

Part I C- Elective Paper
Paper VII – EDUCATIONAL TECHNOLOGY
COURSE OUTLINE
Course Code: 908.12

Contact Hours: 108
Duration of Exam: 3 hrs.

Max. Weight : 32
No. of credits : 4

Course Objectives

- ❖ To enable the student teacher to understand about meaning, nature and scope and significance of Educational Technology and its important components in terms of hardware and software.
- ❖ To help the student teachers to distinguish between communication and instruction so that they can develop and design a sound instructional system.
- ❖ To acquaint student teachers with levels, strategies and models of teaching for future improvement.
- ❖ To enable the student teachers to understand about the importance of programmed instruction and researches in E.T.
- ❖ To acquaint the student teachers with emerging trends in E.T. along with the resources centers of E.T.
- ❖ To know the different approaches, components of media technology and develop the packages of AudioVisual Technology.
- ❖ To apply the principles of systems approach in Education and classroom communication and interaction system of FICAS and VICS.

Unit I: Concept of Educational Technology 10 hrs

- ❖ Meaning, Nature, Scope and Significance of Educational Technology
- ❖ Approaches of Educational Technology: Software, hardware, systems approach, Individual approach, Mass media approach.
- ❖ Educational Technology and Instructional Technology
- ❖ Essential components of quality technology plan

Unit II: Learning theories and Educational Technology 20hrs

- ❖ Skinner's response centered approach – principles, application to programmed and individualized instruction.
- ❖ Gagne's hierarchical approach – application to behavioral objectives and systematic instruction
- ❖ Bruner's structure of knowledge – application to the teaching learning process in terms of modes of representation, observational learning and symbolic learning in media technology.
- ❖ Mager and Miller's learning sequences – application to behavioural objectives, learning task, human information processing; alternative model
- ❖ Piaget's learning stages – application of its constructivism to educational technology.

Unit III: Communication Technology 15hrs

- ❖ Concept, Nature, Process, Components, Types of Classroom communication

- ❖ Teaching as communication
- ❖ Observation schedules of interaction – FIACS, VICS, OSCAR, BLAS
- ❖ Competency based Teacher Education (CBTE) – Specifying competencies

Unit IV Teaching levels, Strategies & Model (10 hrs)

- ❖ Memory, Understanding and Reflective levels of Teaching
- ❖ Teaching strategies: Meaning, Nature, Functions and Types
- ❖ Models of Teaching: Meaning, Nature, Functions and Types- Inquiry training model, synetics, contingency model, jurisprudential model.
- ❖ Modification of teaching behaviour- Microteaching, Simulation.

Unit V: Individualized Instructional Technology (10 hrs)

- ❖ Meaning, Origin, principles and types - Linear and branching
- ❖ A-T. Approach: Auto lecture, Audio laboratory and language laboratory
- ❖ Modular Approach, Learning kits, Keller Plan

Unit VI: Media Technology (15 hrs)

- ❖ Meaning, Nature, Functions
- ❖ Educational technology in formal, non-formal and informal Education, Distance Education, Open Learning Systems
- ❖ Media classification-Projected and Non-projected aids

- ❖ Media sub-systems-Film strips and slides, OHP, Motion pictures, audio tape recording, radio, T.V.
- ❖ Emerging trends in E.T- Video tape, Tele-conferencing, CCTV, INSAT, ETV, VCR and satellite instruction, printed materials, media selection criteria.
- ❖ Multi media approach
- ❖ Problems of New Technologies
- ❖ Evaluation and E.T.
- ❖ Resource centers for Educational Technology, CIET, UGC, IGNOU, NOS, state E.T. cells, AVRC, EMRC, NIST - their activity for the improvement of teaching learning

Unit VII: Information Technology & Functional Introduction to

Computers

(18 hrs)

- ❖ Definition, recent trends, scope of ICT in education
- ❖ Educational informatics and E. learning
- ❖ Parts and Peripherals: C PU, Memory, various types of input – output devices, modes of computer operation, Mass storage devices-tapes, discs, pendrives
- ❖ Basic principles and functions of computers
- ❖ Different computer languages
- ❖ Data information and knowledge
- ❖ Computer Assisted Instruction: Development and Validation of computer packages
- ❖ Computer Managed Instruction

- ❖ Web based instruction, online education, virtual education
- ❖ Application of Internet in education, Creating E-mail ID, Browsing E-journals

Unit VIII : Distance Education and Educational Technology

(10hrs)

- ❖ Computers and assessment using computers for assessment constructing, printing, administering and scoring tests, electronic, portfolios, record keeping, web based assessment.
- ❖ Course designing-steps & approach

Advanced Practicum (any two) (10 marks)

- ❖ Observation of classroom interaction using FIACS, VICS etc
- ❖ Seminar in new trends in E.T
- ❖ Discussion on application of E.T. in different discipline
- ❖ Developing instructional strategies of materials for rural schools
- ❖ Preparation of radio & T.V.lessons.
- ❖ Developing computer software for instruction
- ❖ Conduct a seminar in new trends in IT

REFERENCES

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- ❖ Karpaga Kumaravel R.(1998), Educational Applications of Video-Theory, Research and Practice, Coimbatore:Suri Publishers
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- ❖ Singh U.K and Sudar Shan K.N(1996), Computer Education, New York. Discovery publishing Company.

Part I C – Elective Paper**PAPER VII – EDUCATIONAL TECHNOLOGY**

Time: Three Hours

Maximum Weightage : 32

PART A**Answer any two questions. Each question carries a weight of four**

- 1 a) Discuss in detail the different approaches to Educational Technology.
b) Bring out the relationship between Instructional Techniques and Educational Technology
- 2 a) Explain the need and importance of individualizing instruction.
b) Describe the different styles in programming. What are the differences between self-posed and group-posed programmed instruction.
- 3 a) Discuss in detail how you would categorize the technologies.
b) Briefly describe the salient features of the Keller plan?
4. Define Reflective Level of Teaching. Specify the different strategies that optimize Reflection.

(4x2=8 weights)**PART – B****Answer any six questions. Each question carries a weight of two**

5. What do you mean by cybernetics?
6. Explain how media can be effectively used in distance and continuing education?
7. Briefly describe how you would develop a PLM.
8. Write a short note on nature and function of “media packages” in the context of teaching learning process.
9. Describe system approach to education

10. Describe computer-assisted instruction and list its merits and limitations.
11. Explain the term “Satellite instruction”? Examine how far it is used in India at present.
12. Explain the components of any one teaching skill you have studied.

(2x6=12 weights)

PART – C

Answer any six questions. Each question carries a weight of one

13. Differentiate online Education from virtual Education
14. Explain the application of Internet in Education
15. Write a short note on ‘validation of computer packages’
16. List out the different computer languages.
17. Explain what is meant by Mass storage devices.
18. What are the problems confronted by the application of new technologies?
19. Enlist the future priorities in E.T.
20. Write a short note on the syntax of Simulation Model.

(1x6 =6 weight)

PART – D

Answer all questions. Each question carries a weight of .5

21. What is forwarded branching programme?
22. Give one suggestion for the modification of teaching behaviour
23. Enumerate the stages in Reflective teaching
24. Mention any one function of media technology

25. Give any one advantage of open learning system
26. List the major units of Tele conferencing
27. Mention the major application of ICT in Evaluation
28. Name the latest computer language
29. What is a learning kit?
30. Mention any one e-journal
31. What is Keller plan?
32. Expand BLAS

(12×.5 = 6 weight)