Kerala Public Enterprises (Selection and Recruitment)Board

Opposite KELTRON, Vellayambalam, Thiruvananthapuram
Website: kpesrb.kerala.gov.in, Email: kpesrb@gmail.com
Tel: 0471 - 2995042

Version: A

Name of Examination: Electrical Engineering **Date: 13/09/2026**

Written examination for:
051-2025-Senior Engineer – Electrical (Executive Trainee – Electrical)-The Travancore Cochin Chemicals Limited

FINAL ANSWER KEY

Sl No		Answer
1	A	1.47
2	B	6.66 A
3	B	400 MW
4	C	0.5
5	C	2.5%
6	C	resistors of same values across each SCR
7	B	2.8 pu
8	B	39.6 Ω
9	C	become 3 times
10	C	0.08
11	D	both base-emitter and base-collector junction are forward biased
12	C	more than the no-load voltage
13	A	0°
14	A	67.C8
15	C	differentially compounded motor
16	A	NOR with negative logic
17	Cancelled*	
18	D	0.707 lead
19	C	decrease both rise time and over shoot
20	A	$f<f_0$

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21	A	1
22	C	gives a nearly sinusoidal output voltage
23	C	15, 16
24	C	4 rad/s
25	D	Non-linear
26	D	inductive reactance
27	D	stability and voltage profile
28	A	Periodic with a period T
29	D	prevent hunting and to provide starting torque
30	A	active power to busbars and its power angle will increase
31	B	50 W
32	B	demagnetising
33	B	6.3 V
34	D	all of these
35	B	$(1010)_2$
36	D	0.4
37	C	0.30
38	C	$50\ e^{-3t}$
39	A	zero
40	B	Damper winding
41	A	3600 W
42	B	125 W
43	A	5 A, 3 A
44	C	may or may not be stable
45	D	entire z plane except z = 0 and z = ∞
46	C	the existence of stray capacitance between the metallic junctions of the units and the tower body
47	B	3 ms
48	B	within the unit circle
49	D	over compensation due to friction
50	A	960

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51	B	1800mH
52	C	Poles and signal type
53	B	Overhead line insulators
54	A	Recovery Voltage
55	A	SI – A = 0
56	B	50%
57	A	Slip
58	C	Voltage divider bias
59	B	BJT biased in common base configuration has high current gain
60	D	6f
61	B	PWM rectifier
62	C	0.1 s
63	D	8 V
64	D	Exponentially bounded
65	C	Ratio of average load to maximum demand
66	B	400 MW
67	B	2
68	A	Memory addressing
69	D	1110 rpm
70	C	Hydro-electric power plants
71	C	Junction and stray capacitances
72	B	Voltage controlled device
73	B	Decreases
74	C	Zero
75	A	Shift right by 3, then scale (compress) by 2
76	B	To reduce I^2 R power losses in transmission lines
77	C	It doubles
78	B	Reduce steady state error
79	C	It introduces a constant steady-state error (offset)
80	D	Solar Cell
81	B	Induction motor drives

SELECTION & RECRUITMENT BOARD

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82	B	Prime mover input
83	C	Dual slope
84	D	0.6A
85	A	Interconnect two asynchronous AC grids
86	C	Load greater than generation
87	B	0.5
88	C	Opposite to motoring
89	D	Rotor reactance=rotor resistance
90	A	Differential gain to common-mode gain
91	A	8 kHz
92	C	Reduced harmonic distoration
93	D	XOR gate
94	C	Deactivating independent sources and finding resistance
95	C	The same whether referred to the primary or secondary side
96	C	Be positive and non-zero
97	C	Equal to 1
98	B	Output resistance
99	D	Core loss, windage and friction loss
100	B	Phase difference

*1 (one) mark will be given for Question No. 17 to all candidates who attended the written examination.

KERALA PUBLIC ENTERPRISES
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This Final Answer Key is published on the basis of expert opinion on valid complaints received within the stipulated time.

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Secretary

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Kerala Public Enterprises (Selection and Recruitment)Board

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Version: B

Name of Examination: Electrical Engineering **Date: 13/09/2026**

Written examination for:
051-2025-Senior Engineer – Electrical (Executive Trainee – Electrical)-The Travancore Cochin Chemicals Limited

FINAL ANSWER KEY

Sl No		Answer
1	B	Phase difference
2	D	Core loss, windage and friction loss
3	B	Output resistance
4	C	Equal to 1
5	C	Be positive and non-zero
6	C	The same whether referred to the primary or secondary side
7	C	Deactivating independent sources and finding resistance
8	D	XOR gate
9	C	Reduced harmonic distoration
10	A	8 kHz
11	A	Differential gain to common-mode gain
12	D	Rotor reactance=rotor resistance
13	C	Opposite to motoring
14	B	0.5
15	C	Load greater than generation
16	A	Interconnect two asynchronous AC grids
17	D	0.6A
18	C	Dual slope
19	B	Prime mover input
20	B	Induction motor drives

