

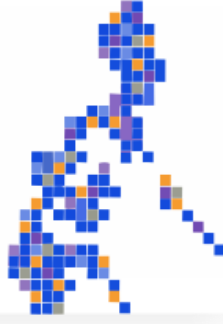
BITT Group of Institutions Celebrating it's 26 Glorious years

BITT POLYTECHNIC

(Approved by AICTE, New Delhi & Affiliated to Jharkhand University of Technology, Ranchi)

RUN AND MANAGED BY BIRSA INSTITUTE OF TECHNOLOGY (TRUST) - BITT

मानवता की सेवा, सभी के लिए सर्वश्रेष्ठ शिक्षा



APPROVED BY



RECOGNISED BY



AFFILIATED BY



DTPCIR



UNIT OF BITT

हमारे सभी विद्यार्थियों एवं सहयोगियों को
हमारी 26 वर्षों की गौरवशाली यात्रा का हिस्सा
बनने के लिए धन्यवाद.

सर्वश्रेष्ठ पॉलीटेक्निक संस्थान, सर्वोत्तम पढ़ाओ, सर्वोत्तम बनाओ ।

NOTICE

(EXAMINATION DEPARTMENT)

1st INTERNAL EXAMINATION

All the students of 3rd and 5th semesters of all branches of session 2019-22 & 2020-23 are hereby informed that the 1st internal exam (online) will be Scheduled on 11th December 2021 and 13th December 2021, in accordance with the Academic calendar of Jharkhand University of Technology (JUT) and the College Notice Number BITT-G/NOTICE/2021-22/ 10135, Dated 04.10.2021.

Students are directed to follow the rules & regulation framed for the online internal examinations. Students are also advised to go through the time table provided as here under for the examination.

To appear in the 1st Internal Exam, the students of 3rd and 5th semesters (EE, CSE, ME, ECE, and CE) are required to clear all their dues before the commencement of Internal Examination, Non clearance of dues may cause Inconvenience to students and No student is allowed to appear in the Internal Examination. Nonappearance in Internal exam will be treated as absent and 0 marks will be awarded to the student. The evaluation of Internal Marks for final semester results depends on the performance in the Internal Examination as well as Sincerity, behavior, conduct, Attendance and other academic activities during the semester.

The students are strictly instructed to clear all their dues till 10.12.2021 to avoid any inconvenience. Under dues No student will be allowed to appear in the Internal Examination and in any circumstances he/she cannot get any academic, non-academic support from the college.

A student is required to have 75% Attendance* in a semester (although the college insists for 100% attendance in semester), Failure of 75% attendance shall invite one or any combination of the following actions:

- I. The Principal may, at any point of time, allocate extra classes in concerned subject(s) to make up the shortfall in the attendance (for the students having short fall by 2-3%). In such cases, concerned students will be mandatorily required to attend the (extra) classes.
- II. A student shall not be allowed to fill the semester examination form or may fill with fine as applicable by the principal at the time of examination form submission.

***Attendance regulation for offline classes is applicable as per the Memo No. 429/CS/Res, dated 31.07.2021, notified guidelines for re-opening of polytechnic across the Jharkhand state.**

BITT HELP-DESK:

BITT Special Student's Care: In Case of any issue, for any Observation/Suggestion/Grievances/Feedback, Please WhatsApp on 9931080111 / Call 9470193650 Or Email at: rkbitt@gmail.com (From 11.30 AM to 02.30 PM & Days: MONDAY - FRIDAY Only). We are committed for best academic support to our students.

(NOTE - All students are advised to make only WhatsApp messages on BITT helpline WhatsApp No.- 9931080111. Students may send their feedbacks/suggestions/complaints through WhatsApp only. No any call will be entertained on this no. in any cases.)

BIRSA INSTITUTE OF TECHNOLOGY (TRUST)- BITT: Indeed, it is pride moment for all of us that The BITT Group of Institution is Celebrating it's 26 Glorious Years in field of Technical Education, Scholarship & Serving the Nation in the excellent Way. BITT Polytechnic - **मानवता की सेवा, सभी के लिए सर्वश्रेष्ठ शिक्षा** (Approved by AICTE, NEW DELHI & Affiliated to Jharkhand University of Technology) - **सर्वश्रेष्ठ पॉलिटेक्निक संस्थान, सर्वोत्तम पढ़ाओ, सर्वोत्तम बनाओ**


We firmly believe in "Student Centric Approach. So, Be Proactive, Not Reactive". Your cooperation is highly solicited in this regard.

COVID Guidelines: the college has no responsibility in case any of the student, visitors (visiting office) get corona infected the college is following all the COVID protocols keeping the spread of CORONA.

Stay Safe & Healthy

With Best Wishes,
BITTP

For admission/Scholarship/Placement/Start-up/Entrepreneurship/Notices/Any details, Visit URL given as:
<http://www.bittpolytechnic.com>


Principal
BITT Polytechnic
Getlatu, Ranchi
Principal,
BITT Polytechnic

Copy to,

1. Hon'ble Chairman, BITTGOI
2. Principal
3. Assistant Registrar
4. All HoDs
5. Controller of Examinations
6. Accounts Department
7. Workshops
8. Library
9. Notice Board
10. Website
11. File

आपका विश्वास ही हमारी निरंतर सफलता की प्रेरणा है।

Digital Campus, Smart Students

26 *Years* **years**
IN ACADEMIC
SCHOLARSHIP
PLACEMENT &
TECHNICAL EDUCATION
Atma Nirbhar Digital BITT Parivar
Service for Mankind

anishi
anishinstitute.com

YGE
YGE Group of Institutions



Attractive Scholarships for KG to PG Under
"RAM KISHOR SARASWATI VANDANA JAN SHIKSHA ABHIYAAN"
आपका विश्वास ही हमारी निरंतर सफलता की प्रेरणा है।
SCHOLARSHIPS, FREE COURSES & TRAINING PROGRAMS



बेटियां अब बोझ नहीं,
हर बेटियों का अधिकार,
शिक्षा से करें अपने सपनों को साकार
RKSVJSA के तहत
विद्या लक्ष्मी उपप्रवृत्ति योजना
अपने करियर को सफलता के
शिखर पर पहुंचाएं।



#StayHomeStaySafe



ATMA NIRBHAR DIGITAL BITT PARIVAR
Getlatu, Ranchi - 835217

9905011011 | BITT | BITT | LIVE



Service for Mankind

हिन्दी, इंग्लिश, कंप्यूटर एवं डिजिटल शिक्षा सभी के लिए। बेटी बचाओ-बेटी पढ़ाओ, लड़का-लड़की एक समान। वृक्ष लगाओ-जीवन बचाओ, नशा मुक्त-स्वस्थ भारत, रेन वाटर हार्वेस्टिंग, सौर उर्जा, स्टार्ट अप, पीएम ई-विद्या, डिजिटल इंडिया, आत्मनिर्भर डिजिटल बीआईटीटी, इंटरनशाला, लड़कियों के लिए विद्या लक्ष्मी स्कॉलरशिप, अंतरराष्ट्रीय कार्यशाला, झारखंड स्किल डेवलपमेंट मिशन, कौशल एवं कुशल रोजगार, कल्याणकारी छात्रवृत्ति योजनायें।

