Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD)
Re-accredited with A+ Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test I – March 2022
IV Semester

Class : II B.Ed
Major :Physical Science and English ;
Special Education (VI) and Physical Science

Time: 2 Hrs.
Max. Marks: 60

18BEDP14/18BDSP14 School Subject I: Professionalising Physical Science Education

Course Outcomes:

CO1 Analyse the content and pedagogy of text books
CO2: Analyse and evaluate text books
CO3: Design and develop e - content material
CO4: Conduct an action research
CO5: Organise science exhibitions and science fairs

PART – A **6 x 1 = 6**

Answer all questions

1. Pedagogy is -----of teaching. CO1 K1

   a. Art b. Science
   c. Art and Science d. Method

2. Of the following which is the tool used for assessing text book? CO2 K2

   a. Bhatia's Battery of test b. Big five test
   c. Hunter's Score Card d. Hamilton's check list

3. The ideal Fog index score for a textbook is CO2 K2

   a. 10 b. 7
   c. 12 d. 5

4. Who is given the credit of ***Content Creation*** in Tamil Nadu text book? CO2 K2

   a. NCERT b. Govt. of Tamilnadu
   c. SCERT d. Tamil Nadu Textbook and Educational Services Corporation

5. DIKSHA means CO1 K1

   a. Digital Initiative for Knowledge and Skill Sharing b. Digital Infrastructure for Knowledge and Skill Sharing
   c. Digital Initiative for Knowledge Sharing d. Digital Infrastructure for Knowledge Sharing

6. "What kind of chemical element hates to be a follower?" This is an example for _____. CO3 K1

   a. Science concept b. Science puzzle
   c. Science riddle d. Science fiction

PART – B **3 x 6 = 18**

Answer ALL Questions

Answer should not exceed 400 words or two pages

7. a. What are the steps in Pedagogic analysis? CO1 K2

(or)

7. b. What are the steps in Content analysis? CO1 K2

8. a. How do NCERT Science textbooks differ from Tamil Nadu state board Science text book? CO2 K2

(or)

8. b. Can textbooks be used outside the classroom? Justify your answer. CO2 K2

9. a. Select any five Science exhibits and explain the procedure of arranging a science exhibition. CO5 K3

(or)

9. b. Select any five places of scientific importance and explain the procedure of arranging a study tour to these places. CO5 K3

PART – C

3 x 12 = 36

Answer the following

Answer should not exceed 800 words or four pages

10. a. For the given content from VII standard Tamil Nadu state text book carry out **pedagogic analysis.** CO1 K4

Oersted aligned a wire XY such that they were exactly along the North-South direction. He kept one magnetic compass above the wire at A and another under the wire at B. When the circuit was open and no current was flowing through it, the needle of both the compass was pointing to north. Once the circuit was closed and electric current was flowing, the needle at A pointed to east and the needle at B to the west. This showed that current carrying conductor produces magnetic field around it. The direction of the magnetic lines around a current carrying conductor can be easily understood using the right hand thumb rule. Hold the wire with four fingers of your right hand with thumbs-up position. If the direction of the current is towards the thumb then the magnetic lines curl in the same direction as your other four fingers. This shows that the magnetic field is always perpendicular to the direction of current. The strength of the magnetic field at a point due to current carrying wire depends on: (i) the current in the wire, (ii) distance of the point from the wire, (iii) the orientation of the point from the wire and (iv) the magnetic nature of the medium. The magnetic field lines are stronger near the current carrying wire and it diminishes as you go away from it. This is represented by drawing magnetic field lines closer together near the wire and farther away from the wire.

(or)

10. b. For the given content from IX standard Tamil Nadu state text book carry out **Content analysis.** CO1 K4

s-Block Elements

While arranging the electrons of elements of group 1 and 2, the last electron is added to s sub shell. These elements are called s-block elements. The elements of group 1 (except hydrogen) are metals. They react with water to form solutions that change the colour of a vegetable dye from red to blue. These solutions are said to be highly alkaline or basic. Hence they are called alkali metals. The elements of group 2 are also metals. They combine with oxygen to form oxides, formerly called "earths," and these oxides produce alkaline solutions when they are dissolved in water. Hence, these elements are called alkaline earth metals.

(2) p-Block Elements

The last electron in these elements is filled in p sub shells and hence these elements are called p block elements. These elements are in group 13 to 18 in the periodic table. They include boron, carbon, nitrogen, oxygen, fluorine families in addition to noble gases (Except helium). The p-block is home to the biggest variety of elements and is the only block that contains all three types of elements: metals, nonmetals, and metalloids.

(3) d-Block Elements

The elements of group 3 to 12 have their valence electrons in their outermost d subshells. These elements are called d block elements. They are found in the centre of the periodic table. Their properties are intermediate to that of s block and p block elements and so they are called transition elements.

(4) f – Block Elements

Part of the group 3 elements has their valence electrons in inner f subshell. They are known as f block elements or inner transition elements. They are placed at the bottom of the periodic table. There are two series in f block elements. The elements that follow Lanthanum are called "Lanthanides" and that follow Actinium are called "Actinides".

11.	a.	What do you understand by readability index? For the given content from IX standard Tamil Nadu state text book calculate **fog index**.	CO2	K4

Magnetic Shielding: The computer hard disk stores information using magnetism. Therefore if the hard disk comes near a powerful magnet the data may get corrupted because of the strong magnetic field. Hence we may have to shield computer hard disk, MRI and other such sensitive equipments from such magnetic effects. Stopping the magnetic field from entering into a region is called magnetic shielding. It is known that soft magnetic materials like iron or nickel-iron alloy have the ability to choke up magnetic lines. Magnetic lines coming out of a magnet prefer to pass within the soft metals rather than through air.

(or)

11.	b.	Critically analyse the Tamil Nadu state board Science text book of any grade using Vogel's spot checklist.	CO2	K4
12.	a.	What is the relevance of co-curricular activities in teaching science? Explain the structural and functional organization of science club and the various activities you will organize under science club?	CO5	K3

(or)

12.	b.	Differentiate science fairs and exhibitions. How can science fairs and exhibitions helpful in making the teaching learning of science enjoyable?	CO5	K3

Staff in charge : Dr Indu H
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