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21	D	Solar Cell
22	C	It introduces a constant steady-state error (offset)
23	B	Reduce steady state error
24	C	It doubles
25	B	To reduce I^2 R power losses in transmission lines
26	A	Shift right by 3, then scale (compress) by 2
27	C	Zero
28	B	Decreases
29	B	Voltage controlled device
30	C	Junction and stray capacitances
31	C	Hydro-electric power plants
32	D	1110 rpm
33	A	Memory addressing
34	B	2
35	B	400 MW
36	C	Ratio of average load to maximum demand
37	D	Exponentially bounded
38	D	8 V
39	C	0.1 s
40	B	PWM rectifier
41	D	6f
42	B	BJT biased in common base configuration has high current gain
43	C	Voltage divider bias
44	A	Slip
45	B	50%
46	A	SI – A = 0
47	A	Recovery Voltage
48	B	Overhead line insulators
49	C	Poles and signal type
50	B	1800mH
51	A	960

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52	D	over compensation due to friction
53	B	within the unit circle
54	B	3 ms
55	C	the existence of stray capacitance between the metallic junctions of the units and the tower body
56	D	entire z plane except z = 0 and z = ∞
57	C	may or may not be stable
58	A	5 A, 3 A
59	B	125 W
60	A	3600 W
61	B	Damper winding
62	A	zero
63	C	$50\ e^{-3t}$
64	C	0.30
65	D	0.4
66	B	$(1010)_2$
67	D	all of these
68	B	6.3 V
69	B	demagnetising
70	B	50 W
71	A	active power to busbars and its power angle will increase
72	D	prevent hunting and to provide starting torque
73	A	Periodic with a period T
74	D	stability and voltage profile
75	D	inductive reactance
76	D	Non-linear
77	C	4 rad/s
78	C	15, 16
79	C	gives a nearly sinusoidal output voltage
80	A	1
81	A	$f<f_0$

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82	C	decrease both rise time and over shoot
83	D	0.707 lead
84	Cancelled*	
85	A	NOR with negative logic
86	C	differentially compounded motor
87	A	67.C8
88	A	0°
89	C	more than the no-load voltage
90	D	both base-emitter and base-collector junction are forward biased
91	C	0.08
92	C	become 3 times
93	B	39.6 Ω
94	B	2.8 pu
95	C	resistors of same values across each SCR
96	C	2.5%
97	C	0.5
98	B	400 MW
99	B	6.66 A
100	A	1.47

*1 (one) mark will be given for Question No. 84 to all candidates who attended the written examination.

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Shine A Haq
Secretary

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Version: C

Name of Examination: Electrical Engineering **Date: 13/09/2026**

Written examination for:
051-2025-Senior Engineer – Electrical (Executive Trainee – Electrical)-The Travancore Cochin Chemicals Limited

FINAL ANSWER KEY

Sl No		Answer
1	B	1800mH
2	C	Poles and signal type
3	B	Overhead line insulators
4	A	Recovery Voltage
5	A	SI – A = 0
6	B	50%
7	A	Slip
8	C	Voltage divider bias
9	B	BJT biased in common base configuration has high current gain
10	D	6f
11	B	PWM rectifier
12	C	0.1 s
13	D	8 V
14	D	Exponentially bounded
15	C	Ratio of average load to maximum demand
16	B	400 MW
17	B	2
18	A	Memory addressing
19	D	1110 rpm
20	C	Hydro-electric power plants

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21	C	Junction and stray capacitances
22	B	Voltage controlled device
23	B	Decreases
24	C	Zero
25	A	Shift right by 3, then scale (compress) by 2
26	B	To reduce I^2 R power losses in transmission lines
27	C	It doubles
28	B	Reduce steady state error
29	C	It introduces a constant steady-state error (offset)
30	D	Solar Cell
31	B	Induction motor drives
32	B	Prime mover input
33	C	Dual slope
34	D	0.6A
35	A	Interconnect two asynchronous AC grids
36	C	Load greater than generation
37	B	0.5
38	C	Opposite to motoring
39	D	Rotor reactance=rotor resistance
40	A	Differential gain to common-mode gain
41	A	8 kHz
42	C	Reduced harmonic distoration
43	D	XOR gate
44	C	Deactivating independent sources and finding resistance
45	C	The same whether referred to the primary or secondary side
46	C	Be positive and non-zero
47	C	Equal to 1
48	B	Output resistance
49	D	Core loss, windage and friction loss
50	B	Phase difference
51	A	1.47