BITT POLYTECHNIC: BITT-DEVI DARSHAN ROAD, GETLATU, RANCHI-835217, JHARKHAND (INDIA), PH.: 0651 2273067 | ADMISSION HELP LINE 9905011011 | 9470193650

bittpolytechnic.com | bittgroup.in | [/bittpolytechnic](https://www.facebook.com/bittpolytechnic) | [/bitt.goi](https://www.facebook.com/bitt.goi) | [/rksvss](https://www.facebook.com/rksvss) | [/bittpolytechni1](https://www.facebook.com/bittpolytechni1) | [/BittGroup](https://www.facebook.com/BittGroup) | [/rksvss](https://www.facebook.com/rksvss) | [9931080111](https://www.facebook.com/9931080111)

BITT POLYTECHNIC

GETLATU

RANCHI-835217

BITT DIGITAL 1ST INTERNAL EXAMINATION SYLLABUS (Subject wise)

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

S.NO.	SEMESTER	SUBJECT AND CODE	SYLLABUS (PORTION)
1	III rd	Electrical engineering (EE 303)	Introduction to electrical circuits: Electric field, electric current, potential and potential difference, electric power, basic circuit components, ohm's law., Sources and its types, Ideal and practical sources, Source Conversion, independent and dependent sources, Energy Stored in Inductor and Capacitor, series, parallel and series and parallel circuit, DC Networks & Theorems: Laws and Theorems applicable to DC networks (KCL & KVL, Node voltage & Mesh current analysis, Star-Delta and Delta-Star conversion, Superposition theorem, Thevenin & Norton theorem & Maximum power Transfer theorem), Simple problems. AC Fundamentals, Single-Phase AC Circuits: Single-phase EMF Generation, Average and Effective value of periodic ac signals, Peak factor & Form factor, Phasor and Complex representation of sinusoids, Power factor, complex power, Three-Phase AC Circuits: Comparison between single-phase and three-phase systems, three phase EMF Generation, Line and Phase quantities in star and delta networks
2	III rd	Math III (301)	Integration, Definition of integration as anti-derivative. Integration of standard function., Rules of integration (Integrals of sum, difference, scalar multiplication), Methods of Integration, Integration by trigonometrically transformation, Integration by substitution, Integration by parts, Integration of rational and irrational functions, Integration by Partial fractions.
3	III rd	Electronic Devices and Circuits (ECE 303)	Classification, Feedback concept, Feedback Topologies, Transfer gain with feedback, General characteristics of negative feedback amplifiers. Analysis of voltage-series, voltage-shunt, current-series and current-shunt feedback amplifier. Stability criterion. OSCILLATORS- Classification. Criterion for oscillation. Tuned collector, Hartley, Colpitts, RC Phase shift, Wien bridge and crystal oscillators, pulse generator. Band Pass Amplifier, Parallel resonant Circuits, Band Width of Parallel resonant circuit. Analysis of Single Tuned Amplifier, Primary & Secondary Tuned Amplifier with BJT & FET, Double Tuned Transformer Coupled Amplifier. Stagger Tuned Amplifier. Pulse Response of such Amplifier, class C tuned amplifiers, Shunt Peaked Circuits for Increased Bandwidth. (Discussion and use as RF and IF stages) Classification, Power transistors & power MOSFET (DMOS, VMOS). Output power, power dissipation and efficiency analysis of Class A, class B, class AB, class C, class D and class E amplifiers as output stages. Push pull amplifiers with and without transformers, Complementary symmetry & quasi complimentary symmetry amplifiers

4	III rd	Object Oriented Programming (CSE 303)	<p>Basic concepts, Benefits of OOPs, Procedure Oriented Programming versus Object Oriented Programming, Structure of C++ Programs.</p> <p>Specifying an Object & Class, Access Specifiers, Defining member functions, Inline function, Arrays within a class, Static data & member functions, Arrays of Objects, Objects as Function Arguments, Friend function.</p> <p>Concept of Constructor, Types of Constructors (Parameterized, Copy, Default), Overloaded Constructors (Multiple constructor), Constructor with default arguments, Destructors.</p> <p>Concepts of Inheritance, Types of Inheritance (Single, Multilevel, Multiple, Hierarchical, Hybrid), Virtual Base Class, Abstract Class, Constructor in Derived Class, Member Classes, Concepts of Overriding.</p> <p>Concepts of Polymorphism, Types of Polymorphism, Function overloading, Operator Overloading (Unary & Binary Operator), Rules for overloading operators, Virtual Functions, Rules for Virtual Functions, Pure Virtual Function.</p>
5	III rd	WEB TECHNOLOGY (CSE 304)	<p>Clients, Servers, and Communication. The Internet-Basic Internet Protocols -The World Wide Web-HTTP request message-response Message-Web Clients Web Servers-Case Study. Mark up Languages: XHTML. Basics of HTML, XHTML Syntax and Semantics, URLs- Lists- tables-Frames-Forms-XML Creating HTML Documents, Case Study.</p> <p>CSS- Introduction to Cascading Style Sheets-Features-Core Syntax- Style Sheets and HTML Style Rule Cascading and Inheritance-Text Properties-Box Model</p> <p>Introduction of CSSH and different types of program.</p>
6	V th	Microprocessors & Microcontrollers (CSE 503)	<p>Introduction to 8085 – Microprocessor architecture, pin out diagram, – Addressing modes - Instruction set, Interrupts and interrupt service routines.</p> <p>Introduction to 8086 – Microprocessor architecture – Addressing modes - Instruction set and assembler directives – concept of pipelining, Assembly language programming, Interrupts and interrupt service routines – Byte and String Manipulation.</p>
7	V th	Java Programming (CSE 504)	<p>Fundamentals of Object Oriented Programming, Object and Classes, Data abstraction and encapsulation, Inheritance, Polymorphism, Dynamic Binding. Java Features:- Compiled and Interpreted, Platform independent and portable, Object oriented Distributed, Multithreaded and interactive, High performance. Constant, Variables and Data Types, Constant, Data Types, Scope of variable, Symbolic Constant, Type casting, Standard default values. Operator and Expression:- Arithmetic Operators, Relational Operators, Logical Operators, Assignment Operator Increment and Decrement Operator, Conditional Operator, Bit wise Operator, Special Operator. Decision making and Branching:- Decision making with if statement, Simple if statement, The if else statement, The else if ladder, The switch statement, The ? : Operator. Decision making and Looping:- The While statement, The do statement, The for statement, Jumps in Loops, Labeled Loops.</p> <p>Defining a class, Creating object, Accessing class members, Constructor, Methods Overloading, Static Member. Inheritance.</p>
8	V th	Computer Graphics (CSE 505)	<p>Overview of computer graphics, representing pictures, preparing, presenting & interacting with pictures for presentations; Visualization & image processing; RGB color model, direct coding, lookup table; storage tube graphics display, Raster scan display, 3D viewing devices, Plotters, printers, digitizers, Light pens etc.; Active & Passive graphics devices; Computer graphics software.</p> <p>Points & lines, Line drawing algorithms; DDA algorithm, Bresenham's line algorithm, Circle generation algorithm; Ellipse generating algorithm; scan line polygon, fill algorithm, boundary fill algorithm, flood fill algorithm.</p>

