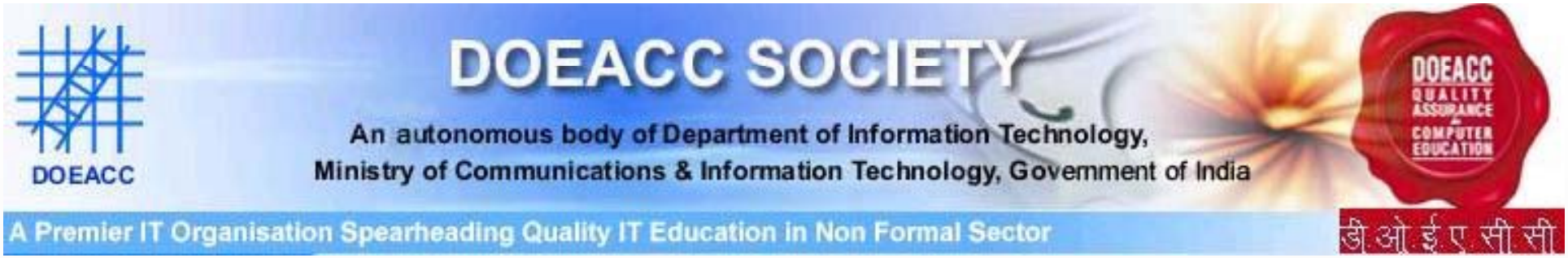


Now
National Institute of Electronics and Information Technology

(NIELIT)

Department of Information Technology
Ministry of Communications and Information Technology , Government of India
http://www.doeacc.edu.in

A Premier Institution for Quality Education and Training in the areas of Information, Electronics & Communication Technology (IECT)

Objectives

- To create Human Resource in the area of IECT through long term formal, non-formal and short term courses.
- To accreditate Training Institutes in non-formal sector to conduct DOEACC Scheme.
- To conduct National Level Examination in Electronics, IT & allied fields and Certification thereon.
- To undertake Sponsored Training and R&D Projects.
- To provide Consultancy & Services.
- To create awareness about IT by training masses through IT Literacy Programmes.

NIELIT Centres

Society has Centres in19 States of India at the following locations.

S. N.	City (State)	S. N.	City (State)
1	Agartala (Tripura)	2	Aizawl (Mizoram)
3	Ajmer (Rajasthan)	4	Aurngabad (Maharashtra)
5	Calicut (Kerala)	6	Chandigarh (Chandigarh)
7	Chennai, Puddukottai (Tamilnadu)	8	Delhi (Delhi)
9	Gangtok (Sikkim)	10	Gorakhpur, Lucknow (Uttar Pradesh)
11	Imphal (Manipur)	12	Itanagar (Arunanchal pradesh)
13	Kohima, Chuchuyimlang (Nagaland)	14	Kolkata (West Bengal)
15	Patna (Bihar)	16	Shillong (Meghalaya)
17	Shimla (Himachal Pradesh)	18	Srinagar, Jammu (Jammu & Kashmir)
19	Tezpur, Guwahati (Assam)		

Well Networked throughout India with the Presence of its 900 Accredited Institutes

NIELIT – Spectrum of Courses

S. N.	Level	Non -formal	Formal
1.	Primary Skills	Awareness in Computer Concepts (ACC) Basic Computer Course (BCC) Course on computer Course (CCC)	-----
2.	Secondary Skills	O Level – IT/ Hardware/Bioinformatics A Level - IT/ Hardware/ Bioinformatics ITES-BPO (Customer Care/ Banking) Certification in Information Security Advance Diplomas Skill oriented short-term courses	3 years Diploma Electronics Production & Maintenance Electronics & Telecom Engineering Electronics Engineering Computer Science & Engineering Post Graduate Diplomas B.C.A.
3.	Tertiary Skills	B Level - IT/ Bioinformatics C Level - IT	M.C.A. M. Tech. (ED&T, Embedded system) Ph. D.

Activities of NIELIT Centres

- **Formal Courses** Approved by All India Council of Technical Education (AICTE) and Recognized by Universities.

- **M.Tech**
  Electronics Design & Technology (*Aurangabad, Gorakhpur)*
  Embedded Systems (*Calicut)*

- **Master of Computer Applications** (*Calicut, Aizawl, Srinagar/ Jammu, Imphal)*

- **Bachelor of Computer Applications** (*Aizawl, Kohima, Imphal)*

- **Diploma** in Electronics Production & Maintenance (*Aurangabad)*

- **Diploma** in Electronics Engineering (*Imphal)*

- **Diploma** in Computer Science & Engineering (*Imphal, Aizawl)*

- **Diploma** in Electronics & Telecom Engineering (*Aizawl)*

Activities of NIELIT Centres Contd..

