

VSB ENGINEERING COLLEGE, KARUR

DEPARTMENT OF ELECTRICAL AND ELECTRONICS

ENGINEERING

III YEAR/V SEMESTER 2 MARK AND 16 MARK QUESTION BANK

S.No	SUBJECT CODE	SUBJECT NAME	PAGE NO
1	EE6501	Power System Analysis	2
2	EE6504	Electrical Machines II	4
3	ME6701	Power Plant Engineering	6
4	IC6501	Control Systems	8
5	EE6503	Power Electronics	12
6	EE6502	Microprocessors and Microcontrollers	13

EE6501-POWER SYSTEM ANALYSIS ASSIGNMENT QUESTIONS

Sl. No.	Reg. No.	Student Name	QUESTIONS
1.	922516105001	AARTHI D	Elucidate Fast decoupled Load flow
2.	922516105002	AJAY K	clarify three-phase load flow
3.	922516105004	BALAKRISHNAN R	Discuss about DC power flow
4.	922516105005	BHARATHKUMAR S	Single phase and three phase -AC-DC load flow
5.	922516105006	DHANALAKSHMI S	Extension to Multiple and Multiterminal DC systems
6.	922516105008	DIVAKAR V G	clarify about Sparse matrix
7.	922516105009	GOWTHAMKUMAR R	Give explanation about bad data analysis
8.	922516105011	JAYARAMAN P	Discuss various types of power generation
9.	922516105013	KALAIYARASU A	Make clear the types of Transformer used power system
10.	922516105014	KAMALESH P	Explain structure and formation of Hessian matrix
11.	922516105015	KANNAN G	Explain Harmonic Power Flow
12.	922516105016	KAVIN A	Enlighten the Power Flow Tracing
13.	922516105017	KAVIYARASU R	Discuss Network Congestions
14.	922516105018	KIRUPAVATHI J	Explain Available Transfer Capability
15.	922516105019	LOGESHKANNA K	Illuminate the steps for Contingency Analysis
16.	922516105020	MALATHI T	Explain Indian Electricity Grid Code.
17.	922516105021	MANOJ KUMAR S	Enlighten about Linear programming methods
18.	922516105022	MARIMUTHU R	Explain Security levels of system
19.	922516105023	MEENA M	Explain steps to design circuit breakers
20.	922516105024	MONICA K	Give details about relay and types of relay
21.	922516105025	NIJANDHAN R	Discuss about Zone of protection in power system.
22.	922516105026	NIRANJAN KUMAR B M	Explain Network Observability And Pseudo Measurements,

23.	922516105027	NITHEESHKUMAR K	Elucidate Fast decoupled Load flow
24.	922516105028	NITHISH KUMAR G	clarify three-phase load flow
25.	922516105029	PAVITHRA M	Discuss about DC power flow
26.	922516105030	PERIASAMY R	Single phase and three phase -AC-DC load flow
27.	922516105031	PRASANNAKUMAR K J V	Extension to Multiple and Multiterminal DC systems
28.	922516105032	PRIYA V	clarify about Sparse matrix
29.	922516105033	PRUTHIVI RAJ S	Give explanation about bad data analysis
30.	922516105034	REENADEVI M	Discuss power system state estimation
31.	922516105035	SANJAY R	Discuss various types of power generation
32.	922516105037	SANTHOSHKUMAR R	Make clear the types of Transformer used power system
33.	922516105039	SATHYA S	Explain structure and formation of Hessian matrix
34.	922516105040	SOWMIYA S	Explain Harmonic Power Flow
35.	922516105041	SUDHAKAR R	Enlighten the Power Flow Tracing
36.	922516105042	SUNDARA PANDIAN S	Discuss Network Congestions
37.	922516105043	SUREKHA S	Discuss Network Congestions
38.	922516105044	SURESH S	Explain Available Transfer Capability
39.	922516105045	SURYA T	Illuminate the steps for Contingency Analysis
40.	922516105046	SWATHI R	Explain Indian Electricity Grid Code.
41.	922516105047	THIVYAA R	Enlighten about Linear programming methods
42.	922516105048	VAISHALI P	Explain Security levels of system
43.	922516105049	VASANTHKUMARAN J	Explain steps to design circuit breakers
44.	922516105050	VIJAYA KUMAR A	Give details about relay and types of relay
45.	922516105052	YUVAN KUMAR T	Single phase and three phase -AC-DC load flow
46.	922516105301	P.KARTHICK	Extension to Multiple and Multiterminal DC systems