9	y th	<p align="center">Mobile Computing (CSE 506)</p>	<p>Issues in mobile computing, overview of wireless telephony: cellular concept, GSM: air-interface, channel structure, location management:HLR-VLR, hierarchical, handoffs, channel allocation in cellular systems</p> <p>Mobile IP Goals, assumptions, entities and terminology, IP packet delivery, agent advertisement and discovery, registration, tunnelling and encapsulation, Dynamic Host Configuration Protocol (DHCP), Traditional TCP, Indirect TCP, Snooping TCP, Mobile TCP, Fast retransmit/fast recovery, Transmission /time-out freezing, Selective retransmission, Transaction oriented TCP.</p> <p>Wireless LAN Overview: MAC issues, IEEE 802.11, Blue Tooth, Wireless multiple access protocols</p>
10	y th	<p align="center">E – Commerce (CSE 511)</p>	<p>Electronic Commerce: Overview, Definitions, Advantages & Disadvantages of E – Commerce, Threats of E – Commerce, Managerial Prospective, Rules & Regulations for Controlling E – Commerce, Cyber Laws.</p> <p>Technologies: Relationship Between E – Commerce & Networking, Different Types of Networking for E – Commerce, Internet, Intranet & Extranet, EDI Systems Wireless Application Protocol: Definition, Hand Held Devices, Mobility & Commerce, Mobile Computing, Wireless Web, Web Security, Infrastructure Requirement for E – Commerce Business Models of e – commerce: Model Based On Transaction Type, Model Based On Transaction Party - B2B, B2C, C2B, C2C, E – Governance.</p> <p>Content Management: Definition of content, Authoring Tools & Content Management, Content – partnership, repositories, convergence, providers, Web Traffic & Traffic Management; Content Marketing. Call Center: Definition, Need, Tasks Handled, Mode of Operation, Equipment, Strength & Weaknesses of Call Center, Customer Premises Equipment (CPE).</p>

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1 ST INTERNAL EXAMINATION SYLLABUS (Subject wise)			
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING			
S.NO.	SEMESTER	SUBJECT AND CODE	SYLLABUS (PORTION)
1	III rd	Elect & Electronic Measurement (ECE 305)	<ol style="list-style-type: none"> 1. Introduction to Measurements – Block diagram of measurement system, characteristics of measurement system, Accuracy & precision, Repeatability, range, linearity and offsets. Errors and its types. Calibration of instruments. 2. Analog Instruments – Construction and principle of operation of moving coil, moving iron, Dynamometer, Thermal and Rectifier type deflecting instruments. Deflecting, controlling and damping torques, extension of instrument ranges using shunts, multipliers and instrument transformers, localization of cable faults. 3. DC & AC Bridges: Wheat stone bridge 4. ELECTRONIC INSTRUMENTS - Electronic Voltmeter, Electronic Multimeters, Digital Voltmeter
2	III rd	Electrical Technology (ECE 304)	<p>Introduction to electrical circuits: Electric field, electric current, potential and potential difference, electric power, basic circuit components, ohm's law., Sources and its types, Ideal and practical sources, Source Conversion, independent and dependent sources, Energy Stored in Inductor and Capacitor, series, parallel and series and parallel circuit, DC Networks & Theorems: Laws and Theorems applicable to DC networks (KCL & KVL, Node voltage & Mesh current analysis, Star-Delta and Delta-Star conversion, Superposition theorem, Thevenin & Norton theorem & Maximum power Transfer theorem), Simple problems. AC Fundamentals, Single-Phase AC Circuits: Single-phase EMF Generation, Average and Effective value of periodic ac signals, Peak factor & Form factor, Phasor and Complex representation of sinusoids, Power factor, complex power, Three-Phase AC Circuits: Comparison between single-phase and three-phase systems, three phase EMF Generation, Line and Phase quantities in star and delta networks</p>
3	III rd	Math III (301)	<p>Integration, Definition of integration as anti-derivative. Integration of standard function., Rules of integration (Integrals of sum, difference, scalar multiplication), Methods of Integration, Integration by trigonometrically transformation, Integration by substitution, Integration by parts, Integration of rational and irrational functions, Integration by Partial fractions..</p>
4	III rd	Electromagnetic Field Theory (ECE 306)	<p>Topics: Introduction to Co-ordinate System – Rectangular – Cylindrical and Spherical Co-ordinate System – Introduction to line, Surface and Volume Integrals, Coulomb's Law in Vector Form – Definition of Electric Field Intensity – Principle of Superposition – Electric Field due to discrete charges – Electric field due to continuous charge distribution – Electric Field due to charges distributed uniformly on an infinite and finite line – Electric Field on the axis of a uniformly charged circular disc – Electric Field due to an infinite uniformly charged sheet.</p> <p>Electric Scalar Potential – Relationship between potential and electric field – Potential due to infinite uniformly charged line – Potential due to electrical dipole – Electric Flux Density – Gauss Law – Proof of Gauss Law – Applications.</p>

5	III rd	Electronic Devices and Circuits (ECE 303)	<p>Difference between Conductor, Insulator and Semiconductor, Mobility and conductivity, Charge densities in a semiconductor, Fermi Dirac distribution, Carrier concentrations and Fermi levels in semiconductor, Generation and recombination of charges, Diffusion and continuity equation, P and N Type semiconductor, Formation of homogenous and heterojunction diodes and their energy band diagrams, PN Junction, V-I characteristics, Small signal models of diode, Diode as a circuit element, Diode parameters and load line concept, Applications of diodes in rectifier, Clipping, Clamping circuits and voltage multipliers, Breakdown diodes, Schottky diodes, and Zener diode as voltage regulator Characteristics, Current components, Current gains: alpha and beta. Variation of transistor parameter with temperature and current level, Operating point, Hybrid model, DC model of transistor, h-parameter equivalent circuits. CE, CB and CC configuration.</p> <p>DC and AC analysis of single stage CE, CC (Emitter follower) and CB amplifiers AC & DC load line, Ebers-Moll model. Biasing & stabilization techniques. Thermal runaway, Thermal stability.</p> <p>Construction and operation, Noise performances of FET, Parasitic of MOSFET, Small signal models of JFET & MOSFET, Biasing of JFET's & MOSFET's, Low frequency single stage CS and CD (source follower) JFET amplifiers, FET as voltage variable resistor and FET as active load,</p>
6	V th	Instrumentation System (ECE 503)	<p>1. Electronic Meters: Electronic Analog voltmeter: DC voltmeters-Choppers type-DC amplifier, solid state voltmeter, Differential voltmeter, peak responding voltmeter, True RMS voltmeter, calibration of DC voltmeters. Digital Voltmeter:- Introduction, Ramp Techniques, dual slope, integrating type DVM, Successive approximation type DVM, Resolution and sensitivity of digital meters, general specification of a DVM. CRO's study of various stages in brief, measurement of voltage, current phase and frequency, special purpose oscilloscope.</p> <p>2. Instrumentation for Generation and Analysis of Waveforms: Signal generators: Fixed and variable AF oscillators, AF sine and square wave generator, Function generator: Square and pulse generator, Sweep generator, wave analyzer, harmonic distortion analyzer, spectrum analyzer, spectrum analysis.</p> <p>3. Errors & types of errors</p>
7	V th	Power Electronics (ECE 504)	<p>Power semiconductor devices PNP diodes, DIACS Thyristors, TRIACS, G.T.O. devices. Power Transistors, Power MOSFET, Rating, Losses and Cooling. Triggering circuits for SCR's, UJT, Blocking Oscillators, Schmitt trigger circuits – Power MOS gate drive circuits.</p> <p>Uncontrolled and controlled Rectifiers: Single phase and poly phase Bridge rectifiers. Transformer ratings. Inductive load, freewheeling diodes. Converter operation: Overlap, power factor, inversion, regulation, P-pulse converters, power factor control via PWM converters.</p> <p>D.C. line commutation: Series and parallel capacitor turn off, resonant turn off, impulse commutation. D.C. Choppers: Principles, classification, use.</p> <p>Frequency conversion: Cyclo converter single and three phase circuits, blocked group operation, circulating current mode. Single phase and three phase inverters, constant voltage source and constant current source inverters.</p>
8	V th	Electronic Waste (ECE 508)	<p>Introduction: Definition and meaning of e waste (WEEE), e waste growth in India, e waste growth in world E waste toxicity and health perspectives: Introduction, Hazardous, biomedical waste, occupational and environmental health perspective. E Waste regulations: Basel convention, E waste regulation in European Union</p>

