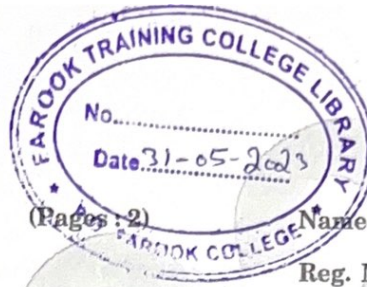


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**THIRD SEMESTER M.Ed. DEGREE EXAMINATION, DECEMBER 2022**

M.Ed.

**MED 12.2.9—ADVANCED METHODOLOGY OF TEACHING PHYSICAL SCIENCE**

(2017 Scheme)

Time : Three Hours

Maximum : 80 Marks

I. Short Answer Type Annotation Questions. Answer *all* questions. Each question carries 2 marks :

- 1 Define Guided discovery approach in science.
- 2 Name two popular science journals.
- 3 List 2 criteria to be taken care of while developing physical science textbooks.
- 4 What is the major aim of EDUBUNTU.
- 5 What is meant by scientific method ?

(5 × 2 = 10 marks)

II. Short Essay Type Questions. Answer any *eight* questions out of twelve. Each question carries 5 marks :

- 6 Write a short note on science as a dynamic expanding body of knowledge.
- 7 Differentiate with examples the inductive and deductive method in science.
- 8 Explain the role and significance of teacher appraisal.
- 9 Discuss the planning and organization of laboratory works in physical science classrooms.
- 10 Write a short note on the desired professional competencies of science teachers.
- 11 Illustrate with suitable examples how innovative thinking can be fostered in science classrooms.
- 12 Explain the theory of Piaget in the context of physical science learning.
- 13 Describe project-based learning in science.
- 14 Write a short note on critical pedagogy and its application on teaching and learning of science.

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- 15 Describe the role and significance of ICT in physical science teaching. Give examples.
- 16 Discuss the vision of NCF 2005 with regard to physical science education.
- 17 Describe in detail the evolution of science as a discipline.

(8 × 5 = 40 marks)

III. Long Essay Type Questions. Answer any *two* questions out of four. Each question carries 15 marks :

- 18 Elaborate the changing roles and responsibilities of science teachers. Suggest methods to develop proficiency among science teachers for dealing with these changes.
- 19 Describe in detail the changing trends in physical science education at the national and international level.
- 20 Discuss the salient features of continuous and comprehensive evaluation. Explain in brief the planning and assessment of portfolios in science learning.
- 21 Explain the recent research trends in science education along with the important research areas in physical science education. Identify areas in which more research is needed with suitable justification.

(2 × 15 = 30 marks)

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