

Indian Institute of Information Technology Sonapat
Electronics and Communication Engineering
(Syllabus for written test)

Section-1: Networks Theory

Node and mesh analysis, superposition, Thevenin's theorem, Norton's theorem, reciprocity. Sinusoidal steady state analysis: phasors, complex power, maximum power transfer. Time and frequency domain analysis of linear circuits: RL, RC and RLC circuits, solution of network equations using Laplace transform. Linear 2-port network parameters, wye-delta transformation.

Section-2: Signals and Systems

Fourier series and Fourier transform, sampling theorem and applications. Discrete-time Signals: DTFT, DFT, z-transform, discrete-time processing of continuous-time signals. LTI systems: definition and properties, causality, stability, impulse response, convolution, poles and zeroes, frequency response, group delay, phase delay.

Section-3: Electronic Devices

Energy bands in intrinsic and extrinsic semiconductors, equilibrium carrier concentration, direct and indirect band-gap semiconductors. Carrier Transport: diffusion current, drift current, mobility and resistivity, generation and recombination of carriers, Poisson and continuity equations. P-N junction, Zener diode, BJT, MOS capacitor, MOSFET, LED, photo diode and solar cell.

Section-4: Analog Circuits

Diode Circuits: clipping, clamping and rectifiers. BJT and MOSFET Amplifiers: biasing, ac coupling, small signal analysis, frequency response. Current mirrors and differential amplifiers. Op-amp Circuits: Amplifiers, summers, differentiators, integrators, active filters, Schmitt triggers and oscillators.

Section-5: Digital Circuits

Number Representations: binary, integer and floating-point- numbers. Combinatorial circuits: Boolean algebra, minimization of functions using Boolean identities and Karnaugh map, logic gates and their static CMOS implementations, arithmetic circuits, code converters, multiplexers, decoders. Sequential Circuits:

latches and flip-flops, counters, shift-registers, finite state machines, propagation delay, setup and hold time, critical path delay. Data Converters: sample and hold circuits, ADCs and DACs. Semiconductor Memories: ROM, SRAM, DRAM.

Section-6: Control Systems

Basic control system components; Feedback principle; Transfer function; Block diagram representation; Signal flow graph; Transient and steady-state analysis of LTI systems; Frequency response; Routh-Hurwitz and Nyquist stability criteria; Bode and root-locus plots; Lag, lead and lag-lead compensation; State variable model and solution of state equation of LTI systems.

Section-7: Communication Systems

Random Processes: auto correlation and power spectral density, properties of white noise, filtering of random signals through LTI systems. Analog Communications: amplitude modulation and demodulation, angle modulation and demodulation, spectra of AM and FM, super heterodyne receivers. Information Theory: entropy, mutual information and channel capacity theorem. Digital Communications: PCM, DPCM, digital modulation schemes (ASK, PSK, FSK, QAM), bandwidth, inter-symbol interference, MAP, ML detection, matched filter receiver, SNR and BER.

Section-8: Electromagnetic Theory

Maxwell's Equations: differential and integral forms and their interpretation, boundary conditions, wave equation, Poynting vector. Plane Waves and Properties: reflection and refraction, polarization, phase and group velocity, propagation through various media, skin depth. Transmission Lines: equations, characteristic impedance, impedance matching, impedance transformation, S-parameters, Smith chart. Rectangular and circular waveguides, light propagation in optical fibers, dipole and monopole antennas, linear antenna arrays.

List of Provisionally Eligible Candidates for Written Test for the Recruitment of Assistant Professor Grade-II in ECE (Advt. No.:IIITSNP/RECT/2021/01 Dated-19.05.2021 and IIITSNP/RECT/2023/03 Dated-24.03.2023)

