



April - September 2020

Electronics & Communication Engineering Department conducted a Quiz programme on August 31, 2020 of 1 hour duration through online mode for B.Tech ECE final year students. More than 200 students participated in the online quiz. Merit Certificates for 1st, 2nd, 3rd positions, Quiz Qualified certificates for all scoring 60% and more, participation certificates were given to students, under the coordinatorship of Dr. Balwinder Singh and Dr. Kanika Sharma.

NITTTR, CHANDIGARH

TO BENEFIT THE **B.Tech ECE Students**

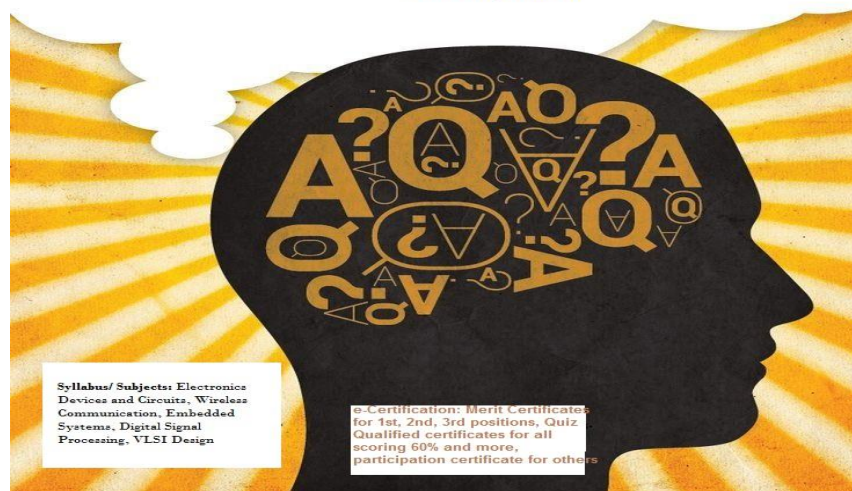
August, 31, 2020 . No Registration fee

Quiz Duration: 1 Hr.

No. of questions: 60

• Quiz starts at 10:30AM

Platform: Google forms/ other similar platform



➤ Training Programme:

A. Long term Programme:

- ME Regular - Students of Batch 2019 started with their second semester ME programme.
- ME Regular - Students of Batch 2018 started their thesis work.
- ME Modular - Students of Batch 2018 & 2019 completed their 5th & 3rd spell respectively.
- Ph.D. Scholar - 2 students started their course work

ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

ICT online Programme:

Topic	Date		Faculty
	Start Date	End Date	
Latest Wireless and Computing Technologies	14.04.2020	18.04.2020	BSD/GS
Low Power VLSI Design	20.04.2020	24.04.2020	SSG/BR
Image and Embedded Processing	27.04.2020	01.05.2020	AK/KS
Academic Leadership Enhancement in Technical Institutions	04.05.2020	08.05.2020	SSG/BSD
Images and Embedded Processing	11.05.2020	15.05.2020	AK/KS
Technological Interventions using Wireless Communication	18.05.2020	22.05.2020	BSD/GS
Research Trends in VLSI Design	25.05.2020	29.05.2020	SSG/BR
VLSI Physical Design Techniques	15.06.2020	19.06.2020	SSG/BR
Advances in Antenna Design Techniques and Simulations using CST Studio Suite	22.06.2020	26.06.2020	BSD
Nanoelectronics Devices and Circuits Design	06.07.2020	10.07.2020	SSG/BR
Antenna Design Techniques and Software Simulation using HFSS	13.07.2020	17.07.2020	BSD
Basic MATLAB Programming	20.07.2020	24.07.2020	AK
Image Processing using MATLAB	27.07.2020	31.07.2020	AK
Embedded World	27.07.2020	31.07.2020	KS
Digital and Analog VLSI Design	03.08.2020	07.08.2020	BR/SSG
Latest Wireless Technologies	10.08.2020	14.08.2020	GS
Nanoelectronics Devices and Circuits	17.08.2020	21.08.2020	BR/SSG
Industry Partnered online STC on IoT and LoRaWAN Technology using Arduino	17.08.2020	21.08.2020	BSD
Digital Signal Processing Fundamentals	24.08.2020	28.08.2020	AK
IoT & Embedded Systems	24.08.2020	28.08.2020	KS
VLSI Design Challenges and Opportunities	21.09.2020	25.09.2020	SSG/BR
Biomedical Instrumentation and Applications	28.09.2020	02.10.2020	AK
IoT and Reconfigurable WSNs	28.09.2020	02.10.2020	KS

STC organized with other Institute

Nanoscience for Engineering Applications" Jointly organized by NITTTR, CHD and NIT, Jalandhar	22.06.2020	26.06.2020	PV/BR
Artificial Intelligent and its Applications Jointly organized by NITTTR, CHD and NIT, Jalandhar	27.07.2020	31.07.2020	PV/BR
Internal of Things and Its Application Jointly organized by NITTTR, CHD and NIT, Jalandhar	07.09.2020	11.09.2020	PV/BR

➤ **Research & Development: (Completed)**

- ME Pre-thesis – 02
- ME Final Thesis – 01

LIST OF PUBLICATIONS

- i) Girish Wadhwa, **Balwinder Raj**, "An Analytical Modeling of Charge Plasma based Tunnel Field Effect Transistor with Impacts of Gate underlap Region" Superlattices and Microstructures, Elsevier, Vol. 142, PP. 106512, June 2020.
- ii) Shailendra Singh, **Balwinder Raj**, "Modeling and Simulation analysis of SiGe heterojunction Double Gate Vertical t-shaped Tunnel FET", Superlattices and Microstructures, Elsevier [Volume 142](#), PP. 106496, June 2020
- iii) Girish Wadhwa, Jeetendra Singh, **Balwinder Raj**, "Design and Investigation of Doped Triple Metal Double Gate Vertical TFET for performance Enhancement", Journal of Silicon, Springer, July 2020.
- iv) Shailendra Singh, **Balwinder Raj**, "Analytical Modeling and Simulation of SiGe heterojunction Dual Material Gate Vertical t-shaped Tunnel FET, Journal of Silicon, Springer, 2020
- v) Sunil Kumar, Balwant Raj and **Balwinder Raj**, "Dual-Material Gate-Drain Overlapped DG-TFET Device for Low Leakage Current Design", Journal of Silicon, Springer, May 2020.
- vi) Rachit Manchanda, **Kanika Sharma**, "A review of reconstruction Algorithm in Compressive Sensing" paper in IEEE sponsored International Conference on Advances in Computing, Communication and Materials (ICACCM), Conference ID-50413, held from 21st and 22nd Aug.2020.
- vii) Vinod K, **Kanika Sharma**, "A Review on Different Cluster Head Selection Methods for Improving the Lifetime of Wireless Sensor Network", International Journal of Advance Computational Engineering and Networking (IJACEN) ISSN:2320-2106, Volume-8, Issue-4, April 2020.
- viii) Jamal Kutty, **Kanika Sharma**, "Improved DV- Hop localization Algorithm for Wireless Sensor Networks", International Journal of Engineering and Advance Technology (IJEAT), Vol. 9, Issue 5, June 2020.
- ix) Rachit Manchanda, **Kanika Sharma**, "SSDA: Sleep Scheduled Data Aggregation in Wireless Sensor Network- based Internet of Things", International Conference on Data Analytics and Management, An Indo-European Conference (ICDAM-2020), Organized jointly by Jan Wyzykowski University, Poland and B.M Institute of Engineering and Technology, India on 18th June 2020.
- x) Roshan Lal, **Kanika Sharma**, "GAEER: Genetic Algorithm Based Energy Efficient Routing Protocol in Wireless Sensor Network" International Journal of Scientific and Technology Research (Scopus Listed with ISSN 2277-8616), Vol.9, Issue 6, June 2020.
- xi) Jamal Kutty K, **Kanika Sharma**, "Advanced DV-Hop Localization Algorithm for Wireless Sensor Network", International Journal of Advanced Research in Engineering and Technology (IJARET) ISSN Print: 0976-6480 and ISSN Online: 0976-6499, pp. 359-369, Volume-11 Issue-8, August2020.

