Hall Ticket No.: | | | | | | | | | | |

**SRIT R20**

# SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

**(AUTONOMOUS)**

II B. Tech II Sem – Continuous Internal Examinations II – Jun 2023 (AY:2022-2023)

**DISCRETE MATHEMATICS**

**[R204GA05401]**

(Common to CSE, CSD & CSM)

**Time: 2 hours** **SET – 1** **Max. Marks: 30**

**Answer the following questions**

| Q. No | | Questions | Unit | Marks | CO | Cognitive Level |
|---|---|---|---|---|---|---|
| 1 | a) | Find the GCD of 826, 1890. | III | 2 | CO1 | Remember |
| | b) | Define permutation with an example. | IV | 2 | CO1 | Remember |
| | c) | Define graph coloring with an example. | V | 2 | CO1 | Remember |
| **UNIT-III** | | | | | | |
| 2 | | Explain the testing for prime numbers with an example. | | 8 | CO4 | Apply |
| **OR** | | | | | | |
| 3 | a) | Explain division theorem with an example | | 6 | CO4 | Apply |
| | b) | Find the LCM of 826, 1890. | | 2 | CO4 | Remember |
| **UNIT-IV** | | | | | | |
| 4 | a) | In how many different ways can the letters of the word 'COMPUTER' be arranged so that the vowels always come together? | | 4 | CO5 | Apply |
| | b) | Find the number of positive integers less than are equal to 2076 and divisible by 3 or 4. | | 4 | CO5 | Apply |
| **OR** | | | | | | |
| 5 | | Explain the circular permutations with an example. | | 8 | CO5 | Apply |
| **UNIT-V** | | | | | | |
| 6 | | State and Prove Eulers formula. | | 8 | CO6 | Understand |
| **OR** | | | | | | |
| 7 | | Explain Prim's Algorithm along with a suitable example. | | 8 | CO6 | Apply |

**Prepared by**

Name of the Faculty:

Mr. G. Chinna Pullaiah, Mr. M. Narasimhulu, Mr. P. Ram Bayapa Reddy

Signature of the Faculty:

Hall Ticket No.: | | | | | | | | | | |

**SRIT R20**

# SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY

**(AUTONOMOUS)**

II B. Tech II Sem – Continuous Internal Examinations II – Jun 2023 (AY: 2022-2023)

**DISCRETE MATHEMATICS**

**[R204GA05401]**

(Common to CSE, CSD & CSM)

**Time: 2 hours** **SET – 2** **Max. Marks: 30**

**Answer the following questions**

| Q. No | | Questions | Unit | Marks | CO | Cognitive Level |
|---|---|---|---|---|---|---|
| 1 | a) | Mention the properties of integers. | III | 2 | CO1 | Remember |
| | b) | Define Sum and Product rule. | IV | 2 | CO1 | Remember |
| | c) | How a given graph is said to be planar? | V | 2 | CO1 | Remember |
| **UNIT-III** | | | | | | |
| 2 | | Write the Euclidian algorithm with an example. | | 8 | CO4 | Apply |
| **OR** | | | | | | |
| 3 | | Explain the Fermat's theorem and Euler's theorem with an example. | | 8 | CO4 | Apply |
| **UNIT-IV** | | | | | | |
| 4 | | Explain pigeonhole principle and its applications. | | 8 | CO5 | Understand |
| **OR** | | | | | | |
| 5 | | Explain the principles of inclusion – exclusion. | | 8 | CO5 | Understand |
| **UNIT-V** | | | | | | |
| 6 | | Explain the matrix representation of graphs with example. | | 8 | CO6 | Apply |
| **OR** | | | | | | |
| 7 | | Explain krushkal's algorithm with an example. | | 8 | CO6 | Apply |

**Prepared by**

Name of the Faculty:

Mr. G. Chinna Pullaiah, Mr. M. Narasimhulu, Mr. P. Ram Bayapa Reddy

Signature of the Faculty: