Indian Institute of Technology Palakkad

Electrical Engineering

Research Admissions (MS) – July 2022

The candidates shortlisted for the written test in the advertised areas are given below. Intimation emails will be sent on or before **May 26, 2022**. **Kindly note a written test followed by an interview will be conducted for all the areas.** The shortlisted candidates for the written test/interview will receive detailed instructions on how to proceed further.

Note 1: The candidates who will appear for the offline written test followed by interviews need to report to the **IIT Palakkad (Room No: 203, Samgatha, Nila Campus) on June 09, 2022, at 08:00 am**. If you clear the written test, you will be asked to appear for the interview. The interviews will be held on June 9-10, 2022. Hence, please be prepared to stay for two days. The candidate must confirm the attendance via email by **03-June-2022** (ee-admissions@iitpkd.ac.in). Your documents will be verified before the interviews.

Note 2: All candidates are requested to check the shortlisting criteria carefully and in case of any doubt should request a clarification from the department. The last date for contacting the department if there are any discrepancies is **02-June-2022** (ee-admissions@iitpkd.ac.in). In case a candidate who has been called feels he/she may not be satisfying the shortlisting requirements, he/she should contact the office at the earliest.

Area 1: Sensors, Measurements, and Instrumentation (MS)

Summary of shortlisting criteria for MS admission

	Total	GEN	GEN-EWS	OBC-NCL	SC	ST	PwD
No of applications:	**27**	15	0	10	2	0	0
No of candidates shortlisted:	**24**	14	0	8	2	0	0
Shortlisting Criteria		Valid GATE Score OR For CFTI, CGPA ≥ 8	Valid GATE Score OR For CFTI, CGPA ≥ 7.5		Valid GATE Score OR For CFTI, CGPA ≥ 7		

LIST OF APPLICANTS SHORTLISTED FOR WRITTEN TEST

S.No.	Application No
1	MSEEJUL2022-3976-7186
2	MSEEJUL2022-3976-8147
3	MSEEJUL2022-3976-7694
4	MSEEJUL2022-3976-7969
5	MSEEJUL2022-3976-8106
6	MSEEJUL2022-3976-7847
7	MSEEJUL2022-3976-6129
8	MSEEJUL2022-3976-8030
9	MSEEJUL2022-3976-8032
10	MSEEJUL2022-3976-8007
11	MSEEJUL2022-3976-6664
12	MSEEJUL2022-3976-7927
13	MSEEJUL2022-3976-7839
14	MSEEJUL2022-3976-7735
15	MSEEJUL2022-3976-7817
16	MSEEJUL2022-3976-7508
17	MSEEJUL2022-3976-7506
18	MSEEJUL2022-3976-7170
19	MSEEJUL2022-3976-7252
20	MSEEJUL2022-3976-6644
21	MSEEJUL2022-3976-6156
22	MSEEJUL2022-3976-5497
23	MSEEJUL2022-3976-5988
24	MSEEJUL2022-3976-5934

Syllabus for written test: Analog Circuits - Diode Circuits, Operational Amplifier Circuits, RLC circuits. Basic Mathematics - functions, plotting etc; In addition (during interview), questions based on your BTech project.

Area 2: Signal and Image Processing (MS)

	Total	GEN	GEN-EWS	OBC-NCL	SC	ST	PwD
No of applications:	**59**	35	7	15	2	0	0
No of candidates shortlisted:	**59**	35	7	15	2	0	0
Shortlisting Criteria BE/BTech/MSc Electrical/Electronics/Instrumentation/Computer science with a valid GATE score (for external registration GATE score is not required) with overall graduation score.		>= 60%	>= 54%	>= 54%	>= 40%	>= 40%	>= 40%
For CFTI BE/BTech candidates with the above mentioned degrees, CGPA		>= 8	>= 7.5	>= 7.5	>=7	>=7	>= 7

LIST OF APPLICANTS SHORTLISTED FOR WRITTEN TEST

S.No.	Application No
1	MSEEJUL2022-3976-7186
2	MSEEJUL2022-3976-8113
3	MSEEJUL2022-3976-7970
4	MSEEJUL2022-3976-8103
5	MSEEJUL2022-3976-7965
6	MSEEJUL2022-3976-8002
7	MSEEJUL2022-3976-7709
8	MSEEJUL2022-3976-7793
9	MSEEJUL2022-3976-7356
10	MSEEJUL2022-3976-7039
11	MSEEJUL2022-3976-7599
12	MSEEJUL2022-3976-7655
13	MSEEJUL2022-3976-5902
14	MSEEJUL2022-3976-7420
15	MSEEJUL2022-3976-7109

