

# National Testing Agency

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| <b>Question Paper Name :</b> | BES 141 Pedagogy of Science 29th August<br>2021 Shift 1 |
| <b>Subject Name :</b>        | BES 141 Pedagogy of Science                             |
| <b>Creation Date :</b>       | 2021-08-29 13:53:54                                     |
| <b>Duration :</b>            | 180   |
| <b>Total Marks :</b>         | 100   |
| <b>Display Marks:</b>        | Yes   |

## BES 141 Pedagogy of Science

|                                      |           |
|--------------------------------------|-----------|
| <b>Group Number :</b>                | 1         |
| <b>Group Id :</b>                    | 603489227 |
| <b>Group Maximum Duration :</b>      | 0         |
| <b>Group Minimum Duration :</b>      | 120       |
| <b>Show Attended Group? :</b>        | No        |
| <b>Edit Attended Group? :</b>        | No        |
| <b>Break time :</b>                  | 0         |
| <b>Group Marks :</b>                 | 100       |
| <b>Is this Group for Examiner? :</b> | No        |

## BES 141 Pedagogy of Science -1

|                                |           |
|--------------------------------|-----------|
| <b>Section Id :</b>            | 603489333 |
| <b>Section Number :</b>        | 1         |
| <b>Section type :</b>          | Online    |
| <b>Mandatory or Optional :</b> | Mandatory |

|   |           |
|---|-----------|
| <b>Number of Questions :</b>  | 50        |
| <b>Number of Questions to be attempted :</b>                        | 50        |
| <b>Section Marks :</b>  | 100       |
| <b>Enable Mark as Answered Mark for Review and Clear Response :</b> | Yes       |
| <b>Sub-Section Number :</b>   | 1         |
| <b>Sub-Section Id :</b>   | 603489611 |
| <b>Question Shuffling Allowed :</b>                                 | Yes       |

**Question Number : 1 Question Id : 60348916108 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 2 Wrong Marks : 0**

Which among the following is **not** a myth related to Science?

1. Evidence accumulated carefully will result in sure knowledge.
2. Science and its methods provide absolute proof.
3. Scientific knowledge is long lasting yet tentative.
4. Science and its methods can answer all questions.

**Options :**

60348960573. 1

60348960574. 2

60348960575. 3

60348960576. 4

**Question Number : 2 Question Id : 60348916109 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 2 Wrong Marks : 0**

Archaeopteryx, a feathered dinosaur, was discovered in.....

1. France
2. Austria
3. Australia
4. Germany

**Options :**

60348960577. 1

60348960578. 2

60348960579. 3

60348960580. 4

**Question Number : 3 Question Id : 60348916110 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is **not** a process of enquiry?

1. Influenced by background knowledge
2. Estimating about results
3. Experimenting the ideas
4. Hypothesizing the tentative solutions

**Options :**

60348960581. 1

60348960582. 2

60348960583. 3

60348960584. 4

**Question Number : 4 Question Id : 60348916111 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The enquiry learning cycle begins with:

1. Focused Observation
2. Notice, Wonder, explore
3. Plan and Explore
4. Formulating pattern and relationships

**Options :**

60348960585. 1

60348960586. 2

60348960587. 3

60348960588. 4

**Question Number : 5 Question Id : 60348916112 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Who stated that "Science is more than a body of knowledge. It is a way of thinking."

1. Kothari
2. Nehru
3. Carl Sagan
4. Larsen and Cindy

**Options :**

60348960589. 1

60348960590. 2

60348960591. 3

60348960592. 4

**Question Number : 6 Question Id : 60348916113 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which domain is related to non-cognitive aspects of learners' personality?