Short Term Courses in the areas of:

- Electronics Design Technology
- Information Technology
- Manufacturing Technologies
- VLSI and Embedded Systems
- Information Security
- Maintenance Engineering
- E-learning
- Entrepreneurship Development Programme
- Customized Training Programmes

NIELIT National Level Schemes (Non-Formal Courses)

- O/A/B/C Level IT Courses
- Bio-Informatics BI - O/A/B Level Courses
- Hardware Courses CHM - O/A Level Courses
- ITES-BPO (Customer Care & Banking)
- Certification in Information Security
- Certificate Course in Computer Concepts (CCC)
- Basic Computer Course (BCC)
- Awareness in Computer Concepts (ACC)

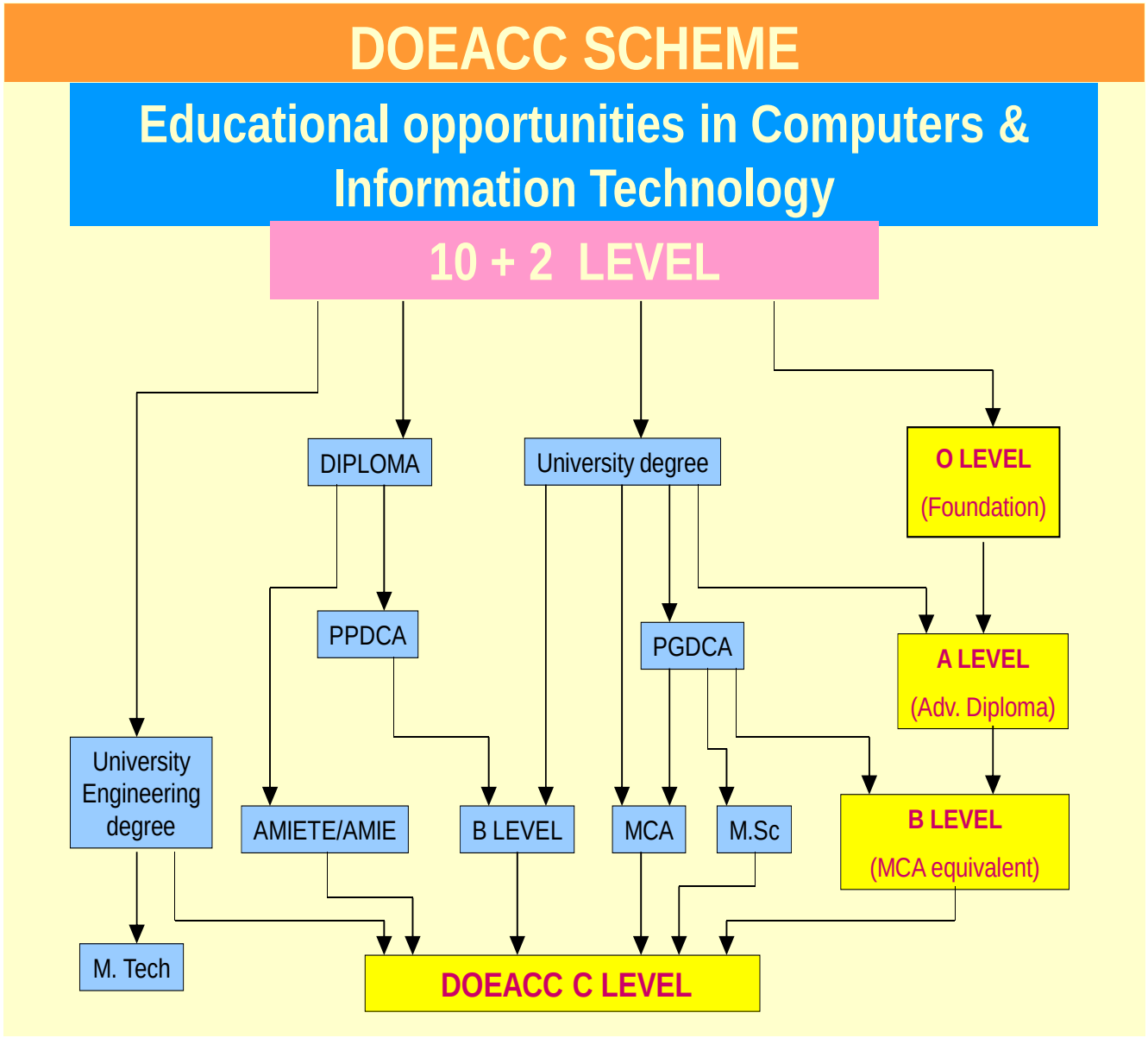
Training Capacity (per annum)

S.N.	Activities	No. of Candidates
1	Students registered for DOEACC Scheme (O/A/B/C level-IT, Bioinformatics, Hardware) Examination	60,000
2	IT Literacy Courses(CCC, BCC) examination	2,00,000
3.	Formal Long Term Courses (M. Tech, MCA, BCA, PGDCA, Diploma, Diploma in Electronics Engg. & IT)	2,000
4.	Training for Short Term Courses in Electronics and IT of duration upto1 year	30,000
Total		**2,92,000**

Since introduction of the DOEACC Scheme more than **8.5 lakh candidates have been registered** and about **4.0 lakh candidates have qualified** the various DOEACC Computer Courses at O/A/B & C Levels.