16	MSEEJUL2022-3976-7260
17	MSEEJUL2022-3976-7431
18	MSEEJUL2022-3976-7486
19	MSEEJUL2022-3976-7303
20	MSEEJUL2022-3976-7011
21	MSEEJUL2022-3976-7235
22	MSEEJUL2022-3976-7418
23	MSEEJUL2022-3976-7377
24	MSEEJUL2022-3976-7142
25	MSEEJUL2022-3976-7066
26	MSEEJUL2022-3976-7385
27	MSEEJUL2022-3976-6357
28	MSEEJUL2022-3976-7279
29	MSEEJUL2022-3976-7041
30	MSEEJUL2022-3976-7252
31	MSEEJUL2022-3976-7232
32	MSEEJUL2022-3976-7224
33	MSEEJUL2022-3976-7209
34	MSEEJUL2022-3976-7113
35	MSEEJUL2022-3976-7081
36	MSEEJUL2022-3976-7065
37	MSEEJUL2022-3976-7054
38	MSEEJUL2022-3976-7006
39	MSEEJUL2022-3976-6902
40	MSEEJUL2022-3976-6835
41	MSEEJUL2022-3976-6802
42	MSEEJUL2022-3976-6722
43	MSEEJUL2022-3976-5856
44	MSEEJUL2022-3976-6464
45	MSEEJUL2022-3976-6418
46	MSEEJUL2022-3976-6264
47	MSEEJUL2022-3976-6254
48	MSEEJUL2022-3976-6194
49	MSEEJUL2022-3976-5497
50	MSEEJUL2022-3976-5934
51	MSEEJUL2022-3976-6114
52	MSEEJUL2022-3976-6095
53	MSEEJUL2022-3976-6077
54	MSEEJUL2022-3976-6027
55	MSEEJUL2022-3976-6029
56	MSEEJUL2022-3976-5821
57	MSEEJUL2022-3976-5731

58	MSEEJUL2022-3976-5470
59	MSEEJUL2022-3976-5672

Syllabus for written test: Sampling and reconstruction -Transform domain analysis (Fourier, and Z-transforms), -Representation of signals on orthogonal basis - Discrete systems: attributes, Z-Transform, DFT, Fast Fourier Transform algorithm, Design of FIR and IIR Digital filters; Random process: probabilistic structure of a random process; mean, autocorrelation and autocovariance functions; stationarity - strict- sense stationary and wide-sense stationary (WSS) processes: time averages and ergodicity; spectral representation of a real WSS process-power spectral density, cross-power spectral density; Linear Algebra - vector spaces, linear independence, bases and dimension, linear maps and matrices, eigenvalues, invariant subspaces, inner products, norms, orthonormal bases.

Area 3: Digital VLSI Design (MS)

	Total	GEN	GEN-EWS	OBC-NCL	SC	ST	PwD
No of applications:	**110**	**52**	**12**	**36**	**10**	**0**	**0**
No of candidates shortlisted:	**110**	**52**	**12**	**36**	**10**	**0**	**0**
Shortlisting Criteria BE/BTech/MSc Electrical/Electronics/Instrumentation/Computer science with a valid GATE score (for external registration GATE score is not required) with overall graduation score.		>= 60%	>= 54%	>= 54%	>= 40%	>= 40%	>= 40%
For CFTI BE/BTech candidates with the above mentioned degrees, CGPA		>= 8	>= 7.5	>= 7.5	>=7	>=7	>= 7

LIST OF APPLICANTS SHORTLISTED FOR WRITTEN TEST

S.No.	Application No
1	MSEEJUL2022-3976-8102
2	MSEEJUL2022-3976-8113
3	MSEEJUL2022-3976-7832
4	MSEEJUL2022-3976-7694
5	MSEEJUL2022-3976-7089
6	MSEEJUL2022-3976-7200
7	MSEEJUL2022-3976-6129
8	MSEEJUL2022-3976-8049
9	MSEEJUL2022-3976-6442
10	MSEEJUL2022-3976-8030
11	MSEEJUL2022-3976-8032
12	MSEEJUL2022-3976-7709
13	MSEEJUL2022-3976-7989
14	MSEEJUL2022-3976-7939
15	MSEEJUL2022-3976-7886
16	MSEEJUL2022-3976-7871
17	MSEEJUL2022-3976-7039
18	MSEEJUL2022-3976-7817
19	MSEEJUL2022-3976-7126
20	MSEEJUL2022-3976-6285
21	MSEEJUL2022-3976-6104

