

**Paper INFORMATION TECHNOLOGY AND MODERN  
EDUCATIONAL PRACTICES  
COURSE CODE 906**

**COURSE OUTLINE**

Contact Hours: 108

Max. Weights; 32

Duration of Exam: 3 hrs.

Credits: 4

**COURSE OBJECTIVES**

1. To equip the student teacher to attain basic skills and cognitive orientations in Information Technology
2. To develop an analytical perspective towards the emerging trends and practices in Information Technology for effective curriculum transaction
3. To encounter the challenges of building quality technology programme.
4. To develop an insight into the dimensions and innovative trends in of Information Technology as a subject of study in schools
5. To acquire the skills to become proficient in the effective utilization of ICT
6. To develop and transact their expertise in ICT effectively in the actual classroom settings.

**Course Content****PART A – INFORMATION TECHNOLOGY EDUCATION****UNIT-1 Basics of ICT (10 Hrs)**

Meaning, nature, characteristics and scope of Information Technology Education Major divisions of Information Technology - Aims and objectives of Information Technology Education up to higher education level - Relevance of Information Technology education in the present day educational system.

**UNIT-II (10 hrs)**

**Approaches in teaching Information Technology:** Instructional software, Drill and practice activities-Tutorial activities-Tele conference-Instructional Exams-Simulation activities, problem solving, Integrated learning system (ILS)-Logo-resources.

**Information Technology Resources:** Hardware and Software material generators-Desk top publishing, select and use, type of faces (fonts), visual cueing-Graphics-Test generators, Test question banks-online information sources, W.W.web Sites, E-mail, Multimedia-Tele-Text.

Introduction to e-learning – Definitions – types (Synchronous and Asynchronous) – Blended e-learning – Social book making.

**UNIT-III (18 hrs)**

**Role of ICT in Education and Training:** Computer Assisted Instruction, Computer managed Instruction, Computer based testing,

Computer mediated communication. Computer generated materials-  
Computer Languages-Internet-Locations in Cyber Space, using  
statistics packages, planning and organizing tools-Using Research  
and reference tools etc. maintenance and Records.

Viruses: causes, prevention and cures.

Pod casting (fusion of I pod and broad casting )

Pod casting as digital audio programming - Instant managing - Text  
chat – Internet forums – e mailing.

#### **UNIT-IV – Strategies and Possibilities of ICT (10 Hrs)**

Development of skills-ICT and thinking skills, Developing Graphics  
skills-Developing effective logical reasoning skills-critical and creative  
thinking strategies for developing problem solving. Y-fy campus –  
significance of laptop in teaching learning process – laptop as a  
device for effective teaching.

#### **Unit V – Teacher’s Role in ICT (5 hrs)**

IT Education Teacher: Academic and professional Qualification,  
Qualities, required for a good ICT education teacher, Duties and  
responsibilities, technical competency teacher development, pre-  
service and in service training opportunities for professional growth.

#### **Unit – VI (10 hrs)**

Instructional techniques of ICT in the 21<sup>st</sup> century. Net work  
transaction, Tele-conference, Webinar, E-learning, Reflective teaching  
strategies, problem solving, portfolio, concept mapping, Problem

based learning, Internet Access, Cyber space and new frontiers of teacher education, Virtual knowledge café. E-content – Writing. Website – page preparation of website – websites on education – web designing.

## **PART B MODERN EDUCATIONAL PRACTICES**

### **UNIT- VII**

**(5 hrs)**

Curriculum Development: – Principles of curriculum construction - curriculum vs. Syllabus - Different types of curriculum –Different curricular approaches - Enrichment of curriculum - Curriculum analysis

### **UNIT- VIII – Instructional Approaches**

**(10 hrs)**

**Modern Instructional Approaches:** Programmed learning, Modular approach, Models of Teaching: Information Processing Models, Social Interaction Models, Personal Models, Behavioural Models, Concept based Models, Synetics Model.

**General Approaches:** Micro teaching-Team teaching-Reflective teaching-Seminar – Workshops - Conference - Co-operative learning -Supervised study.

### **UNIT- IX – Resources of evaluation**

**(10hrs)**

Evaluation: Meaning- Continuous and Comprehensive Evaluation - Objective based evaluation, Internal and external evaluation, Formative and summative evaluation, Diagnostic testing - Criterion referenced tests and Norm referenced tests - Question banks -

Grading system - use of computers in scoring and recording of results - analysis of data etc.

**Unit X Knowledge Management (10 hrs)**

Knowledge management – knowledge production – Attributes and services – knowledge management model – Ikujiro Nonaka – process view of knowledge management – Justification of knowledge management

**Unit XI (10 hrs)**

- E-learning net work – National knowledge network – country-wide classroom. Knowledge organization and net a data.
- International standards of ICT devices – International Quality of ICT in classrooms – Interacting with teleconference – Video conferencing – Assurance of international quality on ICT – Suggested measures.

**Advanced Practicum (any two)**

1. Prepare a Lesson Design on Computer Assisted Instruction.
2. Develop a lesson design with power point presentation on any selected topic from psychological philosophy / Education practices. Submit a report on it.
3. Create a blog on Education Develop content for educational blog and connect it with server.

