

दुर्ग विश्वविद्यालय, दुर्ग (छ.ग.)



पाठ्यक्रम

परीक्षा— 2018—19

बी.एससी.बी.एड. भाग—4
B.Sc. B.Ed. Part-IV

B.Sc. B.Ed.- IV Year Course
SCHEME OF EXAMINATION

Subject	Paper	Total	Min. Marks	Marks
<u>THEORY</u>				
1. Gender, School and Society		I	100	33
2. Sociological Perspectives of Education		II	100	33
3. Art Education		III	100	33
4. Elective II		IV	100	33
(a) Computer Education				
(b) Teaching of Values				
5. Pedagogical Studies (Elective) Part 2		V	100	33
(a) Pedagogy of Mathematics				
(b) Pedagogy of Biological Science				
(c) Pedagogy of Physical Science				
<u>PRACTICUM</u>				
6. Internship (3 Month) Reflective Dairy & Supervisor's Assessment			100 (Internal)	40
7. Training in Yoga and Sports & Games			50 (Internal)	20
8. Viva Voce on Teaching Experience			100 (External)	40

PAPER - I
CONTEMPORARY STUDIES
GENDER, SCHOOL AND SOCIETY

MARKS: 100

COURSE OBJECTIVES:

- (i) Understanding the role of culture (apart from biology) as determinants of gender distinction in social living;
- (ii) Awareness of factors that shape gendered roles in Indian society;
- (iii) Understand the problems of girl child education in our society;
- (iv) Developing a critical perspective on gender-based discrimination and its effects;
- (v) To provide an introduction to and the development of an understanding of feminist approaches to the social and cultural construction of gender;
- (vi) To develop a critical understanding of intersectionality, including an awareness of gender and its complex intersections with other social and cultural categories, including but not limited to caste, tribe, class, sexuality and ability; and
- (vii) To equip the teacher with the ability to create more meaningful and gender just experiences for her students.

Course Outline

Unit - I: Gender: Key Concepts- Social Construction of Gender

- Examining one's own growing up as a boy or a girl.
- Gender, sex, sexuality, patriarchy, masculinity and feminism.
- Gender bias, gender roles and stereotyping, and its consequences.
- Gender and other forms of inequality in relation with (caste, class, ethnicity, disability etc).
- Female sex ratio and child sex ratio.

Unit - II: Gender and Schooling

- Schooling of girls (literacy rate, dropout rate, completion rate, etc.) and reasons why girls are not able to complete schooling.
- Why do girls feel uncomfortable in schools?
- Can schools be different so that more girls can be educated?
- Gender bias in curriculum, textbooks, analysis of hidden curriculum.
- Critical examination of school and classroom processes- challenging gender biases and stereotypes.

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- Understanding relationships within the school- child-child, teacher-child and teacher-peer group relationships from the perspective of gender.

-Feminization of teaching profession.

Unit - III: Gender and Sexuality

- Understanding sexuality (sexual orientation and sexual identity- third gender) and the relationship between power and sexuality.

- Violence against women- empirical examples of the graded violence against women, the impact of conflict and violence on the lives of women, efforts to deal with the issue of violence against women.

- Legal (sexual and reproductive) rights of women.

Unit - IV: Psychological and Sociological Perspectives

- Radical Feminist;

- Socialist-Feminist;

- Psychoanalytical and other perspectives;

- Recent debates.

Unit - V: Strategies for Change

- Policy and management.

- In the school.

- Women's action groups.

- Mass media.

Suggested themes for transaction of the content (Group discussions and review of case studies etc.)

(i) Telling our own 'gendered' stories.

(ii) En-culturing 'gendered' roles in upbringing within different kinds of families- case studies.

(iii) Gender issues in school education- case studies.

(iv) Gender issues manifest in contemporary public spaces- case studies.

(v) Responding to various forms of gender discrimination.