EE6405 ELECTRICAL MACHINES II- ASSIGNMENT QUESTIONS

Sl. No.	Reg. No.	Student Name	Questions
1	922516105001	AARTHI D	Explain any one application of synchronous alternator
2	922516105002	AJAY K	Write the industrial application of synchronous alternator.
3	922516105004	BALAKRISHNAN R	How can you obtain the synchronous speed in synchronous alternator?
4	922516105005	BHARATHKUMAR S	How can you control power factor in synchronous alternator?
5	922516105006	DHANALAKSHMI S	How the three dark lamp method using in industries?
6	922516105008	DIVAKAR V G	Explain the concept of synchronous scope
7	922516105009	GOWTHAMKUMAR R	How can you use the synchronous motor in industries?
8	922516105010	HARIBABU B	Write the industrial application of synchronous motor
9	922516105011	JAYARAMAN P	Write the industrial application of induction motor
10	922516105013	KALAIYARASU A	Write how the induction motor is used in fans
11	922516105014	KAMALESH P	Write how the induction motor is used in grinding application
12	922516105015	KANNAN G	Write the industrial applications of 3 phase induction motor
13	922516105016	KAVIN A	Write the various starters using for starting an induction motor
14	922516105017	KAVIYARASU R	Write about servo motor
15	922516105018	KIRUPAVATHI J	Explain how the stepper motor is used in robotics
16	922516105019	LOGESHKANNA K	Compare normal fan super fan
17	922516105020	MALATHI T	Write the Design process of Super motor
18	922516105021	MANOJ KUMAR S	Explain the fan speed regulation mechanism by using power electronics regulators
19	922516105022	MARIMUTHU R	Explain the fan speed regulation mechanism by using resistive regulators
20	922516105023	MEENA M	Explain about the AC motor which is using in the locomotive application.
21	922516105024	MONICA K	Explain about the synchronous alternator based power factor control.
22	922516105025	NIJANDHAN R	Write the effect of power factor on inductive, capacitive and resistive load
23	922516105026	NIRANJAN KUMAR B M	Explain the importance of power factor maintenance in industries
24	922516105027	NITHEESHKUMAR K	Explain any one application of synchronous alternator

25	922516105028	NITHISH KUMAR G	Write the industrial application of synchronous alternator.
26	922516105029	PAVITHRA M	How can you obtain the synchronous speed in synchronous alternator?
27	922516105030	PERIASAMY R	How can you control power factor in synchronous alternator?
28	922516105031	PRASANNAKUMAR K J V	How the three dark lamp method using in industries?
29	922516105032	PRIYA V	Explain the concept of synchronous scope
30	922516105033	PRUTHIVI RAJ S	How can you use the synchronous motor in industries?
31	922516105034	REENADEVI M	Write the industrial application of synchronous motor?
32	922516105035	SANJAY R	Write the industrial application of induction motor
33	922516105037	SANTHOSHKUMAR R	Write how the induction motor is used in fans
34	922516105039	SATHYA S	Write how the induction motor is used in grinding application
35	922516105040	SOWMIYA S	Write the industrial applications of 3 phase induction motor
36	922516105041	SUDHAKAR R	Write the various starters using for starting an induction motor
37	922516105042	SUNDARA PANDIAN S	Write about servo motor
38	922516105043	SUREKHA S	Explain how the stepper motor is used in robotics
39	922516105044	SURESH S	Compare normal fan super fan
40	922516105045	SURYA T	Write the Design process of Super motor
41	922516105046	SWATHI R	Explain the fan speed regulation mechanism by using power electronics regulators
42	922516105047	THIVYAA R	Explain the fan speed regulation mechanism by using resistive regulators
43	922516105048	VAISHALI P	Explain about the AC motor which is using in the locomotive application.
44	922516105049	VASANTHKUMARAN J	Explain about the synchronous alternator based power factor control.
45	922516105050	VIJAYA KUMAR A	Write the effect of power factor on inductive, capacitive and resistive load
46	922516105051	YOGESHWARAN M	Explain the importance of power factor maintenance in industries
47	922516105052	YUVAN KUMAR T	Write the various starters using for starting an induction motor
48		P.KARTHICK	Write the industrial application of synchronous motor