9	y th	Linear Integrated Circuits (ECE 509)	<p>UNIT I: DIFFERENTIAL AND CASCADE AMPLIFIERS: Introduction, Differential Amplifier, Differential Amplifier Circuit Configuration, Dual Input-Balanced output Differential Amplifier, Dual Input-Unbalanced output Differential Amplifier, Single Input- Balanced output Differential Amplifier, Single Input-unbalanced output</p> <p>UNIT II: INTRODUCTION TO OPERATIONAL AMPLIFIERS: Block diagram of a typical Op-Amp, Schematic symbol, integrated circuits and their types, IC package types, Pin Identification and Characteristics and performance parameters of and Op-Amp, Ideal Op-Amp, Equivalent circuit of an Op-Amp, Ideal voltage transfer curve, Open loop configurations: Differential, Inverting & Non Inverting. Practical Op-Amp: Input offset voltage, Input bias current, Input offset current, total output offset voltage, Thermal drift, Effect of variation in power supply voltages on offset voltage, Change in Input offset voltage and Input offset current with time, Temperature and supply voltage sensitive parameters, Noise, Common Mode configuration and common mode rejection Ratio.</p> <p>Feedback configurations. Summing Amplifier inverting and non-inverting type, Instrumentation amplifier, comparator, Schmitt op-amp circuit, voltage follower.</p>
10	y th	Programmable Logic Controllers (ECE- 510)	<p>PLC Basics: An Overall Look at Programmable Logic Controllers - Introduction, definition & history of the PLC, manufacturing & assembly process, PLC advantage & disadvantage, overall PLC system, CPU & programmer/monitors, PLC input & output modules, printing PLC information. The PLC: A Look Inside - Introduction, the PLC as a computer, the central processing unit, solid state memory, the processor, I/O modules, power supplies. General PLC Programming Procedures - Introduction, programming equipment, programming formats, proper construction of PLC ladder diagrams, process PLC operational faults. Devices to Which PLC Input and Output Modules Are Connected - Introduction, input ON/OFF switching device, input analog device, output ON/OFF device, output analog devices</p> <p>PLC Programming: Programming On/Off Inputs to Produce On-Off Outputs - Introduction, PLC input instruction, output: coils, inductors & others, operational procedures, contact & coil input/output programming examples, a look at fail safe circuit, industrial process examples. Relation of Digital Gate Logic to Contact/Coil Logic - Digital logic gates, Boolean algebra PLC programming, conversion examples. Creating Ladder Diagrams from Process Control Descriptions - Ladder diagram & sequence listing, large process ladder diagram construction, flow charting as programming method. Converting from digital logic diagram to ladder logic diagram, converting from ladder logic diagram to digital logic diagram.</p>

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1ST INTERNAL EXAMINATION SYLLABUS (Subject wise)

DEPARTMENT OF CIVIL ENGINEERING

S.NO.	SEMESTER	SUBJECT AND CODE	SYLLABUS (PORTION)
1	III rd	BUILDING DRAWING (AUTOCAD) (CIV 306)	<p>Meaning of various CAD software available in the market auto CAD, Felix CAD, AutoCAD civil 3D, 3D max, etc. user interface Starting up of CAD, CAD window, Tool bar, drop down menu, command window, saving the drawing. Introduction of graphicscreen.</p> <p>WCS icon, UCS icon, co-ordinates, drawing limits, ellipse, polygon etc. Editing commands- copy, move, offset, fillet, chamfer, trim, lengthen, working with hatches, fills, dimensioning, text etc.</p> <p>Principles of planning of residential and public building (Load bearing and RCC framed structure) Space requirements and norms for various units of residential and public buildings Rules and Jharkhand State byelaws of building for construction e.g. building line, open spaces, FSI / FAR, headroom, minimum room dimensions.</p>
2	III rd	BUILDING MATERIALS (CIV 304)	<p>1.1 Bricks earth – its composition & selection</p> <p>1.2 Brick making – preparation of brick moulding, drying, burning in kiln</p> <p>1.3 Classification of bricks, size of traditional and modular bricks, qualities of good building bricks</p> <p>1.4 Uses of brick bats and surkhi, uses of hollow bricks.</p> <p>2.1 Type of lime</p> <p>2.2 Uses of lime</p> <p>3.1 Type of cements</p> <p>3.2 Properties of cements</p> <p>3.3 Testing of quality of cement</p> <p>4.1 Sources and classification of sand</p> <p>4.2 Bulking factor and finesses of sand</p> <p>4.3 Qualities and grading of sand for plaster and for masonry Work as per BIS specification (IS:1542,2116,383)</p> <p>5.1 Classification of rock, uses of stone, natural bed of stone, Qualities of good building stone.</p> <p>5.2 Stone quarrying- tools for blasting, process of blasting, Precautions in blasting, machines for quarrying, dressing of stone.</p> <p>5.3 Characteristics of different type of stone and their uses</p>
3	III rd	Math III (301)	<p>In Integration, Definition of integration as anti-derivative. Integration of standard function., Rules of integration (Integrals of sum, difference, scalar multiplication), Methods of Integration, Integration by trigonometrically transformation, Integration by substitution, Integration by parts, Integration of rational and irrational functions, Integration by Partial fractions.</p>