In CCC online examination approximately **6.5 lakh candidates have appeared** and **4.5 lakh candidates have been certified**.

DOEACC SCHEME



'O' - Foundation
(4 papers, 480 Hours)

'A' - Advance Diploma
(10 papers, 1200 Hours)

'B' – MCA equivalent
(25 papers, 3200 Hours)

'C' – Designed to be equivalent to M.Tech

(18 papers, 1160 Hours)

International Linkages

- DOEACC B and C Level Qualifications with three and one year experience, respectively are recognized as equivalent to Associate Certified IT Project Manager (CITPM) of National Infocomm Competency Centre (NICC) Singapore and Singapore Computer Society (SCS) as per the MOU signed in August, 2002 between DOEACC Society and NICC & SCS.

- DOEACC A, B and C Level qualifications have been recognized as equivalent to Fundamental Information Technology Engineer, Software Design & Development Engineer and Application System Engineer Standards, respectively of Japan Information Technology Engineers Examination Center (JITEC) of Information Technology Promotion Agency (IPA), Japan under an MOU signed between DOEACC and IPA.

Recognition

- DOEACC qualifications are widely accepted by IT Industry at National as well as International level.

- O, A & B level certificates are recognized by Government of India as equivalent to ‘Foundation level’, ‘Advance Diploma’ and ‘MCA level’ respectively for the purpose of employment in Central Government services.

- DOEACC A and B level holders are allowed to pursue higher studies in MSc(IT)/MSc(CS)/MCA and M.Tech respectively from many Universities of India.

DOEACC SCHEME ON HARDWARE COURSES (DSHC)

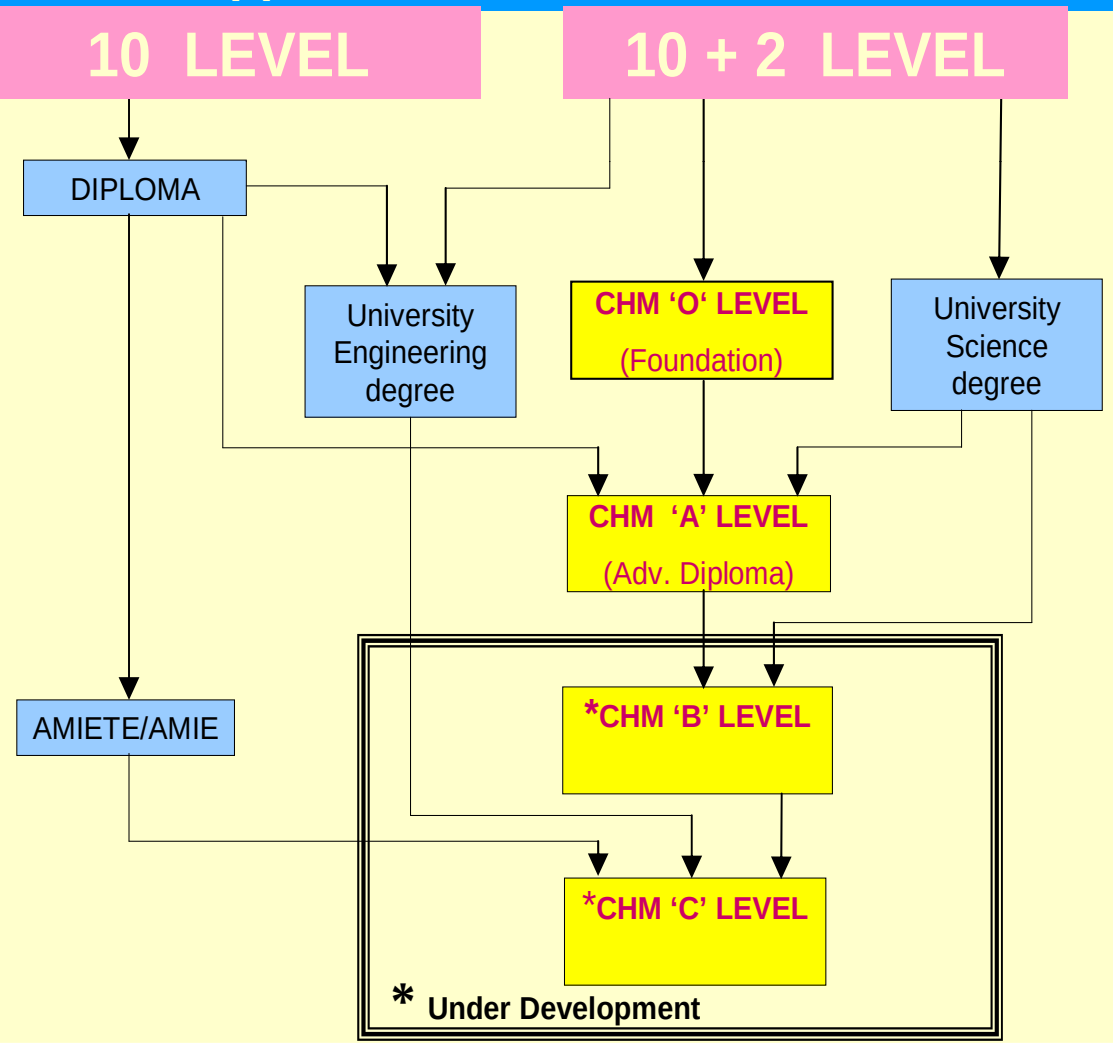
Objective: To generate quality manpower for Computer Hardware Maintenance and Networking