ME 6701 Power Plant Engineering

Sl. No.	Reg. No.	Name of the Student	Assignment Questions
1	922516105001	AARTHI D	Explain Babcock and Wilcox boiler.
2	922516105002	AJAY K	Explain Cochran boiler.
3	922516105004	BALAKRISHNAN R	Explain Cornish boiler.
4	922516105005	BHARATHKUMAR S	Discuss Locomotive boiler
5	922516105006	DHANALAKSHMI S	What are the types of turbines and explain any two.
6	922516105008	DIVAKAR V G	Explain Kaplan turbine.
7	922516105009	GOWTHAMKUMAR R	Discuss the safety measures for thermal power plant.
8	922516105011	JAYARAMAN P	Explain the Methods of attachment of blades to turbine rotor.
9	922516105013	KALAIYARASU A	Compare Nuclear Plants with Thermal Plants.
10	922516105014	KAMALESH P	Write a note on Moderating and Reflecting Materials
11	922516105015	KANNAN G	Write short notes on Control Rod Materials
12	922516105016	KAVIN A	Explain about Shielding Materials.
13	922516105017	KAVIYARASU R	Discuss about the Radioactive Waste Disposal System
14	922516105018	KIRUPAVATHI J	Illustrate about the Effects of Nuclear Radiation
15	922516105019	LOGESHKANNA K	Explain the principle operation and working of biomass energy.
16	922516105020	MALATHI T	Explain the principle operation and working of hybrid renewable energy systems.
17	922516105021	MANOJ KUMAR S	Write a note on selection of location of power plants.
18	922516105022	MARIMUTHU R	Explain the Impacts of renewable energy generation on environment
19	922516105023	MEENA M	Explain the working of Hydrogen Energy systems
20	922516105024	MONICA K	Write a note on deaerator in steam power plant.
21	922516105025	NIJANDHAN R	Explain bulb turbine with neat diagram.
22	922516105026	NIRANJAN KUMAR B M	What are the different types of energy storage? give notes on compressed air energy storage.
23	922516105027	NITHEESHKUMAR K	Give notes on Pulverized coal firing system.
24	922516105028	NITHISH KUMAR G	Explain coal gasifiers in detail.
25	922516105029	PAVITHRA M	With a neat schematic illustrate steam pressure and temperature control.

Sl. No.	Reg. No.	Name of the Student	Assignment Questions
26	922516105030	PERIASAMY R	Derive efficiencies in steam power plant.
27	922516105031	PRASANNAKUMAR K J V	Demonstrate the condensate and feed water system.
28	922516105032	PRIYA V	Explain the losses and efficiency in turbines.
29	922516105033	PRUTHIVI RAJ S	With a neat diagram explain the circulating – water system.
30	922516105034	REENADEVI M	Write a note on Darrieus machines in wind turbine.
31	922516105035	SANJAY R	Give short notes on types of Steam nozzles.
32	922516105037	SANTHOSHKUMAR R	Explain the Methods of attachment of blades to turbine rotor.
33	922516105039	SATHYA S	Derive the Power requirement by draught fans
34	922516105040	SOWMIYA S	Write about the Corrosion in boilers and its prevention methods.
35	922516105041	SUDHAKAR R	Estimate the height of chimney and the Maximum discharge condition
36	922516105042	SUNDARA PANDIAN S	With a neat sketch explain the Turbojet Engine
37	922516105043	SUREKHA S	Explain the Performance and operating characteristics of power plant
38	922516105044	SURESH S	Explain Hot lime soda process in feed water treatment.
39	922516105045	SURYA T	Explain Zeolite ion exchange process in feed water treatment
40	922516105046	SWATHI R	Detail about the Mechanical dust collector
41	922516105047	THIVYAA R	Enumerate combined steam and gas turbine plant
42	922516105048	VAISHALI P	Explain Open and closed cycle turbine plants with the accessories.
43	922516105049	VASANTHKUMARAN J	What are the different types of cooling towers? Explain with a neat sketch.
44	922516105050	VIJAYA KUMAR A	Differentiate between forced draught and induced draught system in cooling tower.
45	922516105052	YUVAN KUMAR T	Explain the difficult types of coal handling process.
46	922516105301	KARTHICK.P	Discuss Oil heaters in gas turbine power plant