**References:**

1. Chanler, David et al, (1993). Computer Technology for Higher Education – A Design Model for a Computerizing University (Vol. III) The Canadian Experience. New Delhi: Concept Publishing Company.
2. Bentley Trevor (1992). Training to meet the technology challenge. London: Mc Graw Hill Book Company.
3. Roger Crawford (1997) Managing Information Technology in secondary schools, London: Routledge.
4. Cady Glee Harrah and Pat Mc Gregor (Ed.) (1996). Mastering the Internet. New Delhi: BPB Publications.
5. Robert Heinich et.al., (1990). Instructional Media and the New technologies of Instruction. New York: Mac Millan Publishing Company.
6. Leon Alexis and Mathews Leon (2002). Fundamentals of Information Technology. New Delhi: Vikas Publishing Company.
7. Leon Alexis and Mathews Leon (2002). Internet in a Nutshell. New Delhi: Vikas Publishing Company.
8. Sanjay Saxena (2002) First Course in Computers – 2002 Edition. New Delhi:Vikas Publishing Company.
9. Leon (2002) Internet for Everyone. New Delhi: Vikas Publishing House.
10. Sanjay Saxena (2002) Introduction to Computers and M.S.

Office. New Delhi: Vikas Publishing House.

11. Rajesh, Easwarakumar & Balasubramaniam (2002) aComputer Networks. New Delhi: Vikas Publishing House.
12. Kjell Erik Rudstan, Judith Schoenholtz – Read (2002) Handbook of Online Learning. New Delhi, Sage Publication.
13. E. Arno Macia, Solar Cervere, C. Rueda Ramos, (2002), Information Technology in Language for specific purposes. Germany, Springer International Handbook of Education.
14. Simmons Hawkins – Teaching ICT – Sage Publications New Delhi – 2010.
15. Aggarwal, Sanjay, M.Kumar and Anilkumar. “Knowledge management framework for improving Teaching and learning process in Technical Education in India”. University News, August 11 – 17, 2008, pp. 10 – 16.
16. Awad, Elias. M and Hassan M. Ghaziri, Knowledge management. Pearson Education Pvt Ltd : New Delhi .2004.
17. Karsinti, T.2002 (Oct – Dec). ‘From Blackboard to Mouse Pad: A case study of effectiveness of e-learning and technology’. Techknowlogia.  
[http : //www.techknowlogia.org](http://www.techknowlogia.org)
18. Mathotra, Yogesh. “Knowledge management, knowledge organizations and knowledge workers : A view from the front lines”, April 2001.

19. Mohanty, Laxman and Neharikw Vohra. ICT strategies for schools : A guide for school administration. New Delhi : Sage 2006.
20. Nonaka, Ikujiro and Hirotaka, Takeuchi. The knowledge creating company: How Japanese companies create the dynamics of innovation. New York, NY : Oxford University Press. 1995.
21. Barath, Steve. "Learning from Mistakes". Knowledge Management April 2001, pp, 41 – 47.



**MAHATMA GANDHI UNIVERSITY**  
**M.Ed DEGREE (CBCSS) SECOND SEMESTER EXAMINATION**  
**Common Course : 906 – ICT and Modern Educational Practices**

**Time : Three (3) Hours**

**Max. Weight : 32**

**Part A**

**Answer any two questions. Each question carries a weight of 4**

1. Discuss the scope of integrating pedagogical principles in ICT based teaching and learning.
2. Explain the advantages of integrating ICT with different subjects in schools. Substantiate your answer with suitable examples.
3. Discuss the recent curricular reforms at secondary and higher secondary educational levels in Kerala with special reference to National Curricular Framework, 2005.
4. Examine the effect of globalization on development of curriculum and administration at different levels of education.

**(2×4 = 8 weight)**

**Part B**

**Answer any six questions. Each question carries a weight of 2**

5. Theoretically distinguish information from misinformation and disinformation.
6. What is meant by “data mining” and explain its applications.
7. How can computers be useful in test scoring and processing of results?

8. Explain the role of teachers in the approach of problem solving.
9. Describe the relevance of virtual classrooms in the present learning environment.
10. Express your views on the role of computers in knowledge construction and creation.
11. Analyse the ethical issues in connection with the use of internet.
12. Give a brief account on the programs for meeting special needs of learners in our classrooms.

**(6×2 = 12 weight)**

### **Part C**

**Answer any six questions. Each question carries a weight of 1**

13. What is the concept of educational informatics?
14. What is operating system?
15. How do the secondary storage systems differ each other?
16. Explain the salient features of problem based learning.
17. Suggest any four means to promote women empowerment.
18. What is the difference between teleconference and computer conference?
19. Mention four inequalities that exist in our educational system?
20. Give any four comparisons in vocationalisation of education in USA and India?

**(6×1 = 6 weight)**

**Part D****Answer all questions. Each question carries a weight of .5**

21. What is remedial teaching?
22. Define e resource.
23. Give the purpose of tele-conference.
24. What is PSI?
25. What is virtual classrooms?
26. Define curriculum evaluation?
27. What does information processing model stand for?
28. What is computer virus?
29. Give a suggestion for e-waste management.
30. What is a face book.
31. Define cloud computing.
32. What is a portfolio.

**(12×.5 = 6 weight)**