Course Name	Computer Hardware Maintenance	Computer Hardware Maintenance & Networking
Code	CHM – 'O' Level	CHM – 'A' Level
Duration	One Year (480 Hrs)	One Year (1200 Hrs)
Eligibility	(10+2) Pass or ITI (One year after 10th Pass) in Electrical/ Electronics/ Computers/ Instrumentation Engineering	'CHM-O' Level Pass/ Diploma in Electronics/Computers/ Electrical / Instrumentation after 10th Pass or Undergoing 2nd Year of B.Sc. with Physics/ Electronics/ Computers and Accredited 'A' level course (may be concurrent) (Certificate / Diploma will be awarded only after completion of the graduation)
Course Structure	Total 480 Hrs of study for Four (4) Papers.	Total 1440 Hrs of study for Ten (10) Papers.
Exam	Theory Papers : Four (4) Practicals : Two (2)	Theory Papers : Ten (10) Practicals : Three (3)

DOEACC SCHEME ON HARDWARE COURSES (DSHC)

DOEACC SCHEME ON HARDWARE COURSES (DSHC)

Educational Opportunities in Hardware & Networking



CHM 'O' - Foundation (4 Papers, 480 Hours)

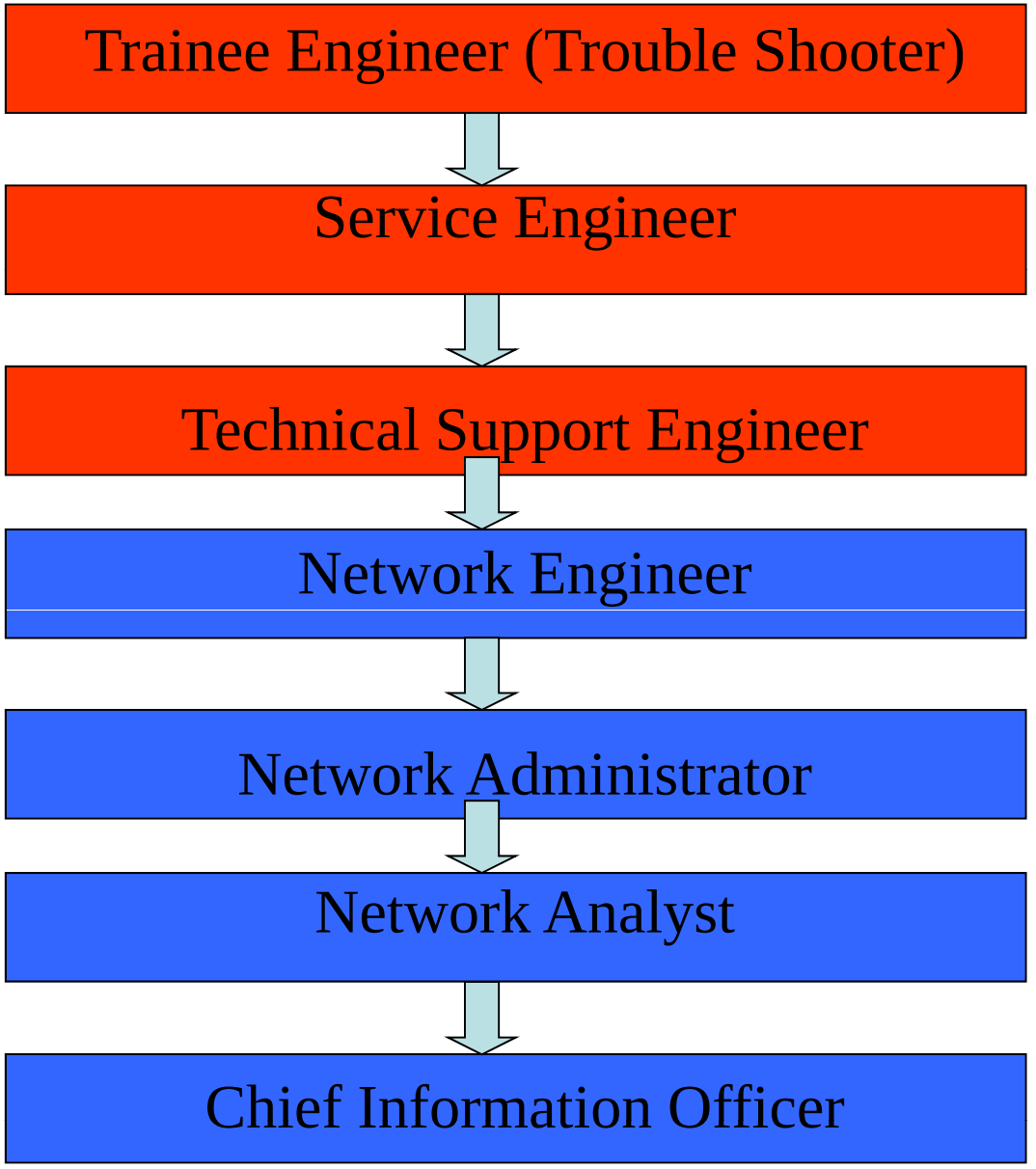
CHM 'A' - Advance Diploma (10 Papers, 1200 Hours)

