>32</b>    | <b>350</b>            | <b>-</b> | <b>100</b> | <b>50</b> | <b>500</b>       | <b>180</b> | <b>-</b> | <b>60</b> | <b>60</b> | <b>300</b>        | <b>800</b>           |                         |

**ELECTIVE-I**

**BTEX-0710(A) Reliability Engineering**

**BTEX-0710(B) EHVAC/DC Transmission**

**BTEX-0710(C) SCADA Systems & Application**

**ELECTIVE-II**

**BTEX-0720(A) High Voltage Engineering**

**BTEX-0720(B) Digital Image Processing**

**BTEX-0720(C) Computer Network**



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering

Department of Electrical & Electronics Engineering

Scheme of Course : B.Tech. - Electrical & Electronics Engineering Course Code : BTEX

Semester :- 8<sup>th</sup> Sem

| Paper / Subject Code | Title of the Paper / Subject             | Credit Allotted |          |           | Total Credit | Distribution of Marks |          |           |           |                  |            |          |            |           |                   |                      | Duration of Theory Exam |
|----------------------|--|-----------------|----------|-----------|--------------|-----------------------|----------|-----------|-----------|------------------|------------|----------|------------|-----------|-------------------|----------------------|-------------------------|
|                      |  | L               | T        | P         |              | Theory                |          |           |           |                  | Practical  |          |            |           |                   | Grand Total (I= D+H) |                         |
|                      |  |                 |          |           |              | End Sem.              |          | Internal  |           | Total (D= A+B+C) | End Sem.   |          | Internal   |           | Total (H= E+F+ G) |                      |                         |
|                      |  |                 |          |           |              | Max (A)               | Min      | MST (B)   | TW (C)    |                  | Max (E)    | Min      | LW (F)     | PQ (G)    |                   |                      |                         |
| BTEX-0801            | Computer Aided Electrical Machine Design | 3               | 1        | 2         | 6            | 70                    | 22       | 20        | 10        | 100              | 30         | 09       | 10         | 10        | 50                | 150                  | 3 Hrs                   |
| BTEX -0802           | Computer Application To Power System     | 3               | 1        | 2         | 6            | 70                    | 22       | 20        | 10        | 100              | 30         | 09       | 10         | 10        | 50                | 150                  | 3 Hrs                   |
| BTEX -0830           | Elective –III (Refer Table Below)        | 3               | 1        | -         | 4            | 70                    | 22       | 20        | 10        | 100              | -          | -        | -          | -         | -                 | 100                  | 3 Hrs                   |
| BTEX-0840            | Elective –IV (Refer Table Below)         | 3               | 1        | -         | 4            | 70                    | 22       | 20        | 10        | 100              | -          | -        | -          | -         | -                 | 100                  | 3 Hrs                   |
| BTEX -0803           | Major Project                            | -               | -        | 8         | 8            | -                     | -        | -         | -         | -                | 120        | 37       | 80         | -         | 200               | 200                  | 3 Hrs                   |
| BTEX -0804           | Modeling & Simulation Lab                | -               | -        | 2         | 2            | -                     | -        | -         | -         | -                | 30         | 09       | 10         | 10        | 50                | 30                   | -                       |
| BTEX -0805           | Self study & Seminar                     | -               | -        | 2         | 2            | -                     | -        | -         | -         | -                | -          | -        | -          | 50        | 50                | 50                   | -                       |
|                      | <b>Total</b>                             | <b>12</b>       | <b>4</b> | <b>16</b> | <b>32</b>    | <b>280</b>            | <b>-</b> | <b>80</b> | <b>40</b> | <b>400</b>       | <b>210</b> | <b>-</b> | <b>110</b> | <b>80</b> | <b>400</b>        | <b>800</b>           |                         |

**ELECTIVE-III**

**BTEX-0830(A) Advanced Power Electronics**

**BTEX-0830(B) Advanced Communication System**

**BTEX-0830(C) FACTS**

**ELECTIVE-IV**

**BTEX-0840(A) Power System Economics**

**BTEX-0840(B) Cellular Mobile Communication**

**BTEX-0840(C) Advanced Control System**