**VISHNU INSTITUTE OF TECHNOLOGY(AUTONOMOUS)**D:\exam01\logo_red.png

**VISHNUPUR: BHIMAVARAM**

Mid – I Examinations

**Optimization Techniques (R23) for II-II AI&MLAI&DS and IT**

**Question Bank- Two marks questions**

**Unit-I: Introduction and Classical Optimization Techniques**

|  | Define constraint surface | L2 | CO1 | [2M] |
| --- | --- | --- | --- | --- |
|  | Define composite constraint surface | L2 | CO1 | [2M] |
|  | Find all Extreme points of  f(x,y) = + 2 + 20x -5y | L1 | CO1 | [2M] |
|  | Explain Optimization technique | L3 | CO1 | [2M] |
|  | Define Hessian Matrix | L3 | CO1 | [2M] |
|  | Define constraint surface | L3 | CO1 | [2M] |
|  | Define Objective function | L3 | CO1 | [2M] |
|  | Define Decision Variables | L1 | CO1 | [2M] |
|  | Define Nature of the function  f = −2x2 + 8x + 4 | L1 | CO1 | [2M] |
|  | Define Local, Global minima and maxima | L3 | CO1 | [2M] |
| **Unit-II: Linear Programming** | | | | |
| 1. | Explain Feasible solution | L3 | CO2 | [2M] |
| 2. | Explain Optimal solution. | L1 | CO2 | [2M] |
| 3. | Define and write standard form of LPP | L5 | CO2 | [2M] |
| 4. | Define Basic feasible solution | L1 | CO2 | [2M] |
| 5. | Define Unbounded solutions | L3 | CO2 | [2M] |
| 6. | Define Slack and Surplus variables | L3 | CO2 | [2M] |
| 7. | Define pivotal reduction | L1 | CO2 | [2M] |
| 8. | What is pivot element | L1 | CO2 | [2M] |
| 9. | Write any two assumptions of linear programming | L1 | CO2 | [2M] |
| 10. | Define degenerate solutions | L1 | CO2 | [2M] |

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