*** CHM 'B' Level & CHM 'C' Level are under development**

Career Opportunities of DOEACC Scheme on Hardware Courses

Diploma in Computer Hardware Maintenance (CHM - O level)

Advance Diploma in Computer Hardware Maintenance & Networking (CHM - A Level)



DOEACC Scheme in Bio-Informatics

Bioinformatics is the convergence of Information Technology & Life Sciences. It is a fast growing discipline & has emerged as a cutting edge technology of the knowledge revolution. Quality Human Resource Development in this area is therefore a challenging task. To meet the growing demand for trained Bio-informatics professionals in India, NIELIT has developed a complete range training programmes in the area of Bio-Informatics .

Eligibility:

Diploma in Bio-informatics(BI-O level) :10 + 2 (Science) pass or ITI (one year after 10 pass) in Electrical / Electronics / Computers / Instrumentation Engineering.

Post Graduate Diploma in Bio-informatics(BI-A level): Graduate

Master's Level (BI-B level) : Graduate

Successful candidates of B level are awarded M.Sc.(Tech) after completing Wet lab from West Bengal Technical University.

DOEACC Scheme in Bioinformatics

Career opportunities:

'O' level (Diploma): Assistant Programmers, Technical Assistants, Information Assistants etc.

'A' level (Advance Diploma): Programmers, Training faculty, Research Assistants etc.

'B' level (Master's level): Senior Programmer, Scientist, System Analyst, Lecturer, Research Associate, Information Officer etc.

ITES – BPO (Customer Care/ Banking)

Customer Care: Course consisting of interactive sessions in developing the soft skills & IT skills with a course duration of 160 hours spread over 8 weeks (2 months). Graduates and undergraduates with good English communication skills are eligible for the course.

Banking: A Memorandum of Understanding (MoU) was signed between NIELIT and Indian Institute of Banking & Finance (IIBF) for launching the joint certification scheme in ITES-BPO Banking. The course has since been launched on 19th September, 2009.

IT Security – Courses and Certification under Information Security Education Awareness (ISEA) , DIT

As part of launching a National Level Certification Scheme in Information Security under the ISEA Project of DIT, the training for Level 1-Certified System Security Analyst (CSSA) has started in July' 2010. The training of Level 2 - Certified System Security Professional and Level-3 have started January 2011.

IT Literacy- Course on Computer Concepts (CCC)

- Based on the recommendation of National Task Force on Information Technology and Software Development, the Society in the year 1999 launched a programme on computer literacy namely, 'Course on Computer Concepts', now popularly known as CCC.

- The CCC has gained popularity and marked recognition amongst state government of Gujarat, Maharashtra and Uttar Pradesh and by various Government Departments and has made compulsory for fresh recruitment and / or in service promotion.