S.No	Ref. No.	Name	Father's Name
1	1	Sandeep Kumar	Jai Parkash
2	2	Sanjib Kalita	Bichitra Kalita
3	3	Rahul K	Janarddhanan N
4	4	Ritesh Vyas	Late. Sh. Ravi Prakash
5	6	Himanshu Sharma	Banwari Lal
6	7	Anish Gupta	Rajendra Gupta
7	8	Karam Singh	Raj Singh
8	9	Neha Mishra	Ravi Prakash Mishra
9	10	Gaurav Khanna	Chandra Shekhar Khanna
10	11	Aman Sikri	Manmohan Sikri
11	12	Nilesh Kumar Tiwari	Rakesh Tiwari
12	13	Soumen Pandit	Lalmohan Pandit
13	14	Chirag Kumar	Ved Parkash
14	15	Ashish Goswami	Laxman Goswami
15	16	Arijit Bardhan Roy	Amalendu Bardhan Roy
16	18	K. Vasubabu	K Veeraiah
17	20	Biswajit Mandal	Pashupati Mandal
18	21	Archana Rajput	Ram Swarup Rajput
19	22	Suman Malik	Nakul Chandra Malik
20	23	Deepika Ghai	Madan Gopal Ghai
21	24	Tanu	Satish Wadhera
22	25	Sunil Sharma	H C Sharma
23	26	Ashis Tripathy	Dilip Kumar Tripathy
24	27	Harbinder Singh	Harnek Singh
25	28	Sanjeev Mani Yadav	Marender Mani Yadav
26	29	Debanjan Acharyya	Debes Kumar Acharyya
27	30	Udathu N V Panduranga Rajendranath	U Venkata Tamana
28	31	Rahul Sharma	Ram Bahori Sharma
29	32	Shatrudhan Palsaniya	Bhomraj Palsaniya
30	33	Sahil Dalal	Satyavir Singh
31	34	Rahul	Mani Ram
32	35	Deepak Punetha	Prakash Chandra Punetha
33	36	Yogeshwar Singh Dadwhal	Karan Singh Dadwhal
34	37	Prateek Rathore	Gaya Prasad Rathore
35	38	Puneeta	Kuldip Rai
36	39	Monika Gambhir	Gaurav Gambhir
37	40	Prateek Asthana	Rajesh Asthana
38	41	Vibhu Srivastava	V B Srivastava
39	42	Ruchi Trppathi	Shesh Mani Tripathi
40	43	Vikram Kumar	Saket Bihari Singh
41	44	Garima Chopra	Adarsh Bhat
42	45	R Parthasarathy	P Ramanujam

43	46	Avik Banerjee	Ashok Kr. Banerjee
44	48	Prateek Bindra	Naresh Bindra
45	49	Tarakeswar Shaw	Debananda Shaw
46	50	Parveen	Tejpal Singh
47	51	Sumit Datta	Kamal Datta
48	52	Manish Deshwal	Rjendra Kumar
49	53	Vinay Kanungo	Anil Kanungo
50	54	Ankur Saharia	Ravi Prakash Mathur
51	56	Prachi Sharma	Nishant Tripathi
52	57	Prateek Jain	Om Parkash Jain
53	59	Shivanshu Shrivastava	Shashi Bhushan Shrivastava
54	60	Savita Kumari	Abhishek Dalal
55	61	Mohan Bansal	U C Bansal
56	62	Deepti Gola	Narsingh Pal
57	63	Mahammad Khalid	Vahab Ali
58	65	Vishal Sharma	Kailash Chandra Sharma
59	66	Ratneshwar Kumar Ratnesh	Prabhu Baitha
60	67	Sandeep Kumar	Sultan Singh
61	68	Varun Kumar	Om Prakash Keshari
62	69	Mohd Rafi Lone	Mohd Abdullah Lone
63	70	Vineeta Kumari	Kanwal Singh
64	71	Nand Kishore	Ram Krishna Chaurasia
65	72	Gaurav Jaswal	Vijay Kumar Jaswal
66	73	K Abhimanyu Kumar Patro	K Bauri Bandhu Patro
67	75	Kritika Aditya	Kulbhushan Jain
68	76	Deepa Sharma	Bharat Sharma
69	77	Kodeeswari M	K K Manoharan
70	78	Sourav Bhowmick	Subhash Bhowmick
71	79	Ujwal Deep Kadiyam	Kadiam Babu Rao
72	80	Sandeep Kumar	Uma Shankar
73	81	Preeti Verma	Guru Bachan Verma
74	82	Sandeep	Tejbir
75	83	Shankar Bhattacharjee	Ajay Bhattacharjee
76	84	Aruna Tyagi	Tilak Raj Tyagi
77	85	Suraj Kumar Saw	Subodh Kumar Saw
78	86	Praveen Kumar	Ram Narayan Sah
79	87	Mohit Kumar	Satendra Singh
80	88	Lakhan Dev Sharma	Surya Narayan Sharma
81	89	Poonam Jaglan	Satbir Singh
82	90	Trapti Sharma	S.R. Sharma
83	91	Indu Yadav	Ramesh Kumar
84	92	Richa Sharma	Vijay Sharma
85	93	Ajay Yadav	Rajender Singh
86	94	Sounik Kiran Kumar Dash	Bijaya Kumar Dash
87	95	Arun Kumar	Sanjay Kumar
88	96	Sushmita Dandeliya	Deepak Kumar Verma
89	97	Sunil Kumar Pandey	Jeet Narayan Pandey