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Suggested Readings:

1. Gender Analysis of State Policies: A case study of Chhattisgarh- Dr. Sen Ilina.
2. Towards Gender Equality in Education: Progress and challenges in Asia-Pacific Region- R. Govinda, National University of Educational Planning and Administration, New Delhi.
3. Bhattacharjee, Nandini (1999). Through the looking-glass: Gender Socialisation in a Primary School in T. S. Saraswathi (ed.) *Culture, Socialization and Human Development: Theory, Research and Applications in India*. Sage: New Delhi.
4. Geetha, V. (2007). *Gender*. Stree: Calcutta.
5. Ghai, Anita (2008). Gender and Inclusive education at all levels. In Ved Prakash & K. Biswal (ed.) *Perspectives on education and development: Revising Education Commission and after*, National University of Educational Planning and Administration: New Delhi.
6. Jeffery, P. and R. Jefferey (1994). Killing My Heart's Desire: Education and Female Autonomy in Rural India. In Nita Kumar (ed.) *Women as Subjects: South Asian Histories*. New Delhi.
7. Learning, Livelihoods, and Social Mobility: Valuing Girls' Education in Central India. Peggy Froerer, Brunel University, Anthropology and Education.

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PAPER - II
CORE STUDY
SOCIOLOGICAL PERSPECTIVES OF EDUCATION

MARKS: 100

COURSE OBJECTIVES:

To enable the student-teacher to understand-

- (i) the social diversity in the state and the class room and its implication for teaching;
- (ii) and be able to use some key concepts relating to social stratification;
- (iii) the nature of caste and changes occurring in it; to focus attention on the scheduled castes and their education;
- (iv) the problems faced by the tribal communities and the issues in education of tribal children; and
- (v) how poverty affects schooling prospects of children with special reference to migrant children.

Course Outline

Unit - I: Understanding Diversity in Indian Society with Special Reference to Chhattisgarh

Diversity in Indian society, especially in Chhattisgarh, would be explored through case studies of some villages, regions or cities. Profile of different communities in terms of their ecology, economy, language, culture and educational status will be taken up for discussion. Special focus will be on childhood in these communities and access to education. Student teachers will be encouraged to look at this diversity as a potential pedagogic resource within the class room.

- Diversity in the class room. Getting to know the diverse socio-cultural and linguistic background of fellow students. Getting to know about how they got themselves educated.
- Ethnographic profiling of some five communities of the state (for example- one tribal, one scheduled caste, one artisanal community, one farming caste, one minority religious community).
- Children at risk- educationally profiling communities of children who have not been integrated well into schooling (non-enrolment, early dropout, low achievement).
- Profiling of the society of one's own village or town in terms of communities, professional groups, economic status, social respect, power, etc.
- How can a teacher use the social background of diverse students as a resource for teaching in the class room?

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Unit - II: Sociological Concepts Relating to Social Stratification

Some key sociological concepts like life opportunities, discrimination, exclusion, stratification, etc. will be discussed to enable the student teachers to use them in different social contexts.

- Life opportunities, class, status and power: frameworks of Marx and Max Weber.
- Social discrimination, exclusion and exploitation.
- Social capital, cultural capital and economic capital- the approach of P Bourdieu.
- Equality of opportunities and capabilities-the approach of Amartya Sen.

Unit - III: Aims of Education

- Aims of Education in key policy and documents;
- Mudaliar commission report;
- Kothari commission report;
- Curriculum frame work, 1975,
- National policy on education, 1986;
- Curriculum frame work, 2000 and 2005;
- NCFTE 2009;

Unit - IV: Democracy and Education

- Meaning of the term “National Integration and Emotional Integration”its need, role of teacher & educational institution in achieving national integration through democratic integration, explanation of cultural heritage, contributions of different religions (Hinduism, Buddhism, Sikhism, Islam, Christianity and Jainism) for the same cause and human upliftment, equal communication, philosophy of celebration of Indian festivals.
- Sociological basis of education; Relationship between individual to individual and individual to society, in terms of norms given by the existing social order; education as liberal utilitarian, education as a tool of economic education, as an agent of social change, education as a means of national welfare through the immediate welfare of the society, education and human resource development.
- Meaning of a new social order, eradication of illiteracy, objectives of NAEP; provisions made and channels started for educating socially, culturally and economically deprived; Means and measures taken for equality of opportunities in terms of castes, tribes. Disabled, Gender and Minorities.

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Unit - V: The Current Concerns of Indian Education

Private Public Partnership (PPP); yet others relate to the status of teachers- casualization and informalisation of teachers. Student teachers will be given an opportunity to study these concerns and prospects through case studies and other academic literature.

- (i) Professional ethics;
- (ii) Impact of privatization and development of Human Resources in the institution.