- The total duration of the course is 80 hours. The entire programme includes topics on introduction to computers; operating system; word processing; spreadsheet; computer communication and Internet; WWW and web browsers; and presentation.

IT Literacy- CCC course (E-learning Mode)

➔The CCC Course is available in self paced e-learning mode to institutes and candidates on the NIELIT's website.

➔The Course is currently available in 22 Indian Regional languages.

➔Access to the e-learning material is provided free of cost through a dedicated portal **http://elearn.doeacc.edu.in**, based on unique login ID and password provided to the user after completion of online registration process.

➔The online and CD based exam of CCC is conducted three times a year. Now it is also available on every 1st and 3rd Saturday of each month.

Basic Computer Course (BCC)

Duration: 36 hours (Th: 10 hrs + Practical: 22 hrs. + Tut: 04 hrs)

Eligibility: 8th pass

Broad Course Contents:

1. Knowing computer
2. Operating Computer using Operating System
3. Communicating using the Internet
4. Using e-gov applications
5. Communications & Collaboration
6. Understanding Word Processing
7. Using Spread Sheet
8. Making small presentation

Recognition: The IT Literacy programme of NIELIT namely; Basic Computer Course (BCC) has been approved as one of the IT literacy course compulsory for all the training schemes of DGE&T w.e.f session starting from August, 2011 vide their letter No. DGE&T-19(19)/2010-CD dated 15.10.2010. NIELIT has also been approved as one of the assessing & certification bodies for assessment of ITI/ ITC trainees in IT Literacy Programme.

Awareness in Computer Concepts (ACC)

- Awareness in Computer Concepts (ACC) is an entry level course for common mass for learning the operations of Computers and Internet for accessing e-Governance Applications etc.

- It is a 20 hours course consisting of 6 modules. There will be no examination; certificates of participation will be issued to the candidates on successful completion of their training.

Future Plans

- NIELIT has a plan of developing a pool of 10 million trained and skilled workforce on IECT by the year 2022, through various formal, non-formal and short term courses, to meet the domestic requirements of a rapidly growing economy in the identified high growth sector(s).

- Empowering Women of Rural India through Digital Literacy under Common Service Centres (CSC).

- Mass IT Literacy Programme for providing Upword Mobility through Integration of Formal & Non-Formal Programmes for labour force of Organised and Non-Organised Sectors.

Areas of Expertise for Mutual Cooperation

The expertise available with the NIELIT can be divided in the following broad categories, which can be offered for mutual co-operation at International level :

❖Setting up of Institutions :

- for providing Electronics & IT Awareness Courses for Common Man.
- for providing Knowledge based Skills Courses in the field of Electronics, Agri-Electronics, Opto-Electronics, Computers/IT Multimedia & Animation, Information Security, Bio-informatics, Maintenance Engineering (Computer Hardware Maintenance and Networking) Electronics Product Design, etc. for enhancing employment opportunity and also meeting the skilled Human Resource Requirement of local Industry.
- for higher learning in the field of Information, Electronics, Communication Technology (IECT) (Centre of Excellence) to develop Designers, Scientists and Technical Professionals.

Contd..

Areas of Expertise for Mutual Cooperation

❖ Schemes :

- To transfer know-how to overseas organizations for implementing Schemes similar to DOEACC i.e., establishing systems of Design & Development including regular updating of Syllabi/ Accreditation / Examinations, Content Development .
- To directly accredit the courses of overseas institutions for conduct of DOEACC course(s) and conduct examinations as is being done in India;
- Cross-certification (Mutual recognition) of Qualifications, awarded by DOEACC with comparable overseas qualifications.

❖ Application of ICT (e-learning) :

- Setting-up of Institute of e-learning & Information Technology.
- Strategic Application of Information Communication Technology (ICT) in Schools (e-School)
- Application of Information Communication Technology (ICT) in teaching and learning (e-University)
- Development of Multimedia & Digital Entertainment Technologies.
- Training of Teachers in e-learning, e-content creation, etc.

Contd..

Areas of Expertise for Mutual Cooperation

❖ Projects & Consultancy :

- To jointly execute Research and Development (R & D) Projects.
- To provide consultancy/software solutions.

❖ Miscellaneous :

- Development of skills through exchange programmes.
- Strengthening competencies and exchange of information through joint sponsorship of conferences, workshops, symposiums, training programmes and seminars in IECT.
- Involving wherever possible, entrepreneurs in each country to foster incubation of start-up companies and setting up of joint venture in Hardware and Software.
- Joint efforts to develop technology, products, trade and markets.
- Any other areas of cooperation as may be mutually agreed upon.

