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| **B.Tech III year II Semester First Mid-Term Examinations, March 2023** |
| Branch Name: CSD(Data Science) |
| Subject Name: Smart Grid Technologies |
| Maximum Marks: 20 Set-1 Duration: 1Hour 20 Minutes |

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| **Part-A (Objective Paper)** | | | |
| Answer All the following questions.  (5 Multiple choices & 5 Fill in the blanks)  Marks: 10x1/2M = 5M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 1 | |  | | --- | | Which among the following are the issues of interconnection  in micro grid [ ] | | A) Power Quality  B) Protection system  C) Energy Management  D) All of the above | | L2 | CO1 |
| 2 | |  |  | | --- | --- | | Smart Grid is used to supply electricity to consumers via [ ] |  | | A) One way digital communication  B)Two way digital communication  C) Multi way digital communication  D)None of the above |  | | L2 | CO1 |
| 3 | |  | | --- | | Which among the following is not an SWOT analysis of smart grid | | A) Strengths B) Weakness [ ]  C) Self Healing D) None of the above | | L2 | CO2 |
| 4 | SCADA stands for [ ]  A) Standard capacity and data analysis  B) Standard control and data analysis  C) Supervisory control and data acquisition  D) All of the above | L2 | CO2 |
| 5 | Phase Measurement unit measures [ ]   1. DC Wave forms 2. AC Wave forms 3. AC and DC Wave forms 4. All of the above | L2 | CO3 |
| 6 | Feeders with single restoration path generally open ---------- | L2 | CO1 |
| 7 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Systems are desirable to prevent dependence on human intervention at critical moments | L2 | CO1 |
| 8 | PHEVS the car batteries are used steadily while driving the battery charge \_\_\_\_\_\_\_\_\_\_ | L1 | CO2 |
| 9 | \_\_\_\_\_transfer schema used for critical loads | L1 | CO2 |
| 10 | A stand- alone micro grid can effectively integrate various sources of distribution generation especially\_\_\_\_\_\_\_\_\_\_\_\_\_. | L1 | CO3 |

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| **Part-B (Descriptive Paper)** | | | |
| Answer All the following questions. Marks: 3x5M= 15M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 11 | a)What are the functions of smart grid components? | L2 | CO1 |
|  | OR |  |  |
|  | b)Compare conventional grid with smart grid in six steps? | L1 | CO1 |
| 12 | a)Explain Intelligent electronic devices(IED)? | L2 | CO2 |
|  | OR |  |  |
|  | b)Explain Plug In Hybrid Electric Vehicles(PHEV)? | L2 | CO2 |
| 13 | a)Describe micro grid structure and its operation? | L1 | CO3 |
|  | OR |  |  |
|  | Explain the protection and control of micro grid? | L2 | CO3 |



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| **B.Tech III year II Semester First Mid-Term Examinations, March 2023** |
| Branch Name: CSD(Data Science) |
| Subject Name: Smart Grid Technologies |
| Maximum Marks: 20 Set-2 Duration: 1Hour 20 Minutes |

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| **Part-A (Objective Paper)** | | | |
| Answer All the following questions.  (5 Multiple choices & 5 Fill in the blanks)  Marks: 10x1/2M = 5M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 1 | |  | | --- | | PHEV Stands for [ ] | | A) Physical Health and Environmental Vehicle  B) Psycho Health and Endanger Vehicle  C) Plug In Hybrid Electric Vehicle  D) All of the above | | L2 | CO1 |
| 2 | |  |  | | --- | --- | | Smart Grid is used to supply electricity to consumers via [ ] |  | | A) One way digital communication  B)Two way digital communication  C) Multi way digital communication  D)None of the above |  | | L2 | CO1 |
| 3 | |  | | --- | | Which among the following is not an SWOT analysis of smart grid | | A) Strengths B) Weakness [ ]  C) Self Healing D) None of the above | | L2 | CO2 |
| 4 | SCADA stands for [ ]  A) Standard capacity and data analysis  B) Standard control and data analysis  C) Supervisory control and data acquisition  D) All of the above | L2 | CO2 |
| 5 | Phase Measurement unit measures [ ]   1. DC Wave forms 2. AC Wave forms 3. AC and DC Wave forms 4. All of the above | L2 | CO3 |
| 6 | Feeders with single restoration path generally open ---------- | L2 | CO1 |
| 7 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Systems are desirable to prevent dependence on human intervention at critical moments | L2 | CO1 |
| 8 | Battery has two terminals one is positive and other one is \_\_\_\_\_\_\_\_\_\_ | L1 | CO2 |
| 9 | \_\_\_\_\_transfer schema used for critical loads | L1 | CO2 |
| 10 | IED Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_. | L1 | CO3 |

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| **Part-B (Descriptive Paper)** | | | |
| Answer All the following questions. Marks: 3x5M= 15M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 11 | a)What are the functions of smart grid components? | L2 | CO1 |
|  | OR |  |  |
|  | b)Compare conventional grid with smart grid in six steps? | L1 | CO1 |
| 12 | a)Explain Grid to Grid connection in detail with diagram? | L2 | CO2 |
|  | OR |  |  |
|  | b)Explain Plug In Hybrid Electric Vehicles(PHEV)? | L2 | CO2 |
| 13 | a)Describe micro grid structure and its operation? | L1 | CO3 |
|  | OR |  |  |
|  | Explain the protection and control of micro grid? | L2 | CO3 |



