#### **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, Well., (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: Surject 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

\*\*\*\*