M.Ed. Two year Programme

IV Semester Final Papers

May 2017 -

Name Course 12: Theme Based Specialisation

Subject Course - I. Pedagogy of Science.

Address

From To

Phone Fax

E-mail :

Reg. No. | | | | | | | |

ST. ANN'S COLLEGE OF EDUCATION, MANGALURU.
(AUTONOMOUS)
M.Ed. Two Year Programme – Choice Based Credit System (CBCS)

Fourth Semester Examination – May 2017
(Semester Scheme)

Course 12 : Theme Based Specialisation Course - I : PEDAGOGY OF SCIENCE

Time : 3 Hours Max. Marks : 70

Instructions : There are two sections in the question paper. Both are compulsory.

Section A

Note : Answer the following questions in about three pages each.

1a) i) Mention the steps of Scientific Method and discuss its application to teaching and learning Science at secondary level.
ii) Explain the integrated process skills in Science and its applications in learning Science. (5+5)

OR

b) i) Write the national goals of Science Education as envisaged in NPE (1986).
ii) Explain the revised taxonomy of Kendall and Marzano and its integration in Science Education. (4+6)

2 a) i) Explain the need and importance of Science in School Curriculum.
ii) Discuss the role of educational philosophies in improving the quality of Science Curriculum. (4+6)

OR

b) i) Discuss the science curricular reforms given in NCF (2005).
ii) Discuss the need and significance of integrating Science with Mathematics, Social Science and Music. (4+6)

3 a) i) Explain the concept and characteriscts of Individualized learning.
ii) Discuss the phases and applications of Autonomous Learner Model and its applications. (4+6)

OR

b) i) Illustrate Meta Cognitive Learning model of IDEAL in relation to teaching and learning of Science.
ii) Explain the syntax of Advance Organizer Model of teaching with an example.(4+6)

Contd...2.

4 a) i) Discuss the techniques and strategies to respond to the science needs of gifted children.

ii) Explain the features of Creative Science Curriculum framework innovative activities to promote students creativity. (5+5)

OR

b) i) Explain the stages of classroom based research and its significance to professional development of a science teacher.

ii) Write reviews of any two research studies related to innovative practices and their implications to science education. (5+5)

Section B

Note : Answer any six of the following questions in about a page each. (6x5=30)

5 a) Discuss the perspectives of Science Education.

b) Explain the Outcomes of Science Education.

c) Explain the need and characteristics of curriculum development in Indian rural environment.

d) Explain the stages of Cognitive Apprenticeship Model and its applications to Science Learning.

e) Discuss the salient features of any two significant Curricular Projects in Science.

f) Discuss the scope and relevance of any five e-resources to teaching and learning of Science.

g) Explain the teaching techniques and strategies to respond to the special needs and interests of children with handicapping.

h) Discuss the concept and process of reflection and its significance to professional development of a Science Teacher.

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ST. ANN'S COLLEGE OF EDUCATION, MANGALURU.
(AUTONOMOUS)
M.Ed. Two Year Programme – Choice Based Credit System (CBCS)

Fourth Semester Examination - May 2018
(Semester Scheme)

MES551 :Theme Based Specialisation Course - I : PEDAGOGY OF SCIENCE

Time : 3 Hours Max. Marks : 70

Instructions : There are two sections in the question paper. Both are compulsory.

Section A

Note : Answer the following questions in about three pages each.

1a) i) Discuss the scope and perspectives of Science Education.
ii) Explain the basic process skills of science and its applications in teaching and learning science. (4+6)

OR

b) i) Write the international goals of Science Education with reference to Science Technology and Society (STS).
ii) Explain the revised taxonomy of Kendall and Marzano and its integration in Science Education. (4+6)

2 a) i) Explain the characteristics of progressive School Curriculum and need of it at secondary school level.
ii) Discuss the role of educational philosophies in improving the quality of Science Education. (5+5)

OR

b) i) Discuss the salient features of any two significant curricular projects in Science.
ii) Explain the need and significance of integrating Science with Mathematics, Art and language. (4+6)

3 a) i) Give the theory base of co-operative learning and explain Reciprocal Peer Teaching method.
ii) Explain the syntax of Inductive Thinking Model with an example. (4+6)

OR

b) i) Illustrate Meta Cognitive Learning Model of KWL in relation to teaching and learning of Science.
ii) Discuss the phases and applications of mastery learning model. (5+5)

Contd...2.

4 a) i) Discuss the techniques and strategies to respond to the science needs of children with handicapping.

ii) Explain the classroom based research and its significance to professional development of a science teacher. (5+5)

OR

b) i) Explain the features of Creative Curriculum framework and innovative activities to promote students creativity.

ii) Discuss the concept and process of reflection and its significance to professional development of a science teacher. (5+5)

Section B

Note : Answer any Six of the following questions in about a page each. (6x5=30)

5 a) Illustrate the steps of scientific method.

b) Explain the Outcomes of Science Education.

c) Explain the need and characteristics of curriculum development in Indian rural environment.

d) Explain the theory base and phases of guided discovery method.

e) Discuss the characteristics and applications of different types of Computer Assisted Instructions (CAI) in learning Science.

f) Write the review of any two research studies related to science process skills and their implications to Science Education.

g) Discuss the research trends in Science Education.

h) Discuss the scope and relevance of any two e-resources in teaching and learning science.