4	III rd	STRENGTH MATERIALS OF (CIV 305)	<p>Elementary knowledge of stress & strain. Concept of Homogeneous, Isotropic & orthotropic material. Principle of superposition, St. Venant principle. Assumption in the analysis of solid material and their idealized behaviors: elastic, linearly elastic, ductile, brittle, viscous & viscoelastic such as creep & stress relaxation.</p> <p>2.1 Stress & strain and their types, complimentary shear stress. Tensile test of ductile & brittle material. Feature point on the curve. Factor of safety.</p> <p>2.2 Hooke's law, poisson's ratio, Generalized Hooke's law, relation among the elastic constants for an isotropic material. Volumetric strain & their calculation for some common solid shapes.</p> <p>2.3 Thin cylindrical & spherical shell. Hoop stress & strain. Change in dimension due to rise in pressure.</p> <p>2.4 Deformations of Axially Loaded Members: Bars of varying section, tapering rod, bars of composite section, Deformation due to self-weight, Thermal stress. (Simple problems on determination of stresses and shortening). Difference between c.g & centroid, Axis of symmetry.</p> <p>Centroid of simple common Figure by 1st principle,</p>
5	III rd	SURVEYING (CIV 303)	<p>1.1 Definition of surveying and related terms</p> <p>1.2 Aims and objectives of surveying</p> <p>1.3 Primary division of surveying with their purposes</p> <p>1.4 Classification of surveying</p> <p>1.5 Principles of surveying</p> <p>1.6 Field work-essential feature and organization</p> <p>1.7 Office work-feature, plotting, scales, effect of erroneous scale</p> <p>1.8 Maintenance and adjustments of instruments</p> <p>1.9 Precision and accuracy of measurements</p> <p>1.10 Method of measuring distance, their merits and demerits.</p> <p>2.1 Instruments for measuring distance: Tape and Chains</p> <p>2.2 Equipment and accessories for chaining-description only</p> <p>2.3 Use of chain- unfolding & folding, use of arrows, reading a chain, testing and adjusting of chain.</p> <p>2.4 Ranging – purpose, signalling, direct and indirect ranging, line ranger- featuring and use, error due to incorrect ranging.</p> <p>2.5 Method of chaining- Role of leader and follower, chaining on flat ground, chaining on sloping ground- stepping method, Clinometers feature and use, slope correction. (Demonstration infield)</p> <p>2.6 Field problems- Setting perpendicular with chain & tape, chaining across different type of obstacles) Chaining around obstacle possible: Vision free but chaining obstructed both vision and chaining obstructed.</p> <p>b) Chaining around obstacle not possible: Vision free but chaining obstructed, chaining free but vision obstructed. Numerical problem on chaining across obstacles</p> <p>2.8 Error and mistakes in liner measurement-classification, sources of error and remedies.</p> <p>2.9 Correction to measured length due to-incorrect length, temperature variation, pull, sag, numerical problem applying corrections</p> <p>2.10 Precaution during chaining.</p> <p>2.11 Principle of chain surveying-well conditioned and ill conditioned triangles</p> <p>2.12 Field books-single line & double line entry, field book recording</p> <p>2.13 Selection of survey station, base line, Tie line, Check lines</p>

6	v th	Irrigation Engineering (CIV 503)	<p>Introduction Definition: Irrigation and irrigation engineering, advantages of irrigation, ill effects of over irrigation, types of irrigation project (purpose wise and administrative wise), Methods of irrigation Water Requirement of Crops: Cropping seasons and crop in Jharkhand. Definition –Crop period base period, Duty & Delta, factors affecting Duty, relation between Duty & Delta and base period, Definition –CCA , GCA, IA, intensity of irrigation time Factor, capacity factor. Problems on water requirement and capacity of canal, Assessment of Irrigation water. Hydrology: Definition of rainfall, rain gauge and rain gauge station</p>
7	v th	RCC Design (CIV 504)	<p>1. GENERAL: Reinforced cement concrete-Concept of composite material-Purpose of providing Reinforcement materials used in R.C.C and their requirement-different grades of cement and steel-Characteristic strength and grades of concrete-modular ratio, types of loads on structures as per (IS:875). Analysis, Design & Detailing: Methods of design-working stress method, limit state method –Introduction of IS 456 and SP-16. I.S. 2. INTRODUCTION TO WORKING STRESS METHOD: Assumption made in the working stress Method- Permissible stresses(IS:456-2000) Flexural Members singly reinforced rectangular section-strain and stress distribution due to bending-actual and Critical neutral axes-under/over reinforced sections-balanced sections-lever arm-moment of resistance of singly reinforced rectangular sections (simple problems).</p>
8	v th	Adv Surveying (CIV 505)	<p>Simple Circular Curves: Need and definition of a simple circular curve; Elements of simple circular curves Degree of the curve, radius of curve, tangent length, point of intersection (Apex point, tangent point length of curve, long chord, Deflection angle, Apex distance and Midordinate, Elements of Simple Circular Curves. Setting out of simple circular curve. □ By linear measurements only; - Offsets from the tangents, -Successive bisection of arcs, Offsets from the chord produced. □ By tangential angles using a theodolite Obstacles in setting circular curve. Introduction: Different cases with base accessible and inaccessible for distance and elevation measurement, curvature and refraction corrections, axis signal correction, method of single and reciprocal observations, calculation of R.L's. Aerial Survey Introductions, definition, Aerial photograph. No. of photo graphs considering overlap, scale and ground coordinate of vertical photo graph. Displacement due to ground relief. Simple numerical problems, Remote Sensing – Introduction, Electro-Magnetic Energy, Remote sensing system-Passive system, Active system, Application of remote sensing : mineral location, Land use/Land cover, Natural Hazards and Environmental engineering system.</p>
9	v th	Environmental Engineering (CIV 506)	<p>Treatment plants: Components and Layout, functions, design and drawing of sedimentation tank and filtration tanks, Disinfection. Aeration - Iron and manganese removal, De-fluoridation and demineralization -Water softening -Desalination- Membrane Systems - Recent advances. Sources of wastewater generation – Effects – Estimation of sanitary sewage flow – Estimation of storm runoff – Factors affecting, Characteristics and composition of sewage (BOD, COD, Oxygen demand and other characteristics) and their significance – Effluent standards – Legislation requirements. Standards for Disposal - Methods – dilution – Self purification of surface water bodies – Oxygen sag curve – Land disposal – Sludge characterization –</p>

			Thickening–Sludge digestion – Biogas recovery – Sludge Conditioning and Dewatering–disposal–AdvancesinSludgeTreatment and disposal.
10	vth	Advance Construction Methodology Equipment (CIV 508)	<p>&</p> <p>1. Fibres And Plastics: Types of fibres, Steel, Carbon, Glass fibres. Use of fibres as construction materials. Properties of fibres. Types of Plastics:- PVC, RPVC, HDPE, FRP, GRP etc. Coloured plastic, sheets. Use of plastic as construction Material. 2. Artificial Timber: Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber. 3. Miscellaneous materials: Properties and uses of acoustics materials, wall claddings, plaster boards, Micro, silica, artificial sand, bonding agents, adhesives etc.</p> <p>2. Advanced Concreting Methods: Prestressed Concrete, Grades of Concrete and prestressing cables for prestressed concrete. Methods of pre-tensioning and post tensioning. Equipment and accessories for pre- stressing. Precautions during prestressing of members. Under water Concreting: Underwater concreting for bridge piers and bored pile construction. Procedure and equipments required for tremie method. Properties, workability and water cement ratio of the concrete required. Ready Mix concrete Necessity and use of Ready Mix Concrete. Production and equipments for RMC. Ready Mix Concrete plant. Conveying of RMC. Transit mixers working and time of transportation. Workability and water cement ratio for RMC.</p>

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1ST INTERNAL EXAMINATION SYLLABUS (Subject wise)