Practicum

- (i) Field based surveys of status of marginalised social groups like SC, ST, migrant workers, rural and urban, poor, etc and their educational prospects.
- (ii) Action research to understand the problems faced by children of marginalised communities in schools of different kinds.
- (iii) Action research to understand the implementation of government schemes for education of the marginalised groups.
- (iv) Surveys to study condition of different kinds of schools and teachers and other staff working in them.
- (v) Surveys to understand field realities relating to policy issues under discussion.
- (vi) Role play and dramatization of issues relating to education of marginal groups.

Suggested Readings:

1. Position Paper of Focus Group on Education of SCs and STs, NCERT.
2. SC Dubey: Indian Society. (Also available in Hindi) NBT, Delhi.
3. Russel & Hiralal: Tribes and Castes of CP & Berar.
4. S. Thorat: Dalits in India, 2009.
5. R Govinda: Who Goes To School? OUP, New Delhi, 2010.
6. Danda, Ajit Kumar [edited]. Chhattisgarh: An Area Study. Calcutta 1977. Anthropological Survey of India.
7. Tribal Situation in Northeast Surguja. Calcutta 1977. Anthropological Survey of India.
8. F. Haimendorf: Tribes in India. OUP.
9. P. Veerbhadranaika, Revathi Sampath Kumaran, Shivali Tukdeo A.R. Vasavi: The Education Question from the Perspective of Adivasis: Conditions, Policies and Structures. NIAS, Bangalore 2011.
10. The Social Context of Elementary Education in Rural India, Azim Premji Foundation, Bangalore, 2004.

11. Praveen Jha & Whithering: Commitments and Weakening Progress, State and Education in the Era of Neo Liberal Reforms. EPW, Aug 2005.
12. Poverty and Social Exclusion in India. World Bank, 2011.
13. Geetha Nambissan: Exclusion and Discrimination in Schools: Experiences of Dalit Children. UNICEF, 2009.
14. Sociology, NCERT Text books for class XI and XII.
15. J.P. Naik & S. Nurullah: A Students' History of Education in India. Macmillan (available in Hindi).
16. Education policy documents and Commission Reports: Mudaliar Commission, Kothari Commission, National Commission on Teachers, Yashpal Commission, National Policy on Education 1965, 1988 & 1992.

Films & Documentaries

1. Shyam Benegal: Making of the Constitution (12 parts).
2. Shyam Benegal: Bharat Ek Khoj (relevant parts on National movement).
3. India Untouched.

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**PAPER - III:
ARTS EDUCATION**

MARKS: 100

COURSE OBJECTIVES:

- (i) To work together on small and large projects;
- (ii) To encourage students to free expression and creativity;
- (iii) To acquaint students with basic elements of design;
- (iv) To develop an insight towards sensibility and aesthetic appreciation;
- (v) Joyful experience; and
- (vi) To develop a perspective of artistic and creative expression.

Course Outline

Unit - I: Art Appreciation/Brief History of Indian Art

- Sculptures: Any 2 Sculptures of every period giving brief introduction;
 - Indus Valley (They must have read in this till 8th standard);
 - Mauryan Period;
 - Gupta Period;
 - Folk Art;
 - Modern/Contemporary Art.
- Paintings:
 - Ajanta and the Mural Traditions;
 - Miniature Paintings;
 - Contemporary Paintings;
 - Folk Art.

Unit - II: Visual Arts

- History of visual arts.
- The concept and meaning of visual arts.
- 2D Art, Methods and Techniques: Drawing, Painting, Still life, Printing, Life Drawing, Composition, Collage, Wall Painting, Posters, Alpana/Rangoli/Mandra/Folk Art Forms etc.
- Tribal Computer Graphics: Animations.
- 3D Art, Methods and Techniques: Relief Work, Clay Modelling, Hand Pottery, Molding, Sculpture, Terracotta construction with mixed materials.
- 3D animation; Folk/Tribal Art.

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Unit - III: Theatre

- Sense of theoretical/dramatic self:
 - Factors of Drama: The plot, structure, characters, available material, performance space, performance etc.
 - Street plays: script writing, song writing, clowning, cartooning.
 - Issues of identity, gender, relationships, social status.
 - The roots of theatre: Ritual, Festival/Celebration, Myth, Primitive Man, Language Development.
 - Modern Indian Drama: Major plays and Playwrights.