22	MSEEJUL2022-3976-7737
23	MSEEJUL2022-3976-7696
24	MSEEJUL2022-3976-7599
25	MSEEJUL2022-3976-7655
26	MSEEJUL2022-3976-7560
27	MSEEJUL2022-3976-6317
28	MSEEJUL2022-3976-7420
29	MSEEJUL2022-3976-7260
30	MSEEJUL2022-3976-7431
31	MSEEJUL2022-3976-7011
32	MSEEJUL2022-3976-7494
33	MSEEJUL2022-3976-7249
34	MSEEJUL2022-3976-7100
35	MSEEJUL2022-3976-7418
36	MSEEJUL2022-3976-7294
37	MSEEJUL2022-3976-6968
38	MSEEJUL2022-3976-7430
39	MSEEJUL2022-3976-7416
40	MSEEJUL2022-3976-6975
41	MSEEJUL2022-3976-5991
42	MSEEJUL2022-3976-7050
43	MSEEJUL2022-3976-7256
44	MSEEJUL2022-3976-7285
45	MSEEJUL2022-3976-7254
46	MSEEJUL2022-3976-7170
47	MSEEJUL2022-3976-7232
48	MSEEJUL2022-3976-7224
49	MSEEJUL2022-3976-7219
50	MSEEJUL2022-3976-6999
51	MSEEJUL2022-3976-7060
52	MSEEJUL2022-3976-7046
53	MSEEJUL2022-3976-7106
54	MSEEJUL2022-3976-6943
55	MSEEJUL2022-3976-7113
56	MSEEJUL2022-3976-7081
57	MSEEJUL2022-3976-7065
58	MSEEJUL2022-3976-7048
59	MSEEJUL2022-3976-6983
60	MSEEJUL2022-3976-6746
61	MSEEJUL2022-3976-7054
62	MSEEJUL2022-3976-7006
63	MSEEJUL2022-3976-6902
64	MSEEJUL2022-3976-6990
65	MSEEJUL2022-3976-6835
66	MSEEJUL2022-3976-6471
67	MSEEJUL2022-3976-6904
68	MSEEJUL2022-3976-6447
69	MSEEJUL2022-3976-6743

70	MSEEJUL2022-3976-6722
71	MSEEJUL2022-3976-5856
72	MSEEJUL2022-3976-6464
73	MSEEJUL2022-3976-6614
74	MSEEJUL2022-3976-6438
75	MSEEJUL2022-3976-6418
76	MSEEJUL2022-3976-6590
77	MSEEJUL2022-3976-5805
78	MSEEJUL2022-3976-6204
79	MSEEJUL2022-3976-5988
80	MSEEJUL2022-3976-6027
81	MSEEJUL2022-3976-5821
82	MSEEJUL2022-3976-5869
83	MSEEJUL2022-3976-5543
84	MSEEJUL2022-3976-5470
85	MSEEJUL2022-3976-8163
86	MSEEJUL2022-3976-7569
87	MSEEJUL2022-3976-8016
88	MSEEJUL2022-3976-8123
89	MSEEJUL2022-3976-8091
90	MSEEJUL2022-3976-8051
91	MSEEJUL2022-3976-7927
92	MSEEJUL2022-3976-7479
93	MSEEJUL2022-3976-5637
94	MSEEJUL2022-3976-7529
95	MSEEJUL2022-3976-7250
96	MSEEJUL2022-3976-7534
97	MSEEJUL2022-3976-7483
98	MSEEJUL2022-3976-7385
99	MSEEJUL2022-3976-7279
100	MSEEJUL2022-3976-7041
101	MSEEJUL2022-3976-6160
102	MSEEJUL2022-3976-6546
103	MSEEJUL2022-3976-7078
104	MSEEJUL2022-3976-7057
105	MSEEJUL2022-3976-6187
106	MSEEJUL2022-3976-6385
107	MSEEJUL2022-3976-6194
108	MSEEJUL2022-3976-6029
109	MSEEJUL2022-3976-5672
110	MSEEJUL2022-3976-5530