90	98	Himanshu Pramod Padole	Pramod Padole
91	99	Vimal Kumar Singh Yadav	D.S. Yadav
92	101	Ratikanta Sahoo	Narendra Prasad Sahoo
93	102	Dilip Kumar Choudhary	Late. Mahendra Choudhary
94	103	Sumer Singh Singhwal	Tarachand Singhwal
95	104	Shuvam Pawar	Pradeep Pawar
96	106	Rajinikanth C	Chinnaian P
97	108	Yogendra Kumar Gupta	Ramesh Chandra Dhanotia
98	109	Ankit Kajaria	Deepak Kajaria
99	110	Sourav Roy	Kalachand Roy
100	111	Satish Chandra	Ganga Sharan
101	112	Arun Goel	Lt. Dinesh Goel
102	113	Tanmay Dubey	Prakash Chandra Dubey
103	114	Divya Sharma	Ramesh Kumar Sharma
104	115	Yadvendra Singh	Ratan Singh
105	117	Abhishek Agrahari	Prem Shanker Gupta
106	118	Rajesh Kumar Bathija	Gokul Singh Bathija
107	119	Rajiv Dey	Late B.N. Dey
108	120	Subiman Chatterjee	Mrinal Kanti Chatterjee
109	121	Ramji Gupta	Gulab Chandra Gupta
110	122	Mohammad Farhan Khan	Mursaleen
111	123	Amit Kumar	Sharda Nadan Chaudhary
112	124	Gourab Dass	Ashok Kumar Das
113	125	Seema	Pradeep Boora (Husband)
114	127	Rajeev Kumar	Surender Chauhan
115	128	Poonam	Vikas Chahal
116	129	Geetika Dua	Gaggi Dua
117	131	Abhijit Mitra	Subir Kumar Mitra
118	132	Lokendra Chouhan	Surendra Chouhan
119	133	Lalit Singh	Mehar Singh
120	134	Kangkana Baishya	Rakesh Sharma
121	135	Priyanaka Bhardwaj	Nipunn Sharma
122	136	Neha Kailash Nawandar	Kailash
123	137	Dinesh	Balram
124	138	Amarish Dubey	Sadanand Dubey
125	139	Shikhar Gupta	Govind Kumar Gupta
126	140	Ankur Kumar	Kunwar Pal Singh
127	141	Mayoorika Shukla	Piyush Bharadwaj
128	142	Sonali	Ashwani Kumar
129	143	Prabhat Kumar Panda	Banamali Panda
130	144	Tasher Ali Sheikh	Nur Hossain Sheikh
131	145	Nitin	O P Sharma
132	146	Kousik Midya	Shyam Pada Midya
133	147	Abhishek Pahuja	Nares Pahuja
134	148	Om Prakash	Kallu Prasad
135	149	Adarsh Nigam	Rakesh Nigam
136	150	Mahesh M	M Ravi Kumar