IC6501 CONTROL SYSTEMS ASSIGNMENT QUESTIONS

Sl. No.	Student Name	Questions
1	Aarathi d	Explain with examples open loop and closed loop control systems. List merits and demerits of both.
2	Ajay k	For what purpose feedback is used in control system? Mention the effects of feedback on (i) stability (ii) overall gain (iii) disturbance and (iv) sensitivity of control systems.
3	Balakrishnan r	<p>For the system shown in Figure.1 write mechanical network and obtain its mathematical model.</p>
4	Bharathkumar s	<p>For a unity feedback system, the open-loop transfer function is given by $G(S) = K / S(S+2)(S^2+6S+25)$</p> <ol style="list-style-type: none"> 1. Sketch the root locus for $0 \leq K \leq \infty$. 2. At what value of K the system becomes unstable. 3. At this point of instability, determine the frequency of oscillation of the system.
5	Dhanalakshmi s	<p>For a unity feedback system, the open-loop transfer function is given by $G(S) = K / S(S+2)(S^2+6S+25)$</p> <ol style="list-style-type: none"> 1. Sketch the root locus for $0 \leq K \leq \infty$. 2. At what value of K the system becomes unstable. 3. At this point of instability, determine the frequency of oscillation of the system.
6	Divakar v g	State the different rules for the construction of root locus.
7	Gowthamkumar r	State the different rules for the construction of root locus.
8	Jayaraman p	<p>A unity feedback control system has an open-loop transfer function</p> $G(S) = K / S(S^2+4S+13)$ <p>Sketch the root locus plot of the system by determining the following:</p> <ol style="list-style-type: none"> (i) Centroid, number and angle of asymptotes. (ii) Angle of departure of root loci from the poles. (iii) Breakaway point if any.

		v) The value of K and the frequency at which the root loci cross the $j\omega$ -axis.
9	Kalaiyarasu a	<p>A unity feedback control system has an open-loop transfer function</p> $G(S) = K / S(S^2+4S+13)$ <p>Sketch the root locus plot of the system by determining the following: Centroid, number and angle of asymptotes.</p> <p>v) Angle of departure of root loci from the poles.</p> <p>(vi) Breakaway point if any. The value of K and the frequency at which the root loci cross the $j\omega$-axis.</p>
10	Kamalesh p	<p>Sketch the root locus plot of a unity feedback system with an open-loop transfer function</p> $G(s) = K / S(S+2)(S+4)$
11	Kannan g	<p>Sketch the root locus plot of a unity feedback system with an open-loop transfer function $G(s) = K / S(S+2)(S+4)$</p>
12	Kavin a	<p>Draw the root locus of unity feedback system with open loop transfer function given by $G(S) H(S) = K (S^2+s+4) / s(s+4)(s+10)$</p>
13	Kaviyarasu r	<p>Draw the root locus of unity feedback system with open loop transfer function given by</p> $G(S) H(S) = K (S^2+s+4) / s(s+4)(s+10)$
14	Kirupavathi j	Obtain the transfer function of field controlled servo motors.
15	Logeshkanna k	Obtain the transfer function of an armature controlled dc servo motor.
16	Malathi t	Define the transfer function. Explain Mason's gain formula for determining the transfer function from signal flow graphs.
17	Manoj kumar s	<p>Illustrate how to perform the following in connection with block diagram reduction techniques:.</p> <p>(i) moving a summing point ahead of a block and behind a block.</p> <p>(ii) moving a take off point ahead of a block and behind a block.</p> <p>(iii) Transforming a non unity feedback to a unity feedback.</p>
18	Marimuthu r	<p>Illustrate how to perform the following in connection with block diagram reduction techniques:.</p> <p>(i) moving a summing point ahead of a block and behind a block.</p> <p>(ii) moving a take off point ahead of a block and behind a block.</p> <p>(iii) Transforming a non unity feedback to a unity feedback.</p>
19	Meena m	Explain about Under damped system.
20	Monica k	Explain about Under damped system.
21	Nijandhan r	Explain about Un damped system.
22	Niranjan kumar b m	Explain about Un damped system.