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52	B	6.66 A
53	B	400 MW
54	C	0.5
55	C	2.5%
56	C	resistors of same values across each SCR
57	B	2.8 pu
58	B	39.6 Ω
59	C	become 3 times
60	C	0.08
61	D	both base-emitter and base-collector junction are forward biased
62	C	more than the no-load voltage
63	A	0°
64	A	67.C8
65	C	differentially compounded motor
66	A	NOR with negative logic
67	Cancelled*	
68	D	0.707 lead
69	C	decrease both rise time and over shoot
70	A	$f<f_0$
71	A	1
72	C	gives a nearly sinusoidal output voltage
73	C	15, 16
74	C	4 rad/s
75	D	Non-linear
76	D	inductive reactance
77	D	stability and voltage profile
78	A	Periodic with a period T
79	D	prevent hunting and to provide starting torque
80	A	active power to busbars and its power angle will increase
81	B	50 W
82	B	demagnetising

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83	B	6.3 V
84	D	all of these
85	B	$(1010)_2$
86	D	0.4
87	C	0.30
88	C	$50\ e^{-3t}$
89	A	zero
90	B	Damper winding
91	A	3600 W
92	B	125 W
93	A	5 A, 3 A
94	C	may or may not be stable
95	D	entire z plane except z = 0 and z = ∞
96	C	the existence of stray capacitance between the metallic junctions of the units and the tower body
97	B	3 ms
98	B	within the unit circle
99	D	over compensation due to friction
100	A	960

*1 (one) mark will be given for Question No. 67 to all candidates who attended the written examination.

This Final Answer Key is published on the basis of expert opinion on valid complaints received within the stipulated time.

Shine A Haq
Secretary

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Version: D

Name of Examination: Electrical Engineering **Date: 13/09/2026**

Written examination for:
051-2025-Senior Engineer – Electrical (Executive Trainee – Electrical)-The Travancore Cochin Chemicals Limited

FINAL ANSWER KEY

Sl No		Answer
1	A	0.30
2	B	may or may not be stable
3	C	0.707 lead
4	C	Hydro-electric power plants
5	C	SI – A = 0
6	B	entire z plane except z = 0 and z = ∞
7	B	Recovery Voltage
8	A	1
9	A	prevent hunting and to provide starting torque
10	B	Opposite to motoring
11	A	over compensation due to friction
12	B	Periodic with a period T
13	C	It doubles
14	B	Slip
15	B	Junction and stray capacitances
16	C	Rotor reactance=rotor resistance
17	A	0.5
18	C	PWM rectifier
19	A	0.5
20	C	Voltage controlled device

Published on 17/11/2026

21	D	2
22	A	Output resistance
23	A	Induction motor drives
24	C	BJT biased in common base configuration has high current gain
25	C	6.66 A
26	C	It introduces a constant steady-state error (offset)
27	A	the existence of stray capacitance between the metallic junctions of the units and the tower body
28	D	$f<f_0$
29	D	Dual slope
30	C	400 MW
31	C	0.1 s
32	B	8 V
33	D	960
34	B	Non-linear
35	C	3 ms
36	A	$50\ e^{-3t}$
37	C	Memory addressing
38	C	more than the no-load voltage
39	D	Load greater than generation
40	B	differentially compounded motor
41	D	become 3 times
42	C	3600 W
43	A	50 W
44	C	50%
45	B	Equal to 1
46	C	Interconnect two asynchronous AC grids
47	B	8 kHz
48	D	2.8 pu
49	A	Ratio of average load to maximum demand
50	A	$(1010)_2$

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51	D	Damper winding
52	C	15, 16
53	D	Exponentially bounded
54	C	To reduce I^2 R power losses in transmission lines
55	D	stability and voltage profile
56	D	0.4
57	D	XOR gate
58	C	both base-emitter and base-collector junction are forward biased
59	A	Zero
60	A	Prime mover input
61	D	Poles and signal type
62	C	Reduce steady state error
63	D	Solar Cell
64	D	2.5%
65	C	0°
66	A	Decreases
67	D	4 rad/s
68	C	all of these
69	B	demagnetising
70	B	1110 rpm
71	A	Voltage divider bias
72	A	6f
73	C	resistors of same values across each SCR
74	A	Overhead line insulators
75	D	zero
76	A	Differential gain to common-mode gain
77	D	125 W
78	D	Be positive and non-zero
79	D	6.3 V
80	B	Shift right by 3, then scale (compress) by 2
81	C	Core loss, windage and friction loss

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82	D	39.6 Ω
83	B	within the unit circle
84	C	The same whether referred to the primary or secondary side
85	C	0.6A
86	D	0.08
87	D	NOR with negative logic
88	C	decrease both rise time and over shoot
89	A	67.C8
90	B	gives a nearly sinusoidal output voltage
91	A	Phase difference
92	Cancelled*	
93	B	Reduced harmonic distoration
94	B	1.47
95	A	5 A, 3 A
96	B	1800mH
97	D	active power to busbars and its power angle will increase
98	A	Deactivating independent sources and finding resistance
99	D	inductive reactance
100	A	400 MW

*1 (one) mark will be given for Question No. 92 to all candidates who attended the written examination.

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Shine A Haq
Secretary

KERALA PUBLIC ENTERPRISES SELECTION & RECRUITMENT BOARD