Unit - IV: Music and Dance

- Laya and Swara: Basic concepts of rhythm and note.
- Sangeet: Gayan, vadan and nritya in the context of locally known songs and dances commonly performed.
- Musical Instruments: Categorization.
- Music of different geographical areas such as the desert, mountains, jungles and river-belt.
- The term 'Nritya' or 'Naach':
 - Movement of different parts of the body
 - Expression
 - Literature
 - Percussion instruments
 - Any two regional dances
 - Description of the region
 - Dialect
 - Costumes
 - Music
 - Tal

Discussions on –

- | | |
|-------------------------------------|-------------------------|
| (i) Rajasthani Folk Dance | (ref. Tarang list CIET) |
| (ii) Himachal Pradesh Ke Lok Nritya | (ref. Tarang List CIET) |
| (iii) Hamare Vadya Yantra Series | (ref. Tarana List CIET) |
| (iv) Community Singing | (ref. Tarang List CIET) |
| (v) Song of Unity (KSSP) | (ref. Tarang List CIET) |

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| (vi) Rajasthan Folk | Langas and Manganiars |
| (vii) Best of Carnatic | Various Instrumental |
| (viii) Classical Dances of India Series | (ref. Tarang List CIET) |

Unit - V: Heritage Crafts

- Introduction to the crafts traditions of India, details about the different crafts, their classifications, regional distribution etc. Each of these topics will incorporate aspects such as the Philosophy and aesthetics, Materials, processes and techniques, Environment and resource management, Social structures, Economy and marketing.

- Clay, Stone work, Metal crafts, jewelry, natural fiber weaving and textile weaving.

Suggested Readings:

1. Indian Sculpture- Chintamani Kar.
2. Exploring Sculpture- Jan Amdell Mills and Boon, London.
3. The Technique of Sculpture- John W. Mills, P.T. Patsford Ltd., London.
4. A History of Sculpture of the World- Sheldon Cneey, Thames and Hudson, London.
5. Form and Space-Edward Their, Thames and Hudson, London.
6. Sculpture and Ideas- Michael F. Andrews.
7. Modern Sculpture-Jean Selz, Heinemann, London.
8. Creative Carving ads. (Material techniques appreciation)- Dons Z.Meilach, Pritam Publishing in the format of Posters, magazine layout, illustration animation and television.
9. Bharat Ki Chitrakala (Hindi) - Rai Krishna Das.

Books published by NBT

1. PranNathMago- Contemporary Art in India: A perspective
2. JasleemDhamija- Indian folk Arts and Crafts
3. Krishna Deva- Temples of North India
4. K.R. Srinivasan- Temples of South India
5. Alokendranath Tagore- Abhanindranath Tagore
6. Dinkar Kaushik- Nandalal Bose
7. MadhuPowle- Festival of Colours
8. Badri Narayan- Find the Half Circles
9. Ela Datta- Lines and Colours
10. Upinder Singh- Discovering I

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11. Mysteries of the Past; Archeological Sites in India

12. Niranjana Ghoshal- Name That Animal

13. Devi Prasad- Art: The Basis of Education

Publications Division, Government of India

1. Vidya Daheja- Looking Again at Indian Art

2. Panorama of Indian Painting

3. Buddhist Sculptures and Monuments

4. A. Ghosh- Ajanta Murals

5. Z.A. Desai- Mosques of India

6. NCERT: Raja Ravi Varma (Hindi)

7. Lalit Kala Monographs

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PAPER - IV
ELECTIVE GROUP - II

MARKS: 100

Note: Any one elective is to be chosen from the options given below:

COMPUTER EDUCATION

TEACHING OF VALUES

PAPER - IV
ELECTIVE GROUP – II

(A) COMPUTER EDUCATION

MARKS: 100

COURSE OBJECTIVES:

To enable the teacher-trainees:

- (i) To appreciate the role of computer education in the context of modern technological society;
- (ii) To develop understanding of computers and their application in education;
- (iii) To acquire sufficient knowledge of handling computers with a view to impart computers independently at school level;
- (iv) To use computer based learning packages and organize effective classroom instructions;
- (v) To acquire necessary skills in using of modern word processing software; and
- (vi) To develop skills of creating and managing simple databases and handling of computers.