NIELIT
(Formerly DOEACC)

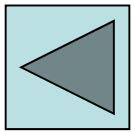
Examination System

Examination System

- Twice in a year
  - Second Saturday
    - **January**
    - **July**
- One Session for ‘O’ and ‘A’ Level

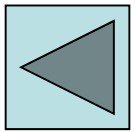
- 1400 To 1700 Hrs

- Two Sessions for “B” & “C” Level
  - Forenoon 0930 To 1200 Hrs
  - Afternoon1400 TO 1700 Hrs



Registration of Students

- Registration with DOEACC is a pre-requisite
- A Unique identity of the student like University enrolment No.
- Enables keeping track of progress of the student.
- Enables the Society to infer likely no. of students appearing in ensuing examination.
- Facilitates advance verification & validation of students eligibility resulting in early processing as also last moment rejection of examination form.



Examination System

Pre-examination activities

- Application Form Management
- Application Form Processing
- Centre Management
- Question Paper Management

Post Examination Activities

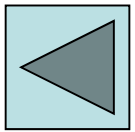
Answer Script Management

Evaluation

Result Finalization and Declaration

Settlement of Payments of Examination Suprietendents

Release of payments to Evaluators



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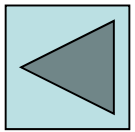
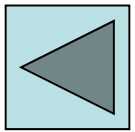


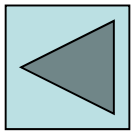
Application Form Management

- Design of Form
  - Updation of Syllabus
  - Change in Fee Structure
  - Addition of New Examination Centre



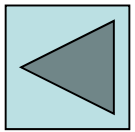
Application Form Management

- Sale of Form
  - Through Counseling Centres
  - Cash Sale at DOEACC counter
  - By Post
- Receipt of Application forms
  - By Post
  - Through institutes in bulk
  - At DOEACC counter



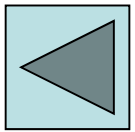
Application Form Processing

- Form Processing
  - Making of Batches
  - Allocation of Serial Numbers
  - Data entry
  - Validation
    - **Candidate registered for the level or not**
    - **Check Fees paid or not**
      - **Fees through Bank Challan**
      - **By DD**
      - **By Cash at DOEACC counter**



Application Form Processing

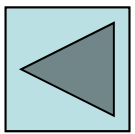
- VALIDATION
  - **Whether from an accredited institute**
  - **Whether having adequate experience**
- Scrutiny of exception reports
- Error Correction
- Rejection of Invalid forms



Application Form Processing

Reports

- Data of candidates applying for practical to be forwarded to practical examination section
- Centre-wise subject-wise number of candidates
- Master list of candidates
- Registration number-wise list of candidates with roll number
- Attendance list
- Stickers to be pasted on Centre intimation cards and forms
- Admit Cards
- Payment details



Centre Management

- Identification of
  - Centre / Town
  - Centre Superintendent
  - Venue
- Forwards SOP for examination
- Tentative number of candidates to exam superintendent
- Release of Advance

Centre Management

- Dispatch of
  - **Answer Books**
  - **Question Papers**
  - **Centre Intimation cards**
  - **Attendance Sheets**
  - **Master list**
  - **Registration wise list**
- Confirmation receipts if all items
- Receipt of answer scripts
- Settlement of account for each answer

Question Paper Management

- Identification of paper setters
- Requests to paper setters
- Receipt of QP from paper setters
- Release of payment to paper setters
- Moderation committee meetings for moderation of QP to ensure appropriate coverage of syllabus and standard of QP
- Question paper formatting

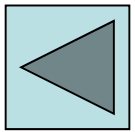
Question Paper Management

- Identifying printers
- Printing of question papers
- Checking of printed QP
- Packing of QP to examination centre
- Question paper dispatch to examination centres
- Confirmation of receipt by Supt.

Answer Script Management

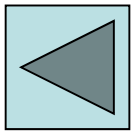
Receipt from Exam Supd.

- Monitor Receipt from Centres
- O Level are to be despatched on the following Monday
- A level and first ten papers of B and C levels to be despatched on the fifth day
- Remaining A,B and C on the last day



Answer Script Management

- Updation of absentees in database from attendance sheets
- Preparation of Blank Mark lists for evaluators
- Verification of Answer Scripts
- Re-bundling of answer scripts



Evaluation Management

Identification of Chief Coordinator, head examiners and evaluators

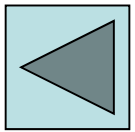
- Experts from IITs, NITs, Universities, Industries and Govt. Scientific departments

- Confidentiality and certificate of no interest in any candidate and/or accredited institute

- Faculty from accredited institutes is not included for examination work

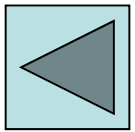
Evaluation Management

- Outstation evaluation is first priority
- Nodal Centres are identified in Universities/IITs
- Chief co-ordinatiors, head examiners and evaluators are appointed
- Dispatch of answer scripts to nodal centres along with hard and soft copies of blank statement of marks
- Marks are entered at the nodal centres