23	Nitheeshkumar k	Explain about Critically damped system.
24	Nithish kumar g	Explain about Critically damped system.
25	Pavithra m	Explain about Over damped system.
26	Periasamy r	Explain about Over damped system.
27	Prasannakumar k j v	Explain Routh-Hurwitz criterion in stability of a control system. What are the disadvantages of RH criterion on stability of control system?
28	Priya v	Explain Routh-Hurwitz criterion in stability of a control system. What are the disadvantages of RH criterion on stability of control system?
29	Pruthivi raj s	The unity feedback system characterized by open loop transfer function $G(S) = K / [S(S+10)]$. Determine the gain constant K such that the damping ratio will be 0.5 and find the time domain specifications for a unit step input.
30	Reenadevi m	The unity feedback system characterized by open loop transfer function $G(S) = K / [S(S+10)]$. Determine the gain constant K such that the damping ratio will be 0.5 and find the time domain specifications for a unit step input.
31	Sanjay r	The open loop transfer function of a servo system with unity feedback is $G(S) = 10 / [S(0.1 S + 1)]$. Evaluate the static error constants and steady state error of the system when subjected to an input
32	Santhoshkumar r	Plot the polar plot for the transfer function given $G(S) = 1 / S(S+1)$
33	Sathya s	Plot the polar plot for the transfer function given $G(S) = 1 / S(S+1)$
34	Sowmiya s	Write the industrial applications of 3 phase induction motor
35	Sudhakar r	State the Nyquist stability criterion. Using Nyquist stability criterion verify stability of the system described by $G(S)H(S) = 5 / S(1-S)$
36	Sundara pandian s	Draw polar plot of $G(S)H(S) = 100 / (S+2)(S+4)(S+8)$
37	Surekha s	Draw polar plot of $G(S)H(S) = 100 / (S+2)(S+4)(S+8)$
38	Suresh s	Compare normal fan super fan
39	Surya t	Explain the application of Cauch's theorem (principle of argument) used in Nyquist stability criterion
40	Swathi r	Explain the application of Cauch's theorem (principle of argument) used in Nyquist stability

		criterion
41	Thivyaa r	State the properties of state transition matrix and derive them.
42	Vaishali p	State the properties of state transition matrix and derive them.
43	Vasanthkumaran j	Explain properties and significance of state transition matrix.
44	Vijaya kumar a	Draw a comparison between the transfer function method of analysis and state space variables approach.
45	Yuvan kumar t	Draw a comparison between the transfer function method of analysis and state space variables approach.
46	P.karthick	Explain properties and significance of state transition matrix.

power Electronics

1. Explain the application of power converter in induction motor drive system.
2. Explain the application of power converter in DC power supply
3. Describe the Series compensation
4. Explain the principle of operation of Unified power flow controller
5. Discuss the Shunt compensation
6. Explain the Electromagnetic interference issues in usage of power converter device.
7. Explain the operation of Stepper motor control
8. Explain the operation of synchronous motor drives
9. Discuss the operation of Multi-level inverter.
10. Describe the steady state analysis of the single phase fully 2 Understand controlled converter fed separately excited DC motor drive for continuous and discontinuous conduction mode.
11. Describe the regenerative braking is obtained in series motor with chopper control.
12. Describe the uses of phase controlled rectifiers in DC drives.
13. Discuss in detail the four quadrant operation of four quadrant chopper fed DC drive.
14. Discuss in detail with suitable diagrams and waveforms the v/f control applied to induction motor drives.
15. Compose in detail about the closed loop operation of armature voltage control method with field weakening mode control in detail.
16. Describe the closed loop speed control of VSI fed and CSI fed induction motor drives.
17. Describe the closed loop control speed control current source fed induction motor drive.
18. Describe the vector control of sinusoidal SPM in constant torque region.
19. Describe the open loop V/f speed control of multiple Permanent magnet synchronous motor.
20. Describe how regenerative braking is obtained in series motor with chopper control.
21. Describe the closed loop speed control of VSI fed and CSI fed induction motor drives.
22. Describe the CSI fed synchronous motor drive in detail.