DEPARTMENT OF MECHANICAL ENGINEERING

1	III rd	Math III (301)	Integration, Definition of integration as anti-derivative. Integration of standard function., Rules of integration (Integrals of sum, difference, scalar multiplication), Methods of Integration, Integration by trigonometrically transformation, Integration by substitution, Integration by parts, Integration of rational and irrational functions, Integration by Partial fractions,
2	III rd	Engineering Materials (MEC 304)	<p>11 Introduction, Classification and Application of Engineering materials, I.S specification of materials like plain carbon steel, Grey Cast iron, low alloy steels & bearing Materials.</p> <p>12 Properties of metals: -Strength, elasticity, ductility, malleability, plasticity, toughness, hardness, Harden ability, brittleness, fatigue, thermal conductivity, electrical conductivity, thermal coefficient of linear expansion.</p> <p>1.3 Imperfection in Crystals:- Basic concept of crystal, crystal pattern of unit cells, ideal crystal and crystal imperfection. Classify crystal imperfections or defects such as point defects, line defects, surface defect and volume defects. State types of dislocation.</p> <p>2.1- Ferrous Metals</p> <p>2.1.1 Characteristics and application of ferrous metals , Flow diagram for production of Iron and Steel, Classification, composition and uses of cast iron, effect of alloying elements like sulphur, silicon and phosphorous on cast iron.</p>
3	III rd	Engineering Mechanics (MEC 305)	<p>Definitions of mechanics, Engineering Mechanics, statics, dynamics, kinematics, kinetics, particles, body, rigid body, mass, weight, length, time, scalar and vector, S.I. units.</p> <p>2.1 Force & Force system: - Definition of a force, S.I. unit of a force, representation of a force by vector and by Bow's notation method, classification of force system According to line and line of action, Characteristic of force, effects of a force, principle of transmissibility.</p> <p>2.2 Resolution of a force: Definition, Method of resolution, Types of Component of a force – Perpendicular component and Non-perpendicular component.</p> <p>2.3 Moment of a force:- Definition, measurement of moment of a force, SI Unit, geometrical meaning of moment of a force, classification of moments according to direction of rotation, sign convention, law of moments, Varignon's theorem of moment and its use.</p> <p>2.4 couple, properties of couple.</p> <p>2.5 Composition of Forces: - Definition, Resultant force, methods of composition of forces, Analytical methods: Trigonometric method (law of parallelogram of forces) and Algebraic method (method of resolution) for calculation of result and for all force systems.</p> <p>3.1 Conditions of equilibrium- analytical and graphical conditions of equilibrium for concurrent, parallel force system, non-concurrent nonparallel force system, free body and free body diagram.</p> <p>Lami's Theorem—Statement and explanation, Application of Lami's theorem for solving various engineering problem having two unknowns only.</p>

5	III rd	Strength of Materials (MEC 306)	<p>1.1 Mechanical properties– Elasticity, Plasticity, Rigidity, Ductility, Malleability, Toughness, Hardness, Brittleness, Creep, Fatigue.</p> <p>1.2 Concept & Definition of Simple stresses & strains Types- tensile, compressive, Shear, single & double shear, Punching shear, Hooke's law, Young's modulus, Modulus of Rigidity, Change in length of the bar having uniform & stepped cross section stress-strain curves for ductile & brittle materials.</p> <p>1.3 Volumetric Strain, Bulk modulus, Poisson's ratio. Bi- Axial & Tri-axial stresses & strains. Relationship among E, G, & K.</p> <p>1.4 Stresses & strains in bar so uniformly varying section subjected to axial load attend only, Composite sections having same length.</p> <p>1.5 Temperatures stresses & strains of uniform & composite Sections.</p> <p>1.6 Buckling of long columns 'Euler's theory, Rankin's theory – equivalent length of the column for the cases of Both ends hinged, one end fixed and other free, both ends fixed, One end fixed and other end hinged. (simple numerical only)</p> <p>Bending Moment & Shear Force</p> <p>2.1 Concept & definition of Shear force & bending moment. Relation between rate of loading, shear force & bending moment.</p>
6	IV th	Power Engineering (MEC 503)	<p>1.1 Power Cycles - Carnot, Otto, Diesel, representation on P-V, T-S diagram. (air standard efficiency, simple numerical)</p> <p>1.2 Explain classification of I.C. engines, Identify various I.C. engine parts & their functions</p> <p>1.3 Engine terminology:- Stroke, bore, piston speed, mean effective Pressure, compression & cut-off ratio etc.</p> <p>1.4 Two stroke and four stroke Engines Construction and working, comparison, valve timing Diagram, Turning moment diagram</p> <p>1.5 Brief description of I.C. Engine combustion (SI & CI),</p>
7	V th	Advance Manufacturing Processes (MEC 504)	<p>Introduction Unconventional machining process – Need, Classification, Brief Overview of all techniques (Merits and demerits).</p> <p>1.2 Mechanical Energy Based Processes Abrasive Jet Machining (AJM), Water Jet Machining (WJM), Ultrasonic Machining (USM) – Working principles, Equipment used, Process parameters, Applications.</p> <p>1.3 Electrical Energy Based Process Electric Discharge Machining (EDM) – Working Principles, Equipment, Process parameters, Electrode/ Tool, Power Circuits. Tool wear, Dielectric, Flushing, Wire cut EDM and Applications.</p>
8	VI th	Metrology & Quality Control (MEC 505)	<p>1.1 Metrology Basics Definition of metrology, Categories of metrology, Scientific metrology, Industrial metrology, Legal metrology, Need of inspection, Revision of (no questions be set) - Precision, Accuracy, Sensitivity, Readability, Calibration, Traceability, Reproducibility, Sources of errors, Factors affecting accuracy, Selection of instrument, Precautions while using an instruments for getting higher precision and accuracy.</p> <p>1.2 Limits, Fits, Tolerances and Gauges Concept of Limits, Fits, And Tolerances, Selective Assembly, Interchangeability, Hole And Shaft Basis System, Taylor's Principle</p>

9	v th	onics Engineering (MEC 506)	Semiconductor: Intrinsic, extrinsic, energy band concept, P N Junction, potential distribution across PN junction and associated terminologies. Semiconductor Diodes: Introduction, Physical operation of p-n junction diodes, Characteristics of p-n junction diodes, Zener diode, Special types of diodes. Rectifier circuits (half-wave, full-wave, bridge and peak rectifiers), Diode clipper and clamper circuits, Light emitting diodes. Bipolar Junction Transistors
10	v th	obile Engineering (MEC 508)	<p>1.1 Introduction of Engine and its classification. Construction and working of 2 stroke and 4 stroke (petrol and diesel) & comparison.</p> <p>1.2 Classification of automobile vehicles, types of automobile vehicles. □ Two and four wheeler chassis layout of an automobile vehicle, automobile body types □ Layout of vehicles such as front engine rear wheel drive, front engine front wheel drive, rear engine rear wheel drive, four wheels drive etc. their advantages, comparisons. □ Aero dynamic body shapes & advantages. □ Automobile market in India and company collaboration</p>

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1ST INTERNAL EXAMINATION SYLLABUS (Subject wise)

DEPARTMENT OF ELECTRICAL ENGINEERING

Sl.No.	SEMESTER	SUBJECT AND CODE	SYLLABUS (PORTION)
1	III rd	Math III (301)	Integration, Definition of integration as anti-derivative. Integration of standard function., Rules of integration (Integrals of sum, difference, scalar multiplication), Methods of Integration, Integration by trigonometrically transformation, Integration by substitution, Integration by parts, Integration of rational and irrational functions, Integration by Partial fractions.
2	III rd	Electrical engineering (ELE 303)	Introduction to electrical circuits: Electric field, electric current, potential and potential difference, electric power, basic circuit components, ohm's law., Sources and its types, Ideal and practical sources, Source Conversion, independent and dependent sources, Energy Stored in Inductor and Capacitor, series, parallel and series and parallel circuit, DC Networks & Theorems: Laws and Theorems applicable to DC networks (KCL & KVL, Node voltage & Mesh current analysis, Star-Delta and Delta-Star conversion, Superposition theorem, Thevenin & Norton theorem & Maximum power Transfer theorem), Simple problems. AC Fundamentals, Single-Phase AC Circuits: Single-phase EMF Generation, Average and Effective value of periodic ac signals, Peak factor & Form factor, Phasor and Complex representation of sinusoids, Power factor, complex power, Three-Phase AC Circuits: Comparison between single-phase and three-phase systems, three phase EMF Generation, Line and Phase quantities in star and delta networks
3	III rd	Measurement (ELE 304)	Fundamentals of Measurement, Electrical signals and errors, their types, Desirable qualities of measuring instruments, Various effects of electricity employed in measuring instruments., Classification of measuring Instruments, Measurement of Current and Voltage, Construction and principle of PMMC, MI, Dynamometer & induction type instruments, Hot wire & electrostatic instruments, Voltmeter, Ammeter, Multi-meter : analog and digital types, Range Extension of Ammeter and Voltmeter., Instrument transformers (CT & PT), tongue tester, their use in extension of ranges, Bridges, Wheatstone bridge, Kelvin Bridge, resistances measurements.
4	III rd	Basic Engineering(C&M) (ELE 305)	Basic Civil Engineering Materials: Basic Knowledge of Civil Engineering Materials, like sand, Cement, Stone, Bricks, Tiles, Terra, Coat, Lime, Mortar Concrete, Paints & Varnishes. Type & Structure of Timber tree, Defects in timber, characteristics of good timber, seasoning of timber. Surveying & Levelling: Surveying Instruments, Engine, classification of engine, 4 stroke, 2 stroke engine, and Boiler types of boiler.