Syllabus for written test: Introduction to Digital systems and Boolean Algebra, Basic logic operation and logic gates; Logic families -- TTL, CMOS; Combinational Logic: Decoder, encoders, multiplexers, de-multiplexers and their applications; Arithmetic circuits; Representation of signed numbers; Adders -- ripple carry, carry look ahead, BCD adders; Sequential Logic : Latches and flip flops -- SR latch, D latch, D flip-flop, JK flip-flop, T flip-flop; Setup and hold parameters; Timing analysis; Registers and counters; Shift register;

Synchronous counter design using D, SR, JK flip-flops; State Machine Design : Definition of state machines; State machine as a sequential controller; Moore and Mealy state machines; Derivation of state graph and tables; Sequence detector; State table reduction using Implication table; Memory and Programmable Logic Devices : Read Only Memories, read/write memory -- SRAM/DRAM; FPGAs; Hardware description language : Modelling combinational and sequential circuits using Verilog

Area 4: Control and Robotics (MS)

	Total	GEN	GEN-EWS	OBC-NCL	SC	ST	PwD
No of applications:	**59**	29	04	19	07	0	0
No of candidates shortlisted:	**59**	29	04	19	07	0	0
Shortlisting Criteria BE/BTech/MSc Electrical/Electronics/Instrumentation/Computer science with a valid GATE score (for external registration GATE score is not required) with overall graduation score. For CFTI BE/BTech candidates with the above mentioned degrees, CGPA		>=60% >=8	>=54% >=7.5	>=54% >=7.5	>=40.2 % >=7	>=40.2% >=7	>=40.2% >=7

LIST OF APPLICANTS SHORTLISTED FOR THE WRITTEN TEST

Sl. No.	Application No.
1	MSEEJUL2022-3976-8163
2	MSEEJUL2022-3976-7946
3	MSEEJUL2022-3976-7970
4	MSEEJUL2022-3976-8016
5	MSEEJUL2022-3976-7969
6	MSEEJUL2022-3976-8106
7	MSEEJUL2022-3976-8091
8	MSEEJUL2022-3976-7847
9	MSEEJUL2022-3976-6442
10	MSEEJUL2022-3976-7937
11	MSEEJUL2022-3976-7898
12	MSEEJUL2022-3976-7965

13	MSEEJUL2022-3976-7939
14	MSEEJUL2022-3976-7793
15	MSEEJUL2022-3976-7356
16	MSEEJUL2022-3976-7839
17	MSEEJUL2022-3976-7886
18	MSEEJUL2022-3976-7871
19	MSEEJUL2022-3976-7735
20	MSEEJUL2022-3976-6104
21	MSEEJUL2022-3976-7560
22	MSEEJUL2022-3976-5902
23	MSEEJUL2022-3976-7529
24	MSEEJUL2022-3976-7109
25	MSEEJUL2022-3976-7090
26	MSEEJUL2022-3976-5527
27	MSEEJUL2022-3976-7534
28	MSEEJUL2022-3976-7508
29	MSEEJUL2022-3976-7506
30	MSEEJUL2022-3976-7486
31	MSEEJUL2022-3976-7303
32	MSEEJUL2022-3976-7483
33	MSEEJUL2022-3976-7249
34	MSEEJUL2022-3976-7100
35	MSEEJUL2022-3976-7377
36	MSEEJUL2022-3976-7430
37	MSEEJUL2022-3976-7142
38	MSEEJUL2022-3976-7405
39	MSEEJUL2022-3976-5991
40	MSEEJUL2022-3976-7050
41	MSEEJUL2022-3976-5516
42	MSEEJUL2022-3976-6357
43	MSEEJUL2022-3976-7209

44	MSEEJUL2022-3976-6644
45	MSEEJUL2022-3976-7078
46	MSEEJUL2022-3976-7057
47	MSEEJUL2022-3976-6156
48	MSEEJUL2022-3976-6614
49	MSEEJUL2022-3976-6392
50	MSEEJUL2022-3976-6187
51	MSEEJUL2022-3976-6385
52	MSEEJUL2022-3976-5824
53	MSEEJUL2022-3976-6264
54	MSEEJUL2022-3976-5717
55	MSEEJUL2022-3976-6095
56	MSEEJUL2022-3976-6077
57	MSEEJUL2022-3976-5862
58	MSEEJUL2022-3976-5731
59	MSEEJUL2022-3976-5543