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ST. ANN'S COLLEGE OF EDUCATION, MANGALURU.
(AUTONOMOUS)
M.Ed. Two Year Programme – Choice Based Credit System (CBCS)

Fourth Semester Examination - May 2019
(Semester Scheme)

MES551 :Theme Based Specialisation Course - I : PEDAGOGY OF SCIENCE

Time : 3 Hours Max. Marks : 70

Instructions : There are two sections in the question paper. Both are compulsory.

Section A

Note : Answer the following questions in about three pages each.

1a) i) Discuss the personal and social perspectives of Science Education.
ii) Explain the integral process skills in science and their applications in learning science. (4+6)

OR

b) i) Explain the outcomes of Science Education.
ii) Write the national goals of Science Education as invisaged in NPR (1986). (6+4)

2 a) i) Explain the characteristics of progressive Curriculum and its need at secondary school level with respect to science.
ii) Discuss the need and significance of integrating Science with Mathematics and Social Science. (5+5)

OR

b) i) Discuss the Science curriculum reforms given in NCF (2005).
ii) Explain the components and guiding principels in the development of science programme at school level. (4+6)

3 a) i) Illustrate the Meta Cognitive Learning. Model of IDEAL in relation to teaching and learning science.
ii) Discuss the phases and applications of Autonomous Learner Model. (5+5)

OR

b) i) Give the theory base of co-operative learning and explain Reciprocal Peer Teaching Method.
ii) Discuss the characteristics and applications of different types of Computer Assisted Instruction (CAI) in learning science. (5+5)

4 a) i) Discuss the techniques to respond to the science needs of gifted children.
ii) Explain the process of reflection and its significance to professional development of science teachers. (4+6)

OR

b) i) Explain the features of Creative Science Curriculum framework and innovative activities to promote student creativity.
ii) Write the review of any two research studies related to science achievement and their implications to Science Education. (5+5)

Contd...2.

Section B

Note : Answer any Six of the following questions in about a page each. (6x5=30)

5 a) List the steps of Sceintific Method and discuss its application to teaching and learning science.

b) Explain the revised Bloom and Anderson Taxonomy of Educational Objectives.

c) Discuss the role of philosophies in improving the quality of science curriculum.

d) Explain the salient features of any two significant curricular projects in science.

e) Explain the syntax and application of Advance Organizer Model of Teaching.

f) Discuss the scope and relevance of blogs and pod casting resources in Science Education.

g) Discuss the research trends in Science Education.

h) Explain the techniques and strategies to respond to the science needs of children with handicapping.

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ST. ANN'S COLLEGE OF EDUCATION, MANGALURU.
(AUTONOMOUS)
M.Ed. Two Year Programme – Choice Based Credit System (CBCS)

Fourth Semester Examination - September 2020
(Semester Scheme)

MES551 : Theme Based Specialisation Course - I : PEDAGOGY OF SCIENCE

Time : 3 Hours Max. Marks : 70

Instructions : There are two sections in the question paper. Both the sections are compulsory.

Section A

Note : Answer the following questions in about three pages each.

1a) i) Discuss the scope and perspectives of Science Education.
ii) Discuss the application of scientific method at secondary level. (5+5)

OR

b) i) Enumerate the National goals of Science Education as envisaged in NPE (1986).
ii) Discuss the importance of integrating the taxonomies for Science Education. (4+6)

2 a) i) Explain the characteristics of a progressive science curriculum.
ii) Explain any one recent trend in science curriculum development. (6+4)

OR

b) i) Explain the components of objective based science education.
ii) Discuss the role of philosophy of Experimentalism in the teaching of science.(6+4)

3 a) i) Explain the phases of mastery learning model.
ii) Discuss the relevance of applying the autonomous learner model at secondary level. (5+5)

OR

b) i) Discuss the importance of application of constructivist learner model at secondary level.
ii) Explain the syntax of advance organizer model with an example from science curriculum at secondary level. (5+5)

4 a) i) Explain any two teaching strategies to meet the science needs of gifted children.
ii) Elucidate the implications of science education researches to classroom practices. (6+4)

OR

b) i) Discuss the importance of reflective practice in professional development of a science teacher.
ii) Explain the need and stages of classroom based research. (5+5)

Contd...2.

Section B

5. Answer any Six of the following questions in about a page each. 6 x 5=30

5 a) Explain any two outcomes of Science Education with examples.

b) Explain the revised Bloom and Anderson Taxonomy of Educational objectives.

c) Discuss the importance of integration of science with language.

d) Elucidate the science curriculum development in Indian rural environment.

e) Explain the role of e-resources and e-journals in teaching-learning of Science.

f) Explain IDEAL meta cognitive learning model for science learning.

g) Explain any two creative activities in science teaching-learning.

h) Explain the factors influencing achievement in Science.

