

N.B:

1. attempt any three questions from each section
2. Answers to the two sections must be written in same answer sheet.
3. Figures to the right indicate full marks.
4. Assume additional data if necessary but state the same clearly.
5. Symbols have their usual meanings and tables have their usual standard design unless stated otherwise.
6. Use of Simple calculators and statistical tables is allowed.

Section I

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| 1 | A | What is modulation? Explain Phase Shift modulation with a neat diagram. | 6 |
| | B | Explain Next-Hop forwarding with a neat diagram. | 6 |
| 2 | A | State the disadvantages of Asynchronous Transfer Mode (ATM) technology. Explain any three. | 6 |
| | B | What are Virtual Private Networks (VPNs)? Explain how VPNs are built and how they work. | 6 |
| 3 | A | Explain Routing in a WAN with a neat diagram. | 6 |
| | B | Explain Ring Topology and Token Passing. | 6 |
| 4 | A | Describe the concept of Byte Stuffing with an example. | 6 |
| | B | What is Transmission Media? State different types of transmission media and briefly explain any two. | 6 |
| 5 | A | How is Bridging implemented across longer distances? Explain its working with a neat diagram. | 6 |
| | B | State the different types of Digital Subscriber Line (DSL) technology. Explain any two. | 6 |

Section II

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| 6 | A | State Kepler's Laws of Satellite motion. Explain any one. | 6 |
| | B | What are Double Reflector Antennas? Explain the two types of double reflector antennas. | 7 |
| 7 | A | Explain Hohmann's Transfer orbit. | 6 |
| | B | State the different Transmission Losses. Briefly explain any three. | 7 |

TURN OVER

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| 8 | A | State and briefly explain the different types of High Power amplifiers. | 6 |
| | B | What are the causes of Depolarisation? Explain any two. | 7 |
| 9 | A | Explain Telemetry, Tracking and Command Subsystem (TTC). | 6 |
| | B | Explain parabolic reflectors. | 7 |
| 10 | A | What are Orbital Perturbations? Explain its causes. | 6 |
| | B | What are the design considerations for a communication satellite? | 7 |
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