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| **B.Tech III year II Semester First Mid-Term Examinations, March 2023** |
| Branch Name: CSD(Data Science) |
| Subject Name: Smart Grid Technologies |
| Maximum Marks: 20 Set-3 Duration: 1Hour 20 Minutes |

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| **Part-A (Objective Paper)** | | | |
| Answer All the following questions.  (5 Multiple choices & 5 Fill in the blanks)  Marks: 10x1/2M = 5M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 1 | |  | | --- | | PHEV Stands for [ ] | | A) Physical Health and Environmental Vehicle  B) Psycho Health and Endanger Vehicle  C) Plug In Hybrid Electric Vehicle  D) All of the above | | L2 | CO1 |
| 2 | |  |  | | --- | --- | | GIS stands for [ ] |  | | A) Geographical Information System  B)Geographical Infrastructure System  C) Geographical Internet System  D) Geographical Industrial System |  | | L2 | CO1 |
| 3 | |  | | --- | | Which among the following is not an SWOT analysis of smart grid | | A) Strengths B) Weakness [ ]  C) Self Healing D) None of the above | | L2 | CO2 |
| 4 | SCADA stands for [ ]  A) Standard capacity and data analysis  B) Standard control and data analysis  C) Supervisory control and data acquisition  D) All of the above | L2 | CO2 |
| 5 | Phase Measurement unit measures [ ]   1. DC Wave forms 2. AC Wave forms 3. AC and DC Wave forms 4. All of the above | L2 | CO3 |
| 6 | Feeders with single restoration path generally open ---------- | L2 | CO1 |
| 7 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Systems are desirable to prevent dependence on human intervention at critical moments | L2 | CO1 |
| 8 | Battery has two terminals one is positive and other one is \_\_\_\_\_\_\_\_\_\_ | L1 | CO2 |
| 9 | \_\_\_\_\_transfer schema used for critical loads | L1 | CO2 |
| 10 | IED Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_. | L1 | CO3 |

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| **Part-B (Descriptive Paper)** | | | |
| Answer All the following questions. Marks: 3x5M= 15M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 11 | a)What are the applications of smart devices? | L2 | CO1 |
|  | OR |  |  |
|  | b)Compare conventional grid with smart grid in six steps? | L1 | CO1 |
| 12 | a)Explain Grid to Grid connection in detail with diagram? | L2 | CO2 |
|  | OR |  |  |
|  | b)Explain Plug In Hybrid Electric Vehicles(PHEV)? | L2 | CO2 |
| 13 | a)Describe micro grid structure and its operation? | L1 | CO3 |
|  | OR |  |  |
|  | Give the merits and demerits of Micro grid? | L2 | CO3 |



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| **B.Tech III year II Semester First Mid-Term Examinations, March 2023** |
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| Subject Name: Smart Grid Technologies |
| Maximum Marks: 20 Set-4 Duration: 1Hour 20 Minutes |

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| **Part-A (Objective Paper)** | | | |
| Answer All the following questions.  (5 Multiple choices & 5 Fill in the blanks)  Marks: 10x1/2M = 5M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 1 | |  |  | | --- | --- | | Which among the following are the issues of interconnection  in micro grid [ ] | PHEV Stands for [ ] | | A) Power Quality  B) Protection system  C) Energy Management  D) All of the above | A) Physical Health and Environmental Vehicle  B) Psycho Health and Endanger Vehicle  C) Plug In Hybrid Electric Vehicle  D) All of the above | | L2 | CO1 |
| 2 | |  |  | | --- | --- | | GIS stands for [ ] |  | | A) Geographical Information System  B)Geographical Infrastructure System  C) Geographical Internet System  D) Geographical Industrial System |  | | L2 | CO1 |
| 3 | |  | | --- | | Which among the following is not an SWOT analysis of smart grid | | A) Strengths B) Weakness [ ]  C) Self Healing D) None of the above | | L2 | CO2 |
| 4 | SCADA stands for [ ]  A) Standard capacity and data analysis  B) Standard control and data analysis  C) Supervisory control and data acquisition  D) All of the above | L2 | CO2 |
| 5 | Phase Measurement unit measures [ ]   1. DC Wave forms 2. AC Wave forms 3. AC and DC Wave forms 4. All of the above | L2 | CO3 |
| 6 | Feeders with single restoration path generally open ---------- | L2 | CO1 |
| 7 | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Systems are desirable to prevent dependence on human intervention at critical moments | L2 | CO1 |
| 8 | Battery has two terminals one is positive and other one is \_\_\_\_\_\_\_\_\_\_ | L1 | CO2 |
| 9 | \_\_\_\_\_transfer schema used for critical loads | L1 | CO2 |
| 10 | IED Stands for \_\_\_\_\_\_\_\_\_\_\_\_\_. | L1 | CO3 |

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| **Part-B (Descriptive Paper)** | | | |
| Answer All the following questions. Marks: 3x5M= 15M | | Blooms Taxonomy Level | Attainment of Course Outcomes |
| 11 | a)What are the applications of smart devices? | L2 | CO1 |
|  | OR |  |  |
|  | b)Compare conventional grid with smart grid in six steps? | L1 | CO1 |
| 12 | a)Explain Grid to Grid connection in detail with diagram? | L2 | CO2 |
|  | OR |  |  |
|  | b)Explain Plug In Hybrid Electric Vehicles(PHEV)? | L2 | CO2 |
| 13 | a)Describe micro grid structure and its operation? | L1 | CO3 |
|  | OR |  |  |
|  | Give the merits and demerits of Micro grid? | L2 | CO3 |