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ST. ANN'S COLLEGE OF EDUCATION, MANGALURU.
(AUTONOMOUS)
M.Ed. Two Year Programme – Choice Based Credit System (CBCS)
Fourth Semester Examination - October 2021
(Semester Scheme)
MES551 : Theme Based Specialisation Course - I : PEDAGOGY OF SCIENCE

Time : 3 Hours Max. Marks : 70

Instructions : There are two sections in the question paper. Both the sections are compulsory.

Section A

Note : Answer the following questions in about three pages each.

1a) i) Explain the philosophical basis of Science.
ii) Explain the steps and application of scientific method in the teaching-learning of science. (5+5)

OR

b) i) Explain the goals of Science Education as envisaged in NCF (2005).
ii) Explain the Taxanomy of Bloom and Anderson and discuss its necessity of integrating it in Science Education. (4+6)

2 a) i) Explain the components and guiding principles of development of Science Programme at secondary school level.
ii) Explain the systems of organizing science curriculum. (6+4)

OR

b) i) Discuss the need for integrating science with other subjects.
ii) Discuss the role of realism and experimentalism philosophy in the teaching of Science. (5+5)

3 a) i) Differentiate Self learning and individualized learning approaches to teaching of Science.
ii) Explain the co-operative learning model with reference to its characteristics, phases and applications. (4+6)

OR

b) i) Illustrate 5E constructivisit learner model in teaching and learning of Science.
ii) Explain the characteristics and uses of Computer Assisted instruction in teaching-learning of Science. (5+5)

4 a) i) Explain the techniques and strategies of teaching Science to children with hearing impairment.
ii) Explain the need and stages of classroom based research. (6 +4)

OR

b) i) Discuss the importance of reflective practices in the professional development of Science Teachers.
ii) Write any two reviews of research in the area of Innovative practices in Science teaching and its implications. (4+6)

Contd...2.

Section B

5. Answer any Six of the following questions in about a page each. (6x5=30)

5 a) Discuss personal and social perspectives of Science Education.

b) Explain the outcomes of Science Education.

c) Explain the characteristics of progressive curriculum and its significance to Science.

d) Explain the characteristics of CHEM project.

e) Explain the phases and application of Mastery learning model.

f) Discuss the relevance of blogs and pod casting in Science Education.

g) Explain the syntax and application of Advance Organizer Model of Teaching to Science Learning.

h) Explain creative and innovative activities in Science Teaching and Learning.

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ST. ANN'S COLLEGE OF EDUCATION, MANGALURU.
(AUTONOMOUS)
M.Ed. Two Year Programme – Choice Based Credit System (CBCS)

Fourth Semester Examination – December 2022
(Semester Scheme)

MES 551 : PEDAGOGY OF SCIENCE

Time : 3 Hours Max. Marks : 70

Instructions : There are two sections in the question paper. Both the sections are compulsory.

Section A

Note : Answer the following questions in about three pages each.

1a) i) Explain the personal and social perspectives of Science education.
ii) Explain the national goals of Science education as envisaged in NPE (1986). (5+5)

OR

b) i) Explain the steps and application of scientific method in teaching learning of Science.
ii) Explain the revised taxonomy of Kendall and Marzano and discuss the need of integrating for science education. (5+5)

2a) i) Discuss the need and importance of Science in school curriculum.
ii) Explain the guiding principles in the development of Science programme at school level. (5+5)

OR

b) i) Explain the role of realism and experimentalism philosophies in improving the quality of science curriculum.
ii) Discuss the need of integrating Science with other subjects. (5+5)

3a) i) Differentiate between self-learning and individualized learning.
ii) Elucidate the application of Gagne's nine events model for Science learning. (4+6)

OR

b) i) Illustrate the syntax and application of Advance Organizer Model for a topic of your choice from secondary Science curriculum.
ii) Explain the types of Computer Assisted Instruction (CAI) used for Science Learning. (5+5)

4 a) i) Explain the strategies used to teach science to children with visual impairment.
ii) Describe any two creative and innovative activities in Science Teaching and learning. (5+5)

OR

b) i) Explain the stages of reflective practice.
ii) Elucidate the need and stages of classroom based research. (4+6)

Contd...2.

Section B

Note : Answer any Six of the following questions in about a page each. (6x5=30)

5. a) Explain the philosophical bases of Science.

b) Discuss the outcomes of Science Education.

c) Explain the components of objective based Science Education.

d) Discuss the characteristics of CHEM Project.

e) Elucidate the phases and application of Mastery Learning Model.

f) Discuss the relevance of blogs and podcasting in Science Education.

g) Explain the research trends in Science Education.

h) Discuss the implications of Science Education research on classroom practices.

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