Course Outline

Unit - I

- Importance of information technology.
- Classification of computers by technology, type and size.
- Uses and scope of computers.
- Fundamentals of computers.
- Input/output devices;
- Central processing unit storage devices;
- Operating systems;
- Application software.

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Unit - II

- Files and folders;
- Use of pointing devices;
- Cut and paste;
- Shortcuts to applications;
- Use and exploring the contents of storage devices- floppy disk, drives, hard discs, CD ROM etc.
- Running applications and exiting applications.

Unit - III

Modern word processing applications:

- Importance of word processing in education.
- Characteristics of modern word processing applications.
- Toolbars and menu.
- Text and objects.
- Text entry-Running text and paragraphs.
- Formatting text- Bold, Italics, Centre and right, justification, changing font and font size, bullets and numbering.
- Editing text- select text, find and replace, cut, copy and paste.
- Editing document- Applying styles, spell check, headers and footers, footnotes, pagination, subscript and superscript.
- Insertion of objects, pictures, symbols, fields, page breaks and section.
- Page setup- Margins, paper size, and layout, printing and saving documents.

Unit - IV

Modern data base management applications:

- Importance of data base management in education.
- Characteristics of modern data base management applications.
- Concept of relational data base management system.
- Fields name, Type, Width.
- Databases;
- Forms;
- Reports.

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Unit - V

Computers for joyful learning:

- Need for joyful learning.
- Computers as an aid for joyful learning.
- Computer games.
- Multimedia capabilities of modern desk top computers.
- Internet- Importance and need.
- Use of interactive and educational software.

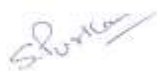
Assignments

- Write an essay on any topic using word-processing software. Document must include at least three of the following characteristics.

- Pagination;
- Header;
- Two different paragraph styles;
- Two different fonts;
- A picture object;
- Bullets and numbering;
- Subscript and super script;
- Symbols or special characters.
- Use relational database management software for any one of the following activities:
 - Developing question bank
 - Developing a data base for either students or staff including various fields like name, date of birth, date of joining, admission, salary/grade obtained etc.
 - Automated printing of salary statement/GPF deduction statement or any other administrative activity.

Suggested Readings:

1. Admas, D.M: Computer and Teacher Training.
2. Bhatnagar, S.C.&Ramani, K.V: Computers and Information Management.
3. CO-ROM-Titles available at cyber media 35 (4bays)Echelon Institutional area, sector 32, Gurgaon 122002.
4. Desai, B.: Database Management System.



5. Rajaram, V: Fundamentals of Computers. Prentice Hall of India, New Delhi.
6. SAM's Teach Yourself Office 97 in 24 hrs., Prentice Hall of India, New Delhi.
7. Shelly, John and Hunt Roger: Computer studies-first course (second edition), A.H.Wheeler& Co., Delhi.
8. Windows 96: Simplified. Complex Publishing, New Delhi.
9. Windows 98: No Experience Required. BPB Publications, New Delhi.

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ELECTIVE GROUP - II
(B) TEACHING OF VALUES

MARKS: 100

COURSE OBJECTIVES:

- (i) To understand the nature and sources of nature, and disvalues.
- (ii) To understand the classification of values under different types.
- (iii) To appreciate educational values like democratic, secular, and socialist.

Course Outline

Unit - I

- Nature and sources of values, biological, psychological, social and ecological determinants of values- their bearing on education in varying degrees.

Unit - II

- Classification of values into various types:Material, social, moral and spiritual values; status of values; how can these be realized through education.

Unit - III

- Corresponding to values there are evils or dis-values:Material, social, economic, moral and religious evils leading to faithlessness and irreverence; how can education overcome these negative values.

Unit - IV

- Levels of values realization, how to resolve the conflicts among values;how to work for the integration of values that are embedded in education.
- Development of values as a personal and life-long process-teaching of values as an integral part of education.

Unit - V

- Evaluating that teachers and other school personnel are value laden, students and parents are value laden, curriculum is value laden evaluate.
- Value of self-sacrifice vs value of self-centredness.
- Values of excellence vs values of ego-centralism.
- Values of work vs values of selfishness.
- Every teacher or all teachers need to teach values.