EE6502 – Microprocessors and Microcontrollers

Sl. No.	Reg. No.	Name of the Student	Assignment Questions
1.	922516105001	AARTHI D	Introduction to Embedded Systems
2.	922516105002	AJAY K	The build process for embedded systems
3.	922516105004	BALAKRISHNAN R	Structural units in Embedded processor
4.	922516105005	BHARATHKUMAR S	selection of processor & memory devices
5.	922516105006	DHANALAKSHMI S	DMA
6.	922516105008	DIVAKAR V G	Memory management methods
7.	922516105009	GOWTHAMKUMAR R	Timer and Counting devices
8.	922516105011	JAYARAMAN P	Watchdog Timer
9.	922516105013	KALAIYARASU A	Real Time Clock
10.	922516105014	KAMALESH P	In circuit emulator
11.	922516105015	KANNAN G	Target Hardware Debugging.
12.	922516105016	KAVIN A	Embedded Networking
13.	922516105017	KAVIYARASU R	I/O Device Ports & Buses
14.	922516105018	KIRUPAVATHI J	Serial Bus communication protocols
15.	922516105019	LOGESHKANNA K	RS232 standard
16.	922516105020	MALATHI T	RS422
17.	922516105021	MANOJ KUMAR S	RS485
18.	922516105022	MARIMUTHU R	CAN Bus

Sl. No.	Reg. No.	Name of the Student	Assignment Questions
19.	922516105023	MEENA M	Serial Peripheral Interface (SPI)
20.	922516105024	MONICA K	Inter Integrated Circuits (I2C)
21.	922516105025	NIJANDHAN R	Different phases of EDLC,
22.	922516105026	NIRANJAN KUMAR B M	Modeling of EDLC; issues in Hardware-software Co-design
23.	922516105027	NITHEESHKUMAR K	Data Flow Graph
24.	922516105028	NITHISH KUMAR G	State machine model
25.	922516105029	PAVITHRA M	Sequential Program Model
26.	922516105030	PERIASAMY R	concurrent Model
27.	922516105031	PRASANNAKUMAR K J V	object oriented Model.
28.	922516105032	PRIYA V	Introduction to basic concepts of RTOS
29.	922516105033	PRUTHIVI RAJ S	Task, process & threads
30.	922516105034	REENADEVI M	Interrupt routines in RTOS,
31.	922516105035	SANJAY R	Multiprocessing and Multitasking
32.	922516105037	SANTHOSHKUMAR R	Preemptive and non-preemptive scheduling
33.	922516105039	SATHYA S	Task communication shared memory
34.	922516105040	SOWMIYA S	Message passing
35.	922516105041	SUDHAKAR R	Inter process Communication
36.	922516105042	SUNDARA PANDIAN S	Synchronization between processes
37.	922516105043	SUREKHA S	Semaphores,
38.	922516105044	SURESH S	Mailbox

Sl. No.	Reg. No.	Name of the Student	Assignment Questions
39.	922516105045	SURYA T	Pipes
40.	922516105046	SWATHI R	Priority inversion
41.	922516105047	THIVYAA R	Priority inheritance
42.	922516105048	VAISHALI P	Comparison of Real time Operating systems: Vx Works
43.	922516105049	VASANTHKUMARAN J	Comparison of Real time Operating systems: RT Linux.
44.	922516105050	VIJAYA KUMAR A	Automotive Application
45.	922516105052	YUVAN KUMAR T	Smart card System Application,
46.	922516105301	P.KARTHICK	Washing machine control