5	III rd	<p align="center">Electronics Engineering (ELE 306)</p>	<p>Semiconductor Diode: Semiconductor Theory, Review of Semiconductor theory (No Question to be set in theory paper), Intrinsic semiconductor, Extrinsic semiconductor, doping, dopant, trivalent & pentavalent impurities, P-Type and N-Type Semiconductor, Semiconductor Diode, PN Junction, Junction theory: Barrier voltage, Depletion region, Junction capacitance, Forward and reverse biased junction., V-I characteristics of P-N Junction diode, Circuit diagram for characteristics (Forward & Reverse), Specification of diode, Forward Voltage Drop, Reverse Saturation Current, Maximum Forward Current, Power Dissipation, Ideal Diode Model, Zener Diode, Construction & Symbol, Circuit diagram for characteristics (Forward & Reverse), Specification of zener diode: zener voltage (V_Z), Maximum Power dissipation (P_{D max}), Break over current, zener resistance, Special Purpose diodes: Schott key diode, Point-contact diode, Varacter Diode</p>
6	V th	<p align="center">Power System II (ELE 503)</p>	<p>Transients in Power System and protection against them. Elements of Power System dynamics, Computer methods in Power System Analyses, load Flow Studies. Power transmission systems – Electrical characteristics of overhead lines and cables, Sag & Tension, Proximity, Corona, Skin effect, Bundled conductors, Transposition of conductors, Per unit representation of system quantities. Steady state performance of transmission network – ABCD parameters of short, medium and long lines. Study of Protective Devices- Isolators, disconnecting switch, lightning arrester, Horn gap, CT, PT, Protective relays and their applications to power apparatus and systems. Principles of circuit breakers – different types, oil circuit breakers, air circuit breakers, vacuum circuit breakers, SF₆ – circuit breakers, their uses and comparison.</p>
7	V th	<p align="center">Electrical Machines II (ELE 504)</p>	<p>Three phase induction motor, Construction of three phase induction motor, Production of rotating magnetic field, Principle of working/operation, Concept of slip, Equation of rotor induced emf, current, frequency, reactance, and impedance under steady and running condition, Torque equation of three phase induction motor, Starting and running torque of squirrel cage and slip ring induction motor, Condition for maximum and starting torque, Torque slip characteristics of three phase induction motor, Effect of change in rotor circuit resistance on torque-slip</p>
8	V th	<p align="center">Traction (ELE 505)</p>	<p>Traction Systems and Latest Trends, Explain the present scenario of Indian Railways – High speed traction, Metro, Detail the latest trends in traction- Metro, monorail, Magnetic levitation Vehicle, Explain types of traction systems and their significance – Steam, diesel, diesel-electric, Battery and electric traction systems, Explain the general arrangement of different types of Electric traction systems and their significance – General arrangement of D.C., A.C. single-phase, 3phase, Composite systems, Choice of traction system – Diesel - Electric or Electric, Mechanics of Train Movement. Draw the speed time curve related to different traction system- Analysis of speed time curves for main line, suburban and urban services, Solve numerical based on speed time curve - Simplified speed time curves , Relationship between principal quantities in speed time curves, Calculate specific energy consumption- Requirement of tractive effort, State the factors affecting Specific energy consumption - Specific energy consumption and factors affecting it, Traction Motors and Their Control State the desirable</p>

			features of traction motors, Explain Significance of D.C. series motor over D.C. Shunt motor - Significance of D.C. series motor as traction motor, Explain working of various A.C. motors as traction motors - A.C. Traction motors – single phase, Three phase, Linear Induction Motor, Comparison between different traction motors, Apply various control methods applied to traction motors - Series – parallel control, Open circuit, Shunt and bridge transition, Pulse Width Modulation control of
9	v th	Illumination Engineering (ELE 506)	Fundamentals of Illumination, Illumination Terminology, Laws of Illumination, featuring of good Illumination scheme, Advantages of good Illumination scheme, Measurement of level of Illumination (simple illumination), Lamps & Lighting Accessories, Types of lamps: ARC lamps, HPMV lamps, Sodium Lamps, CFL Lamps, Metal halides, LED lamps, Neon Sign Tubes. Neon Lamps., Halogen Lamps, Construction, working principle, advantages, disadvantages & Application of incandescent & Fluorescent Lighting accessories. (All fittings, switches, encloses), Illumination Auditing, Illumination for Outdoor Applications, Factory Lighting, Street Lighting (Latest Technology), Flood Lighting, Railway Lighting, Lighting for Advertisement/Hoardings, Sports Lighting
10	v th	Maintenance of electrical machines (ELE 507)	Safety and Accidents, Definition of terminology used in safety: Safety, hazard, accident, major accident hazard, responsibility, authority, accountability, monitoring. I.E. Act & statutory regulations for safety of persons and equipment working with electrical installation, causes of electrical accidents, preventive measures, electrical shocks, precaution to be taken against electrical shock, treatment for electrical shock. Causes of electrical fires, precaution to be taken to avoid fire, action to be taken in case of fire, firefighting equipment's. General Introduction, Concept of routine, preventive and breakdown maintenance, Advantages of preventive maintenance, procedure for developing preventive maintenance schedule, factors affecting preventive maintenance schedule. Introduction to total productive maintenance. Maintenance of Rotating machines, Routine, preventive and breakdown maintenance of 1 & 3 phase induction motors, Synchronous machines and D.C machines

BITT POLYTECHNIC

RANCHI-835217

EXAMINATION DEPARTMENT

INSTRUCTIONS TO THE CANDIDATES FOR FIRST INTERNAL EXAMINATION

Following procedure and instructions should be strictly followed during online Internal Examination.

