PAT Syllabus of Electronic Science

Unit-1

Newton's interpolation formula, Simpson's and Trapezoidal rules, Orthogonal, Hermitian, Unitary, Singular and Orthogonal matrices, Eigen values and Eigen vectors, de Broglie relations, uncertainty relations.

Unit-II

Free electron theory of metal, Physics of semiconductor, Solid state devices (JFET, MOSFET, Tunnel diode)

Unit-III

h- parameter, CE,CB, CC, CS and CD amplifier, Feedback amplifier, Operational amplifier and its applications, Square, Triangular wave generator, Active filter

Unit- IV

Digital circuits, Logic Gates, Boolean algebra, Logic family combinational Logic design with K-MAP, Combinational logic design using MSI, Flip-flop, A/D and D/A convertor

Unit-V

Microprocessor-8085, Architecture of 8085, Pin configuration, Instruction set, Memory device

Unit –VI

Computer algorithm, Flow chart, Programming language, control structure, Fortran and C and C++ language programme structure, Soft ware life cycle model, Data structure-Stack, queue, Graph, Tree, Sorting, Techniques

Unit-VII

Instrumentation and control, Transducer, Control rectifier, SMPS open and close loops control system, Analogous system, Transfer function, Block diagram, Signal flow graph

Unit—VIII

28/05/2019 R.Kumar 28.5.2019 28/05/19.

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Optical electronic and communication, Optical fibre, Transmission line, Poynting vector, Propagation of wave, Ground and Sky wave, Wave guide, Micro wave tube device

Unit- IX

Informatics, Information Theory, Quantization and coding sampling theorem, Modulation technique, A M, F M, Generation and detection of PAM, PWM, PCM, DM

Unit –X

Digital communication and data communication, Data representation and operation system, Basic and file access

28/05/2019

R. Kumar 28.05.2019

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