137	151	Chandra Shankar	Sharat Chandra Gupta
138	152	Alok Kumar	Rameshwar Dayal
139	153	Reena Kumari	Vijak Rajak
140	154	Jitendra Kumar Goyal	Shambhu Dayal Goyal
141	155	Krishana Dayal Shukla	Keshav Das Shukla
142	156	Saptarshi Ghose	Biswadeb Ghose
143	157	Swati Joshi	Girish Chandra Joshi
144	158	Vinay Kumar Tiwari	Shatru Sudan Tiwari
145	159	Ankita Adarsh Malhotra	Adarsh Malhotra
146	160	Rajanish Kumar Singh	Surender Nath Singh
147	161	Girraj Sharma	Choti Lal Sharma
148	162	Praveen Maurya	Teerath Ram
149	163	Rajib Sharma	Jadu Nath Sharma
150	164	Amarjit Roy	Amal Kumar Roy
151	165	Surender Hans	Lal Chand
152	166	Chandradeep Singh	Gyan Pal Singh
153	167	Girish Chandra Ghivela	Kishan Ghivela
154	168	Ghanendra Kumar	Prem Kumar
155	169	Vinay Kumar Trivedi	Ram Kumar Trivedi
156	170	Om Mishra	Ganshyam Chand Mishra
157	171	Mukesh Kumar	Ram Rattan
158	172	Somesh Kumar	Dharampal Singh
159	173	Ranjit Singh	Sham Singh
160	174	Amandeep Singh	Mohinder Singh
161	176	Ajay	Raghibir Singh
162	178	Amit Kumar Baghel	Raj Kumar Baghel
163	179	Snekha Thakran	Vijay Kumar
164	181	Monoj Kumar Singha	Arun Kumar Singha
165	183	Aman Kataria	Pawan K Kataria
166	185	Nalin Kumar Sharma	Mohan Lal Sharma
167	186	Harikesh	Jagdish Dalal
168	188	Manish Kumar	Durga Dass
169	189	Harmeet Singh	Kulwant Singh
170	190	Rakesh Palisetty	Manikya Rao Palisetty
171	191	Konark Sharma	Krishan Lal
172	192	Naveen Cheggoju	Cheggoju Ravindra Chary
173	193	S. Ganapathy	Pl. Sarvanavel
174	194	Shubhi Kansal	Rajeev Kansal
175	195	Ramanand Sagar Sangam	Babulal Prasad
176	197	Vikram Singh	Ishwar Singh
177	198	Beechu Naresh Kumar Reddy	Beechu Nageswara Reddy
178	199	Rohan Prasad	Bhairaw Prasad
179	200	Monika Kumari	Ram Dwara Valecha
180	201	Ritesh Kumar Kushwaha	Dashrath Kushwaha
181	202	Abhishek Narayan Tripathi	V.N. Tripathi
182	204	Praveen Pawar	Baliram Pawar
183	205	Prashant Wagambar Patil	Wagambar Vishvnath Patil

