SEMESTER - III

CPS 2c - Part III - PEDAGOGY OF COMPUTER SCIENCE

Credits: 2 Internal: 20 marks

Hours/Week: Theory-2hrs & Practical-4hrs External: 30 marks

Total: 50 marks

Course Learning Outcomes:

At the end of the course, the student-teachers will be able to

- assess the importance of various learning resources;
- conduct Action Research and effect positive social and educational change in their immediate environments;
- design the various tasks to be executed during field immersion;
- prepare reflective journals on observation of peer teaching;
- prepare reflective journals on co-teaching with mentors; design lesson plans in Computer Science;
- prepare teaching learning materials to facilitate teaching in Computer Science;
- acquire skills in teaching competency; and
- prepare reflective journal on School Internship.

Unit I: Learning Resources

Introduction – Need for planning a computer laboratory – Planning and maintenance of a computer laboratory – Special features of a computer laboratory – essential infrastructure – lab management – organization of practical's for pupils – maintenance of records – discipline rules in the laboratory for the teacher and laboratory staff – rules for the students in the laboratory – cybercrime – clubs – Computer Science Textbook : Meaning – Qualities of good Computer Science Textbook – use of text book in and outside the classroom – criteria for evaluation of Computer Science Textbook – value of the Computer Science Library.

Unit II: Action Research

Action Research- Meaning, need for classroom research- difference between action research and fundamental research- steps in action research- journaling the results of classroom research.

Unit III: Field Immersion

Tasks of student-teachers during Internship:

- Observation of the teaching of mentor teachers and peer student-teachers
- Institutional and Individual case study,
- Lesson plan, Unit plan and teaching-learning materials,
- Question paper and other tools of assessment,
- Reflective diary of school internship,
- Co-Scholastic activities,
- Teaching as a substitute teacher

Suggested References:

Agarwal J.C. (2006). *Essential of Educational Technology: Teaching and learning*. New Delhi: Vikas Publishing House Pvt. Ltd.

Alexis, M. L. (2001). Computer for every one. New Delhi: Vikas Publishing house Ltd.

Allison, L. J. and Chris, P. (2007). *Preparing for blended e-learning*. UK: Routledge.

Bennett, S., Marsh, D. & Killen, C., (2008). *Handbook of online education continuum*. New York: International publishing group.

Chauhan, S. S. (1985). *Innovations in teaching learning process*. New Delhi: Vikas Publishing house Ltd.

Goel, H.K. (2005). *Teaching of Computer Science*. New Delhi: R.Lall Book Depot.

Krishnamurthy, R. C. (2003). Educational technology: Expanding our vision. Delhi: Authors Press.

Harley, H. (2007). The internet: Complete reference. New Delhi: Tata McGrow Hill Pub.co., Ltd.

John, W. (2007). Learning and Teaching using ICT. New Delhi: Learning Matters Ltd.

Joyce, W. (2004). *Models of Teaching*. U.K: Prentice hall of India.

Kochhar, S. K. (1992). Methods and techniques of teaching. New Delhi: Sterling Publishers Pvt Ltd.

Kumar, K.L. (1997). Educational Technology. New Delhi: Angel International (P) Ltd.

Mohanty, L. (2006). ICT strategies for schools. New Delhi: Sage Publication.

Norton, P. (1998). Introduction to Computers. New Delhi: Tata McGraw Hill Publishing Co Ltd.

Oosterhof, A.C. (1990). *Classroom Applications of Educational Measurement*. Ohio: Merrill Publishing.

Sambath, K., Paneerselvam, A., & Santhanam, S. (2006). *Introduction of educational technology*. New Delhi: Sterling Publishers Private Limited.

Sharma, R. A. (2008). Technological foundation of education. Meerut: R.Lall Books. Depot

Sharma, R. C. (1998). *Modern science teaching*. New Delhi: Dhanpat Raj and Sons.

Sharma, R. N. (2008). *Principles and Techniques of Education*. Delhi: Surjeet Publications.

Sidhu, K. S. (2006). *Teaching of Mathematics*. New Delhi: Sterling Publishers Private Ltd.

Singh, Y. K. (2009). *Teaching Practice*. New Delhi: APH Publishing Corporation.

Srinivasan, T.M. (2002). *Use of computers and multimedia in education*. Jaipur: Aavisakar Publication.

Stephen, M.A. & Stanely, R. (1985). *Computer based instruction: Methods and development.* New Jercy: Prentice Hall.

Stone, E. (1996). *How to use Microsoft access*. California: Emergyville.

Vanaja, M. (2006). Educational technology. Hyderabad: Neelkamal Publications Pvt. Ltd.

இரத்தின சபாபதி பி.இரேணு பத்மா மோகன்.(2008), வினாக்களில் விரிசல்கள் சென்னை: சாந்தா பதிப்பகம்.

இரத்தின சபாபதி பி. (2008) கல்வியில் தேர்வு, சென்னை: சாந்தா பதிப்பகம் கணபதி வி. இரத்தின சபாபதி பி. (2008) நுண்நிலை கற்பித்தல் சென்னை சாந்தா பதிப்பகம். பாஸ்கரன் ப. ஷ.பத்மப்ரியா, (2007) கலைத்திட்ட வளர்ச்சி, சென்னை: சாரதா பதிப்பகம் விஜயலட்சுமி வ.(2007), நுண்நிலை கற்பித்தல், சென்னை: சாரதா பதிப்பகம் விஜயலட்சுமி, (2008), கற்பித்தலில் சிக்கல்கள்-தீர்வுகள், சென்னை: சாந்தா பதிப்பகம்