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Suggested Readings:

1. Hassh, I.R.H., Miller., J.R. &Fieding, G.D.: Models of Moral Education, An Appraisal.LorigmanInc, New York.
2. Passi, B.K. & Singh, P.: Value Education, National Psychological Corporation. Agra.
3. Laths, L.E., Menu Harmins& Sydney, S.: Value and Teaching.Menhill, Ohio.
4. Rokeach, M.: The Nature of Human Values. Coiler MacMillan Publisher, London.
5. Fraenkel Jack R.: How to Teach Value: An Analytical Approach. Prentice Hall, New Jersey.

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PAPER – V

(a) PEDAGOGICAL STUDIES (PART II)

MARKS: 100

PEDAGOGY OF MATHEMATICS (PART II)

Course Outline (Part II)

Unit - VI: Planning for Teaching-Learning Mathematics

Organisation of concepts for teaching-learning of Mathematics. Stating instructional objectives, identifying learning experiences, appropriate strategies, teaching aids (Using low-cost material-preparation of various activities, such as verification of algebraic identities, surface areas and volumes of cube, cuboids, cylinder, cone, sphere, conic sections, etc.); ICT applications; Evaluation tools and learners participation in developing instructional materials, etc.

Unit - VII: Learning Resources in Mathematics

Textbooks, audio-visual multimedia- Selection and designing; Using community resources for Mathematics learning, pooling of learning resources in school complex/block/district level, handling hurdles in utilizing resources.

Unit - VIII: Assessment and Evaluation

Informal Creative Evaluation: Encouraging learner to examine a variety of methods of assessment in mathematics so as to assess creativity, problem-solving and experimentation/activity performance; Appreciating evaluation through overall performance of the child; Self and peer evaluation.

Formal Ways of Evaluation: Variety of assessment techniques and practices assessing Product vs Process, Knowing vs Doing in practice of midterm/terminal examination, practising continuous and comprehensive evaluation to test regular programmes/achievements of learner.

Assessment Framework: Identifying and organising components for developing framework of question paper at different stages of learning; Framing questions based on concepts and sub concepts so as to encourage critical thinking, promote logical reasoning and to discourage mechanical manipulation and rote learning; Framing of open-ended questions providing the scope to learners to give responses in their own words; Framing of conceptual questions from simple questions.

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Unit - IX: Mathematics for All

Identifying learners' strength and weaknesses; Activities enriching mathematics learning- assisting learning, supplementary text material, summer programmes, correspondence course, mathematics club, contests and fairs, designing Mathematics laboratory and its effective use, recreational activities- games, puzzles and riddles in Mathematics, cooperative learning ensuring equal partnership of learners with special needs, stimulating creativity and inventiveness in Mathematics.

Unit - X: Professional Development of Mathematics Teachers

Types of in-service programme for Mathematics teachers; Role of mathematics teachers' association; Journals and other resource materials in mathematics education; Professional growth- participation in conferences/seminars/workshops.

NOTE: Refer to the suggested readings that have been given at the end of Paper III: Pedagogy of Mathematics (Part I) in B.Ed. Syllabus(Semester I).

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PEDAGOGICAL STUDIES (PART II)

MARKS: 100

(B) PEDAGOGY OF BIOLOGICAL SCIENCE (PART II)

TOTAL Course Outline (Part II)

Unit - VI: Planning for Teaching-Learning of Biological Science

Identification and organisation of concepts for teaching-learning of Biology; Determining acceptable evidences that show learners' understanding; Instructional materials required for planning teaching-learning of Biological Science and learners' participation in developing them; Identifying and designing teaching-learning experiences; Planning and organizing- field visits, field observation and preparation of field diary, Zoo, Sea shore life, Botanical garden, etc.; Organising activities, laboratory experiences, making groups, planning ICT applications in learning Biology and its use in Biological Science.

Unit - VII: Learning Resources in Biological Science

Identification and use of learning resources in Biological Science from immediate environmental, exploring alternative sources; Developing Science kit and Biological Science laboratory; Designing Biology laboratory; Collection of materials, etc.; Textbooks, audio-visual materials, multimedia-selection and designing; Using community resources for Biology learning; Pooling of learning resources in school complex/block/ district level; Handling hurdles in utilisation of resources.