Syllabus for written test:

Review of Fourier and Laplace transforms, differential equations, LTI system, convolution. Introduction to control systems, Open loop, closed-loop systems, Transfer function. Signal flow graph, Feedback characteristics, Negative and Regenerative feedback, Disturbances and Sensitivity reduction. Introduction to time domain Analysis, standard test signals, Transient Response, Steady-state errors, Addition of zeros, Design Specifications of higher order systems, Concept of stability, relative stability, conditions for stability, Routh-Hurwitz stability criterion, root locus, Frequency response Analysis, Bode plot, stability margins, Nyquist stability criterion, Compensators (Lead and lag compensator) design, PID controller. State space models: State Space Equations, Linearization, Solutions to Linear Time Invariant systems, Matrix Exponentials, Analysis: Equilibrium and operating points, Stability notions (BIBO, exponential, semistable, Lyapunov), Controllability, Stabilizability, Observability. Analysis on feasible operating points and tracking. Linear Control Design: point stabilization, tracking, state feedback control - Pole placement, Lyapunov based control.

Basics of Circuit theory. RL/RC/RLC circuit analysis, OPAMPs. Basics of engineering mathematical subjects such as Linear Algebra and Partial differential equations.

Area 5: Nanoelectronics, Plasmonics & Semiconductor Devices (MS)

	Total	GEN	GEN-EWS	OBC-NCL	SC	ST	PwD
No of applications:	**60**	29	10	16	05	0	0
No of candidates shortlisted:	**44**	18	08	13	05	0	0
Shortlisting Criteria							
With valid GATE score & with min. UG cut-off of:		80%	72%	72%	53.6%		
OR							
With valid GATE score of atleast:		480	432	432	322		
OR							
With UG from CFTI with min. CGPA of:		8/10	7.5/10	7.5/10	7/10		

LIST OF APPLICANTS SHORTLISTED FOR WRITTEN TEST

Sl. No.	Application No
1	MSEEJUL2022-3976-8049
2	MSEEJUL2022-3976-6375
3	MSEEJUL2022-3976-6743
4	MSEEJUL2022-3976-7200
5	MSEEJUL2022-3976-6904
6	MSEEJUL2022-3976-5805
7	MSEEJUL2022-3976-6746
8	MSEEJUL2022-3976-6392
9	MSEEJUL2022-3976-7989
10	MSEEJUL2022-3976-7285
11	MSEEJUL2022-3976-7294
12	MSEEJUL2022-3976-6990
13	MSEEJUL2022-3976-6664
14	MSEEJUL2022-3976-8007
15	MSEEJUL2022-3976-8147
16	MSEEJUL2022-3976-7898
17	MSEEJUL2022-3976-6590
18	MSEEJUL2022-3976-6160
19	MSEEJUL2022-3976-8002
20	MSEEJUL2022-3976-7946
21	MSEEJUL2022-3976-8051
22	MSEEJUL2022-3976-7696
23	MSEEJUL2022-3976-7219
24	MSEEJUL2022-3976-7126
25	MSEEJUL2022-3976-7479
26	MSEEJUL2022-3976-7937
27	MSEEJUL2022-3976-7090
28	MSEEJUL2022-3976-6943
29	MSEEJUL2022-3976-6968
30	MSEEJUL2022-3976-7250
31	MSEEJUL2022-3976-7256
32	MSEEJUL2022-3976-6983
33	MSEEJUL2022-3976-6204
34	MSEEJUL2022-3976-8103
35	MSEEJUL2022-3976-7737

36	MSEEJUL2022-3976-8123
37	MSEEJUL2022-3976-6471
38	MSEEJUL2022-3976-6802
39	MSEEJUL2022-3976-7254
40	MSEEJUL2022-3976-7106
41	MSEEJUL2022-3976-7046
42	MSEEJUL2022-3976-5637
43	MSEEJUL2022-3976-5869
44	MSEEJUL2022-3976-6447

Syllabus for written test/interview:

Solid-state devices: Energy band formation; equilibrium carrier concentration, intrinsic and extrinsic semiconductors, Fermi level, Recombination and generation of carriers, carrier transport: drift and diffusion, Continuity and Poisson equation; p-n junctions; metal-oxide-semiconductor devices: MOS capacitor, MOSFET: physics and I-V characteristics; Schottky junctions. Basic Mathematics: functions, plotting, etc