Evaluation Management

- Random answer scripts from evaluators are sent to head examiner for checking to maintain uniform standards
- Entry of marks (double entry)
- Comparison of two entries
- Error correction



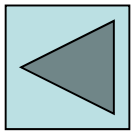
Result Finalization and Declaration

- Compilation of Results
- Moderation of Results
- Declaration of Results
  - Through NEWS papers
  - On Website
  - Individuals
    - Result sheets are printed for B and C level first and dispatched by the fastest means
    - Result sheets for O and A levels follow after B and C have been dispatched

Payment for Services

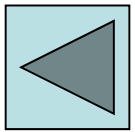
- Payment to examination Superintendents
- Payment to evaluators
- Payment to head examiners

PREPARATION FOR THE NEXT EXAMINATON



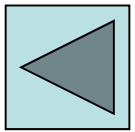
Problems and Challenges

- It is a collaborative effort
- Paper setters, evaluators, examination superintendents
  - Are not on our payrolls
  - Have their own commitments
  - Can refuse last minute for and reason



Problems and Challenges

- Large number of registered candidates
- The figures for particular examinations are just about two months before the examination
- Few examination centres are to be located after this also

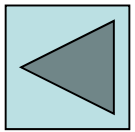


Problems and Challenges

- Examinations are held on working days also
- Conduct of examinations at far flung locations
- Despatch of material to large number of centres and monitoring

Practical Examination

- O, A and B Levels involve Practical examinations besides written theory exams and project works
- O Level envisages one practical examination covering the whole course while A level envisages two practical examinations and B Level envisages four practical examinations.
- Practical exam corresponding to January and July Theory examinations are conducted in the months of February and August respectively
- Computer Labs of accredited institutes are used for conduct of practical examinations though the examiners are 3rd Party experts.

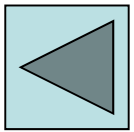


Practical Examination

- The batch schedule for each exam center is prepared keeping in view the number of PCs available and separate question papers is served for each batch.

- The same process of Pre and Post Examination activities as explained in preceding slides for theory examination is followed in case of Practical Examination also.

- Presently these Examinations are conducted at more than 250 Examination Venues simultaneously all over the country.



On-line Examination

On-line Examination

The Society is conducting CCC examination using CAPES (Computer Aided Paperless Examination System) software of NIC, thrice in a year viz in the months of February, June and October.

The examinations are being conducted in two modes namely, CD Based (LAN: Client-Server model) and web based over internet.

The examination of 90 minutes duration comprises of objective type questions of 100 marks and certificate is awarded to those candidates who secure a minimum of 50 percent marks.

The examination of the course is controlled at headquarters level, whereas the DOEACC Centres are involved in the pre-examination activities

DOEACC Society - Online CCC Examination Process

•Notification for Examination along with downloadable form is made public on DOEACC website, 4 Months Prior to the Examination.
•Candidates send duly filled examination form along with the examination fees to the Regional Centres of DOEACC.
•Regional Centers process the examination forms and data of the eligible candidates and also finalise exam center based on the data of the eligible candidates for allotment of exam centers.
•Roll no are generated and Exam center are alloted to the candidates by the Regional centers
•Regional Centers consolidate and collate the data and forward it to the Exam Control Center at Head Office for exam setup preperation.
• The Data Contains Candidate Data, Exam Superintendent/ Center Data and Exam Schedule.

DOEACC Society - Online CCC Examination Process

➔CDs containing examination software with dummy data (also available for downloading from exam site) are sent to exam superintendent for setting CD based Exam centers.

➔The Online Exam Centers are setup by Examination Superintendent from exam site through Internet.

➔CD based as well as Online Exam Centers are required to update the status of center preperation on Examination Management and Monitoring Site of CCC.

➔The Dry run is done before the exam to ensure no technical snag is remaining in conducting the exam as well as to train the exam center to smoothly conduct the exam.

➔On the exam day the candidates are briefed about how to take the exam, the candidates login in the exam client (PC) duly authorised & verified by exam superintendent.

DOEACC Society - Online CCC Examination Process

➔Every canidate gets an unique set of questions to answer. Access to exam is roll no based.

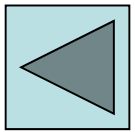
➔As soon as student completes his exam, answer files are collected and upload to main server by exam superintendent

➔Answer files thus collected are compared with the online database to check for discrepency if any and the correct answer file is then processed for result.

➔Attendance is verified with manual attendance

➔Result is processed, announced and informed to appeared candidates

➔Certificates are issued to the successful candidate



THANK YOU