



(Pages : 4)

A – 2665

Reg. No. : .....

Name : .....

**First Semester B.Ed. Degree Examination, May 2016**  
**EDU 04.8 : THEORETICAL BASE OF PHYSICAL SCIENCE EDUCATION – I**  
**(2013 Admn.)**

Time : 2 Hours

Max. Marks : 50

**PART – A**

I. Answer **all** the questions by selecting the most appropriate **one** from the options given :

- 1) Which of the following represents teacher in the role of a scaffolder ?
  - a) Teacher plans and gives instructions for field trip to a group of students
  - b) Teacher supervisor self study of a group of students
  - c) Teacher helps a group in the laboratory to refine the procedure of he experiment
  - d) Teacher asks review questions after the end of the class
- 2) What is the name of space laboratory placed into the orbit by India using PSLV – C30 in 2015 ?
  - a) CARTOSAT
  - b) HUBBLE
  - c) ASTROSAT
  - d) ISS
- 3) Study about 'iris recognition' is part of
  - a) Nanotechnology
  - b) Bioinformatics
  - c) Information Technology
  - d) Geoinformatics
- 4) Which of the following statements are true ?
  - i) According to NCF 2005, at the higher secondary stage science should be introduced as separate disciplines
  - ii) According to NCF 2005, at the secondary school stage science should be presented as a composite discipline
  - a) i) only
  - b) ii) only
  - c) i) and ii)
  - d) neither i) nor ii)

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- 5) "Every student signs a contract for the work to be done during each month."  
This is a characteristic of
- Heuristic method
  - Dalton plan
  - Individual Laboratory method
  - Guided Discovery
- 6) Which of the following terms are used by Piaget in his cognitive theory
- Equilibrium
  - Assessment
  - Alteration
- i) only
  - i) and iii) only
  - iii) only
  - i), ii) and iii)
- 7) You are looking through a microscope to analyze the cross section of a plant stem after staining it with a chemical. This process is
- Observing
  - Experimenting
  - Hypothesising
  - Generalizing
- 8) The process skills in Science Education belong to
- Concept domain
  - Application domain
  - Nature of science domain
  - None of these
- 9) Arrange the following in the order of increasing level of learning
- Zone of proximal development
  - Level of potential development
  - Level of actual development
- ii < iii < i
  - iii < ii < i
  - iii < i < ii
  - i < ii < iii





10) Arrange the following terms in proper sequence :

- i) Instructional goals
- ii) Entering behaviour
- iii) Performance assessment
- iv) Instructional procedure

a) i, ii, iii, iv

b) ii, i, iii, iv

c) ii, i, iv, iii

d) i, ii, iv, iii

(10×1=10 Marks)

PART - B

II. Answer **all** the questions in **not** exceeding in **one** paragraph. **Each** question carries **2** marks.

- 11) Give the definition of learning from behaviourist and cognitivist points of view.
- 12) Give any two instances that uphold the spirit of science for sustainable development.
- 13) Give any one definition for project method. Also describe a small project in three sentences that suits the definition for project method.
- 14) Distinguish between critical thinking and creative thinking.
- 15) What do you mean by discrepant event in Inquiry Training Model ? Illustrate this with an example.

(5×2=10 Marks)

PART - C

III. Answer **any 4** questions in **not** exceeding **one and half** pages. **Each** question carries **5** marks.

- 16) List any five maxims of teaching. Illustrate each maxim by taking an example from science teaching.
- 17) Give 5 instances where the role of teacher as a reflective practitioner is exemplified. Justify each instance by describing how it acts as a case of reflection.
- 18) Give the name of any 5 women scientists across the world. Briefly state the major contributions of each of them.





- 19) What is the significance of Revised Bloom's Taxonomy (RBT). List any four differences between RBT and the earlier version.
- 20) List the step-by-step procedure of conducting a brainstorming session.
- 21) Describe spatial intelligence. Give one example from physics and one from chemistry to show importance of spatial intelligence. Also prepare an assignment in physics or chemistry to test spatial intelligence of students.  
(4×5=20 Marks)

## PART - D

IV. Answer **any one** question in **not** exceeding **3** pages :

- 22) Prepare a lesson plan based on concept attainment model in physics or chemistry at the secondary school level.
- 23) Illustrate Mill's canons of induction with appropriate examples. (1×10=10 Marks)