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Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION JUNE 2008

EC 2K 805 (E)—SATELLITE COMMUNICATION

(Common to AI/EE/IC/PTEE 2K 803 E)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Part A

I. (a) Explain what is meant by solar day and sidereal time.

(b) Explain what is meant by velocity and position of a satellite.

(c) Explain what is meant by payload.

(d) Explain what is meant by antenna.

(e) List various transmission loss.

(f) What is meant by VSAT ?

(g) Explain what is meant by frequency hopping.

(h) What is meant by SPADE system of demand assignment ?

(8 × 5 = 40 marks)

Part B

II. (a) (i) Explain what is meant by Hohmann transfer. (7 marks)

(ii) Explain in detail orbital parameters. (8 marks)

Or

(b) (i) State and explain Kepler's laws. (7 marks)

(ii) Explain whst is meant by non-geostationary constellations. (8 marks)

III. (a) (i) Explain what is meant by space craft subsystems. (7 marks)

(ii) Explain what is meant by tracking and command. (8 marks)

Or

(b) (i) Explain attitude and control systems. (8 marks)

(ii) Explain in detail fixed satellite service earth stations. (7 marks)

IV. (a) (i) Explain what is meant by antenna noise. (8 marks)

(ii) Explain in detail about Antenna parameters. (7 marks)

Or

Turn over

(b) (i) Explain VSAT design issues. (8 marks)

(ii) Explain various transmission loss. (7 marks)

V. (a) Explain in detail the access protocols for Data traffic. (15 marks)

Or

(b) Explain briefly about Time Division Multiple Access. (15 marks)

(4 × 15 = 60 marks)