- xii) Devarapaga Sriramulu, **Garima Saini** and **Balwinder S. Dhaliwal**, "Design of Wearable Microstrip Patch Antenna for WBAN Applications to Enhance Bandwidth using Multiple Slots and CRR," International Journal of Advanced Research in Engineering and Technology, Vol. 11, No. 8, August 2020, pp. 319-327.
- xiii) Susamma Mathew, **Garima Saini**, **S.S Gill**, "Design of Compact MIMO Antenna for 5G Mobile Terminal" International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-9 Issue-3, pp. 202-207, September 2020

Lab Manual/R & D / Consultancy Activities

- i) Research project titled "Design and Development of Junctionless Nanowire TFET Biosensor" for years 2019-2022, SERB-DST funded (36 Lakhs). – **Dr. Balwinder Raj**
- ii) Received sanction letter of grant of Rs. 93,000/- for AICTE Training and Learning (ATAL) Academy programme Online FDP on "Flexible and Wearable Antennas: Recent Advancements, Fabrication Techniques and Applications," (Thrust Area: Wearable Devices) being organized from October 12 to 16, 2020. – **Dr. Balwinder S. Dhaliwal**
- iii) A Lab Manual on Programming of Arduino using TINKERCAD is developed in April 2020 by **Dr. Kanika Sharma**

STCs/FDPs/Seminar/Webinar attended by the Faculty

- i) Attended STC on "Quantum and Energy Materials: Potential & Applications" (ICTO-45) conducted by NITTR Chandigarh from 18 to 22 May 2020. – **Dr. Balwinder Raj**
- ii) Attended CPSC's Online Regional Program on "Strengthening TVET Instructional Management System" organized by *Colombo Plan Staff College* Philippine held from 13-17 July 2020 – **Dr. Balwinder Raj**
- iii) Attended Online Short Term Course on "Sub-micrometer Semiconductor Device to Circuit Co-Design and Modelling Techniques" (SSDCDMT-20) conducted, ECE, NIT Jalandhar, during 20th - 24th Aug 2020 – **Dr. Balwinder Raj**
- iv) Attended Online Short Term Course on "Latest Developments in Communication and Microwave Technologies" conducted, ECE, NIT Jalandhar, sponsored by TEQIP-III, during 2nd Sep - 6th Sep 2020. – **Dr. Balwinder Raj**
- v) STC attended - On Metamaterial & its Applications organized by IEEE Antenna & Propagation Society (APS) Chapter –in association with IEEE Rajasthan Subsection, Malaviya National Institute of Technology Jaipur and Government Women Engineering College Ajmer, during July 27-31, 2020 – **Dr. Garima Saini**
- vii) AICTE Training and Learning (ATAL) Academy Online FDP on "Augmented Reality (AR) / Virtual Reality (VR)" from 2020-9-7 to 2020-9-11 at VNR VignanaJyothi Institute of Engineering and Technology – **Dr. Balwinder Singh**
- viii) Attended Capacity Building Module Training programmes by Faculty of ECE deptt.
- ix) 5-Days Webinar Series on 'Atmanirbhar Bharat: Transmutation from Privation to Exuberance' from 27-07-2020 to 31-07-2020 as Atmanirbhar Bharat Task Force Member. - **Balwinder S. Dhaliwal**

- x) Attended National Seminar on Wireless Communication & Commercialization Technology sponsored by TEQIP-III held on April 30, 2020 organized by UIET, Chandigarh and Government College of Engineering and Technology, Jammu – **Dr. Garima Saini**
- xi) Participated in Online Panel Discussion on MAKING MENTORING RELEVANT: NEP 2020 PERSPECTIVE Conducted by NITTTTR Bhopal, Chandigarh, Chennai, Kolkata on 21.09.2020 — **Dr. Kanika Sharma & Dr. Garima Saini**
- xii) Attended webinar on TEACHING AND LEARNING MODES POST COVID – 19 held on 29th April 2020 conducted by Punjabi University, Patiala, Punjab - – **Dr. Garima Saini**
- xiii) Attended Online Training Program on RCS SIMULATION USING HFSS conducted by Ansys in collaboration with IEEE Bangalore Section, MTTT-S Bangalore Chapter, Entuple Technologies on 29 May 2020 – **Dr. Garima Saini**

**Coordinator:
Dr. Kanika Sharma
ECE Department**