1. Students are advised to kindly take print-out of prescribed Answer sheet page 1 - 2 Day prior the examination.
2. Students are advised to fill the first page of Answer sheet carefully with correct information.
3. 3rd SEM and 5th SEM students are advice to write their Registration number instead of their Roll number provided in answer sheet.
4. The question paper of all subjects of all branches will be sent in PDF file in the Respective class Digital WhatsApp group on 11/12/2021 & 13/12/2021 as per Examination Scheduled.
5. The question paper of all subject branches wise will be sent by respective department.
6. Students are advised to write the answer on prescribed answer sheet on Own handwriting as per instruction given on question paper.
7. After complete the examination you must upload the answer sheet in PDF Format on given Google Link.
8. Google link for submitting answer sheet provided after starting examination by the department wise on respective digital WhatsApp group.
9. Students are advised to submit the Answer sheet subject wise online on provided Google link till 2:00 pm- 5:00pm
10. Online Answer Sheet Submission link will be open on 11/12/2021 (2:00 pm to 5:00 pm) and on 13/12/2021 (1:00 pm- 04:00 pm)
11. Under any difficulty facing during online submission of answer sheet Students may also submit the Answer sheet subject wise in prescribed answer sheet on email id- bittpolytechnic@gmail.com
12. Answer sheet must be submitted in prescribed Answer sheet page in PDF format in provided link.
13. Students are advised to arrange the prescribed page as shown below for answering the question 1 - 2 Day prior the examination.

Process for NOC from Principal (Students having dues only)

1. The students are strictly informed to clear all their dues on or before 10.12.2021 for getting allowed in the 1st internal exam. No student will be allowed to appear in the Internal Exam with dues unless he/she had NOC from Principal.
2. The Students are required to submit an application in the form of Email at bittpnoc@gmail.com as per attached format marked as annexure-1 before 09.12.2021 (In case unable to submit the dues)
3. The submitted application by the student in the form of email is evaluated on the ground of the previous record of the student regarding his/her track record for submission of fee.
4. The track record is the record of the student that the college is having starting from the date of admission till the last date of fee submission as on date.
5. The students are also evaluated on the basis of the various applications he/she had submitted regarding fee submission/clearing dues at the time of submission of examination form, getting the exam result and on other occasions.
6. Providing NOC to the student is the sole discretion of the college the student is advised not to be reactive in case of rejection of application.
7. The students will be provided (whose dues are not clear) an email as NOC/ALLOWED for Internal Exam before 11.12.2021.
8. Appearing in the Internal Exam is mandatory non appearance will be marked as absent in the Internal.

ANNEXURE -1

To
The Principal
BITT Polytechnic
Ranchi (Jharkhand) 835217
Date:

Sub: - Regarding NOC for appearing in the 1st Internal Exam with dues.

Respected Sir,

This is to request you to that I am _____ of session _____ ,
request to kindly provide me the NOC for appearing in the 1st internal Exam
of..... Semester. That I am unable to submit the dues pertaining to me due the
reason of I would like to mention that I will submit all the dues till
20.12.2021.

Kindly consider My Application.

Yours Sincerely,

Name:

Father's Name:

Branch:

Session:

Registration Number:

Roll Number:

Mobile Number:

WhatsApp Number:

Email id:

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1st INTERNAL EXAM TIME TABLE					
DEPARTMENT OF DIPLOMA IN COMPUTER SCIENCE ENGINEERING					
DATE	BRANCH	SEMESTER	SUBJECT/PAPER	PAPER CODE	TIME
11/12/2021	CSE	3RD	Math III	301	10:00 TO 11:00 AM
		5TH	Microprocessors & Microcontrollers	CSE 503	
		3RD	Electronic Devices and circuits	ECE 303	12:00 TO 01:00 PM
		5TH	Java Programming	CSE 504	
		3RD	Electrical Technology	ECE 304	02:00 TO 03:00 PM
		5TH	Computer Graphics	CSE 505	
13/12/2021	CSE	3RD	Object Oriented Programming	CSE 303	10:00 TO 11:00 AM
		5TH	Mobile Computing	CSE 506	
		3RD	Web Technology	CSE 304	12:00 TO 01:00 PM
		5TH	e- Commerce	CSE 511	

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1st INTERNAL EXAM TIME TABLE					
DEPARTMENT OF DIPLOMA IN ELECTRONICS & COMMUNICATION ENGINEERING					
DATE	BRANCH	SEMESTER	SUBJECT/PAPER	PAPER CODE	TIME
11/12/2021	ECE	3RD	Math III	3RD	10:00 TO 11:00 AM
		5TH	Instrumentation System	5TH	
		3RD	Electronic Devices and circuits	3RD	12:00 TO 01:00 PM
		5TH	Power Electronics	5TH	
		3RD	Electrical Technology	3RD	02:00 TO 03:00 PM
		5TH	Programmable Logic Controller	5TH	
13/12/2021	ECE	3RD	Elect & Electronic Measurement	3RD	10:00 TO 11:00 AM
		5TH	Electronic Waste	5TH	
		3RD	Electromagnetic field Theory	3RD	12:00 TO 01:00 PM
		5TH	Linear Integrated Circuits	5TH	

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1st INTERNAL EXAM TIME TABLE					
DEPARTMENT OF DIPLOMA IN ELECTRICAL ENGINEERING					
DATE	BRANCH	SEMESTER	SUBJECT/PAPER	PAPER CODE	TIME
11/12/2021	EE	3RD	Math III	301	10:00 TO 11:00 AM
		5TH	Power System II	ELE 503	
		3RD	Electrical Engineering	ELE 303	12:00 TO 01:00 PM
		5TH	Electrical Machines II	ELE 504	
		3RD	Measurement	ELE 304	02:00 TO 03:00 PM
		5TH	Traction	ELE 505	
13/12/2021		3RD	Basic Engineering(C&M)	ELE 305	10:00 TO 11:00 AM
		5TH	Illumination Engineering	ELE 506	
		3RD	Electronics Engineering	ELE 306	12:00 TO 01:00 PM
		5TH	Maintenance of Electrical Machines	ELE 507	

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1st INTERNAL EXAM TIME TABLE					
DEPARTMENT OF DIPLOMA IN CIVIL ENGINEERING					
DATE	BRANCH	SEMESTER	SUBJECT/PAPER	PAPER CODE	TIME
11/12/2021	CE	3RD	Math III	301	10:00 TO 11:00 AM
		5TH	Irrigation Engineering	CIV 503	
		3RD	Surveying	CIV 303	12:00 TO 01:00 PM
		5TH	RCC Design	CIV 504	
		3RD	Building Material	CIV 304	02:00 TO 03:00 PM
		5TH	Adv Surveying	CIV 505	
13/12/2021		3RD	Strength of Material	CIV 305	10:00 TO 11:00 AM
		5TH	Environmental Engineering	CIV 506	
		5TH	Adv Construction Methodology & Equipments	CIV 508	12:00 TO 01:00 PM
		3RD	Math III	301	

BITT POLYTECHNIC

GETLATU RANCHI-835217

BITT DIGITAL 1st INTERNAL EXAM TIME TABLE					
DEPARTMENT OF DIPLOMA IN MECHANICAL ENGINEERING					
DATE	BRANCH	SEMESTER	SUBJECT/PAPER	PAPER CODE	TIME
11/12/2021	ME	3RD	Math III	301	10:00 TO 11:00 AM
		5TH	Power Engineering	MEC 503	
		3RD	Engineering Materials	MEC 304	12:00 TO 01:00 PM
		5TH	Adv. Manufacturing Technology	MEC 504	
		3RD	Engineering Mechanics	MEC 305	02:00 TO 03:00 PM
		5TH	Metrology & Quality Control	MEC 505	
13/12/2021	ME	3RD	Strength of Materials	MEC 306	10:00 TO 11:00 AM
		5TH	Electronics Engineering	MEC 506	
		5TH	Automobile Engineering	MEC 508	12:00 TO 01:00 PM
		3RD	Math III	301	


Principal
BITT Polytechnic
Getlatu, Ranchi

Principal