Unit - VIII: Tools and Techniques of Assessment for Learning Biological Science

Performance-based assessment; Developing indicators for performance assessment in biological sciences; Learners' record of observations- Field diary, herbarium and collection of materials; Oral presentation of learners work in Biological Science, Portfolio; Assessment of project work in Biology (both in the laboratory and in the field), Assessment of participation in collaborative learning; Construction of test items (open-ended and structured) in Biological Science and administration of tests; Developing assessment framework in Biological Science; Assessment of experimental work in Biological Science; Exploring content areas in Biological Science not assessed in formal examination system and their evaluation through various curricular channels; Encouraging teacher-learners to examine a variety of methods of assessments in Biological Science; Continuous and comprehensive evaluation.

Unit - IX: Biological Science- Lifelong Learning

Nurturing natural curiosity of observation and drawing conclusion; Facilitating learning progress of learners with various needs in Biology; Ensuring equal partnership of learners with special needs; Stimulating creativity and inventiveness in Biology; Organising various curricular activities, such as debate, discussion, drama, poster making on issues related to Science/Biology; Organising events on specific day, such as Earth Day, Environment Day, etc.; Planning and

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organizing- Science club, Science exhibition; Nurturing creative talent at local level and exploring linkage with district/state/central agencies.

Unit - X: Professional Development of Biology Teacher

Professional development programmes for Science/Biology teachers; Participation in seminar, conferences, online sharing membership of professional organisation; Teachers as a community of learners; Collaboration of school with colleges, universities and other institutions; Journals and other resource materials in biology education; Role of reflective practices in professional development of Biology teachers; Visit to science park, science centre, National Laboratories etc.; Teacher as a researcher: Learning to understand how children learn science action research in Biological Science.

NOTE: Refer to the suggested readings that have been given at the end of Paper III: Pedagogy of Biological Science (Part I) in B.Ed. Syllabus (Semester I).

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PEDAGOGICAL STUDIES (PART II)

MARKS: 100

(c) PEDAGOGY OF PHYSICAL SCIENCE (PART II)

Course Outline (Part II)

Unit - V: Learning Resources in Physical Science

Identification and use of learning resources in Physical Science from immediate environment (e.g. Natural pH Indicators, Soaps and Detergents, Baking Soda, Washing Soda, Common Salts, Fruits, Fiber, Pulleys, Projectiles, Lenses and Mirrors, Inter-conversion of one form of energy to other, Propagation of waves in Solid, Liquid and Gas etc.), exploring alternative sources; Improvisation of apparatus developing Science kit and laboratory in Science (secondary stage), Physics and Chemistry (higher secondary stage); Designing laboratories, textbooks, audio-visual materials; Multimedia–selection and designing; Use of ICT experiences in learning Science/Physics and Chemistry; Using community resources for learning Science/Physics and Chemistry; Pooling of learning resources in school complex/block/district level, handling hurdles in utilisation of resources.

Unit - VII: Tools and Techniques of Assessment for Learning Physical Science

Performance-based assessment, developing indicators for performance-based assessment in Science/Physical Science, learners' records of observations, field diary; Oral presentation of learners work, Portfolio; Assessment of project work in Science/Physical Science; Assessment of participation in collaborative learning; Construction of test items in Science/Physical Science and administration of tests; Developing assessment framework in Science/Physics and Chemistry; Assessment of experimental work in Science/Physics and Chemistry; Exploring content areas in Physical Science not assessed in formal examination system and their evaluation through various curricular channels; Encouraging teacher-learners to examine variety of methods of assessments in Science/Physical Science; Continuous and comprehensive evaluation–appreciating evaluation as ongoing teaching-learning process and through overall performance of child.

Unit - VIII: Planning for Teaching-Learning of Physical Science

Identification and organisation of concepts for teaching-learning of Science/Physics and Chemistry (on different topics, such as Motion, Work and Energy, Matter and their Measurements, Carbon and its Compounds, Periodic Properties of Elements, Atomic Structure, dual nature of Matter and Radiation, etc. & developing them); Identifying and designing teaching-learning experiences; Organising activities, laboratory experiences, making groups; Planning ICT applications in learning Science/Physics and Chemistry.

Spencer

Unit - IX: Physical Science- Lifelong Learning

Every child has natural curiosity of observation and drawing conclusion; Identification and application of physical and chemical phenomenon in day-to-day life and human welfare, facilitating learning progress of learners with various needs in Science/Physics and Chemistry; Ensuring equal partnership of learners with special needs; Stimulating creativity and inventiveness in Science; Organising various curricular activities, such as debate, discussion, drama, poster making on issues related to Science/Physics and Chemistry; Organising events on specific day, such as Science Day, Environment Day, etc.; Planning and organising field experiences , Science club, Science exhibition, nurturing creative talent at local level and exploring linkage with district/state/central agencies.