184	206	Sarabdeep Singh Bijral	Ramneek Singh Bijral
185	207	Abhay N Gaikwad	Nararyanrao
186	208	Varun Mishra	Arun Kant Mishra
187	210	Prateek Dolas	Vivek Chintaman Dolas
188	213	Nilesh Anand Srivastava	Vinod Kumar Srivastava
189	214	Swati	Rajender Singh
190	215	Jaspinder Kaur	Gurpej Singh
191	216	Jailsingh Bhookya	Rajanna
192	217	Vejandla Kishore	V.Venkatarao
193	219	Jeet Ghosh	Anil Ghosh
194	220	Shyam Krishan Joshi	Gopal Krishan Joshi
195	222	Dinesh Kumar	Balbir Singh
196	223	Tej Singh	Surendra Singh
197	224	Shivani	Vinod Kumar
198	225	Narender Singh Pal	Naubat Singh
199	226	Raghav Sharma	Anand Prakash Sharma
200	227	Dipak Kumar Ghosh	Manik Chandra Ghosh
201	228	Payal	Narender Kumar
202	229	Abhinay Sandupatla	S Mahesh Kumar
203	231	Rajashree Nayak	Bunil Ku. Balabantaray
204	232	Apangshu Das	Niranjan Das
205	233	Nishit Malviya	Amrit Lal Malviya
206	N2	Rajiv Kumar	Tek Chand
207	N3	Naveen Bokka	B Venkateswara Rao
208	N4	Rohit Buddhiram Chaurasiya	Buddhiram R. Chaurasiya
209	N5	Rajiv Verma	Sham Lal
210	N6	Dr. Manish Kumar	Late. Sh. Rulda Ram
211	N7	Aakankasha Lakhanpal	Sanjeev Kumar Lakhanpal
212	N8	Meenu Rani	Ravi Saini
213	N9	Monika	Sh. Sukhbir Singh
214	N10	Dr. Alisha Priya	Ajay Kumar Ranjan
215	N11	Prabhakar Agarwal	Vijay Kumar Agarwal
216	N12	Himanshu Singh	Kamlesh Kumar Yadav
217	N14	Brijesh Kumar Singh	Uma Shanker Singh
218	N15	Saikat Chandra Bakshi	Subash Chandra Bakshi
219	N16	Dr. Preeti Singh	Anurag Singh
220	N17	Amit Kumar	Mahender Singh
221	N18	Dr. Neelima Singh	Dr. Abhimanu Singh
222	N19	Dr. Shailza Gotra	Mr. Rakesh Gotra
223	N20	Dr. Manish Verma	Late Kishor Verma
224	N21	Vaibhav Kumar Gupta	Ramesh Chand Gupta
225	N22	Dr. Arti K. Sharma	Prafful Sharma
226	N23	Laxmidhar Biswal	Chandramani Biswal
227	N24	Teena Gakhar	Surendra Gakhar
228	N25	Ashish Kumar	Kuldeep Singh
229	N26	Neha Paras	Paras Ram
230	N27	Robin Kalyan	Sh. Karam Saingh

231	N28	Dr. Ravinder Kumar	Ram Singh
232	N29	Nitesh Mudgal	Umesh Mudgal
233	N30	Asha	Js Balhara
234	N31	Dinesh Rano	Tapan Rano
235	N34	Sumeet Kalra	Gurdeep Singh Kalra
236	N35	Amanjot Kaur Lamba	Dr. Ujwaljit Singh
237	N36	Soumyaranjan Routray	Late Sudam Charan Routray
238	N37	Monika	Ranbir Singh
239	N38	Ravendra Singh	Ram Kirti Singh
240	N40	Dr. Kousik Midya	Shyam Pada Midya
241	N41	Dr. Abhay Vidhyarthi	Shri R.S Vidhyarthi
242	N42	Sanmukh Kaur	S. Amar Singh
243	N43	Aijaz Ahmed	Afaq Ahmed
244	N44	Dr. Harshwardhan Choudhary	Omveer Singh Choudhary
245	N45	Niranjan Raj	Rabinandan Mishra
246	N46	Vineet Singh	Rajender Singh
247	N47	Ajay Kumar Maurya	Ram Naresh Maurya
248	N48	Dr. Sambit Satpathy	Mr. Parsuram Satpathy
249	N49	Mangal Das	Uma Shanker Katiyar
250	N50	Dr. Megha Agarwal	Dinesh Kumar Agarwal
251	N51	Ajit Kumar	Nandlal Prasad
252	N53	Neeraj Kumar	Sri Rameshwar Pandit
253	N54	Gaurav Shrivastav	Gyan Parkash Shrivastav
254	N56	Yogesh Kumar Verma	Raghu Raj Singh
255	N57	Dr. Vibha Tiwari	Shri V.K Shukla
256	N58	Dheeraj Dubey	Kedar Nath Dubey
257	N59	Bittu Kumar	Naresh Prasad
258	N60	Salabh Kumar Mishra	Shyam Kishore Mishra

Date: 02-05-2023

**Sd/-
Director,
IIIT Sonapat, Haryana**