Unit - X: Professional Development of Science/Physics/Chemistry Teachers

Professional development programmes for Science/Physics and Chemistry teachers; Participation in seminar, conferences, online sharing, membership of professional organisations; Teachers as a community of learners, collaboration of schools with universities; Journals and other resource materials in Science/Physical Science education; Role of reflective practices in professional development of Physics and Chemistry teachers; Field visit to industries, mines, refineries; National Laboratories, power stations, Science centres, etc.; Teacher as a researcher: Learning to understand how children learn Science- action research in Physical Science.

NOTE: Refer to the suggested readings that have been given at the end of Paper III: Pedagogy of Physical Science (Part I)in B.Ed. Syllabus(Semester I).

SP

(Format A)

TEACHING REFLECTIVE LOG FORMAT

(This is to be completed daily during the week you teach)

Objectives for day:

Materials for day:

Instructional Strategies used (explain how the strategies were implemented):

What I did well:

What my students did well:

What I didn't do so well:

What my students didn't do so well:

What I would keep the same:

What I would Change:

What did I learn about teaching today? (If you had to modify your lesson to help students, briefly explain here)

Shirley

(Format B)

SCORE SHEET FOR REFLECTION LOG ON FOCUS LESSON

(To be filled by the trainee, based on student reflection)

Name of the Trainee:

Duration:

Class:

Section:

Unit of teaching:

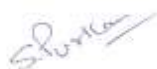
S.No.	CRITERION ON STUDENT RESPONSE	0	1	2	3	4
1	Ability to identify specific and/or varied instructional strategies.					
2	Examples to support the strategy.					
3	Connectivity across disciplines.					
4	Ability to identify learning styles.					
5	Examples to reflect according to learning styles.					
6	Ability to display personal reflections					
7	Examples reflected in support of personal reflection					
8	Group conformity					
9	Contribution to activity/strategy					
10	Acceptance in group/solo activity or Strategy					

Any other remarks by the trainee:

Mentor's Remarks:

Mentor's Signature

Trainee's Signature



(Format C)

MENTOR'S EVALUATION REPORT OF TRAINEE

Name of the Trainee:.....

Period of Evaluation: From.....to.....

Focus Lesson No.:.....

Subject:.....

S.NO.	CRITERION	0	1	2	3	4
I	INSTRUCTIONAL STRATEGIES USED-					
1	Are appropriate for the topic/topics.					
2	Has scope for learner engagement.					
3	Has suitability of learning materials.					
4	Assess learner's understanding throughout the Lesson.					
5	Has effective displays.					
6	Are consistent with the objectives.					
II	LEARNER'S(LEARNING STYLES) IN CLASS-					
7	Identification of personalities and talents of learners					
8	Identification of learning styles of learners.					
9	Ensuring learner participation.					
10	Identification of learner's pace.					
III	LEARNING ENVIRONMENT-					
11	Learners are motivated, appreciated and involved.					
12	Learners are relaxed and confident.					
13	Management of classroom.					
14	Teacher-Student relationship					
15	Class control					
16	Overall performance					

Strengths of the Trainee:

(May use separate papers for detailed report)

Areas of Improvement:

(May use separate papers for detailed report)

Sign of Mentor with Name

(Format D)

Weekly Reflective Diary Format

We learn by doing and reflecting on what we do. (John Dewey)

Use this template to record your observations weekly. This document will be turned in every Monday following each week in the field. The weeks you teach will have a different format to follow. Please note that your document will be longer than one page.

Name:

Date:

Analyze your observations to identify specific teaching and learning strategies you observed involving the classroom teachers and their students. You may include your behavior if you are involved in the teaching process. Include more than one strategy.

Instructional Strategies (Include more than one strategy)	Specific example describing how the strategy was implemented

Learning Styles observed	Specific examples how the learner was supported through instructional delivery

1. What have you learned about teaching this week?
2. What have you observed/learned about students and their learning this week?

Theory base observed	Specific example from classroom to apply/support theory

Personal Reflection: Reflect specifically on something you observed and connect to personal opinions.

Stunt