1. Cognitive
2. Intellectual
3. Psychomotor
4. Affective

**Options :**

60348960593. 1

60348960594. 2

60348960595. 3

60348960596. 4

**Question Number : 7 Question Id : 60348916114 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

"To develop the basic language skills: speaking, reading and writing not only for science but also through science." Is an objective of science education at:

1. Primary level
2. Upper primary level
3. Secondary level
4. Higher Secondary level

**Options :**

60348960597. 1

60348960598. 2

60348960599. 3

60348960600. 4

**Question Number : 8 Question Id : 60348916115 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

As per National Curriculum Framework-2005, Science as an integrated school subject is introduced at:

1. Primary level
2. Upper primary level
3. Secondary level
4. Higher Secondary level

**Options :**

60348960601. 1

60348960602. 2

60348960603. 3

60348960604. 4

**Question Number : 9 Question Id : 60348916116 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

As per Bloom's Taxonomy of educational objectives, '**Interpretation**' is under which cognitive process?

1. Knowledge
2. Comprehension
3. Analysis
4. Synthesis

**Options :**

60348960605. 1

60348960606. 2

60348960607. 3

60348960608. 4

**Question Number : 10 Question Id : 60348916117 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which one of the following is not the part of three important characteristic of an instructional objective suggested by Mager?

1. Performance
2. Condition
3. Leveling
4. Criteria

**Options :**

60348960609. 1

60348960610. 2

60348960611. 3

60348960612. 4

**Question Number : 11 Question Id : 60348916118 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which approach is centred on transmission of knowledge from the instructor to the learner?

1. Cognitivism
2. Behaviorism
3. Constructivism
4. Humanism

**Options :**

60348960613. 1

60348960614. 2

60348960615. 3

60348960616. 4

**Question Number : 12 Question Id : 60348916119 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Thematic approach in science teaching-learning for class VI-X adopted by NCERT and promoting use of concept mapping is an example of:

1. Pedagogical shift in Teaching
2. Pedagogical shift in Learning
3. Pedagogical shift in Assessment
4. Pedagogical shift in Planning

**Options :**

60348960617. 1

60348960618. 2

60348960619. 3

60348960620. 4

**Question Number : 13 Question Id : 60348916120 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which one among the following is considered as an advanced process skill?

1. Experimenting
2. Observing
3. Classifying
4. Inferring

**Options :**

60348960621. 1

60348960622. 2

60348960623. 3

60348960624. 4

**Question Number : 14 Question Id : 60348916121 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

For developing process skills among science learners, a teacher should:

1. train learners for not using senses for observations in science.
2. motivate them to share their observations and inferences with each other.
3. give appropriate answers to learners for making authentic inferences.
4. encourage them to predict an event and not to test it.

**Options :**

60348960625. 1

60348960626. 2

60348960627. 3

60348960628. 4

**Question Number : 15 Question Id : 60348916122 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**



Who defined attitude as 'mental predispositions toward people, objects, subjects, events, and so on.'?

1. Nehru
2. Huxley
3. Newton
4. Martin

**Options :**

60348960629. 1

60348960630. 2

60348960631. 3

60348960632. 4

**Question Number : 16 Question Id : 60348916123 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The ability of a child to carry out something with sustained and persistent efforts, is known as:

1. Logical thinking
2. Objectivity
3. Perseverance
4. Scepticism

**Options :**

60348960633. 1

60348960634. 2

60348960635. 3

60348960636. 4

**Question Number : 17 Question Id : 60348916124 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The concept of Gravitation in Indian literature is given in:

1. Shri Madbhagvad Geeta
2. Siddhant Siromani
3. Mahabharat
4. Arthasharsta

**Options :**

60348960637. 1

60348960638. 2

60348960639. 3

60348960640. 4

**Question Number : 18 Question Id : 60348916125 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The Indian Parliamentary and Scientific Committee was set up in 1961 under the chairmanship of:

1. Prof. D. S. Kothari
2. Shri Jawaharlal Nehru
3. Shri Lal Bahadur Shastri
4. Ishwarbhai Patel

**Options :**

60348960641. 1

60348960642. 2

60348960643. 3

60348960644. 4

**Question Number : 19 Question Id : 60348916126 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

.....requires that the curriculum must convey significant and correct scientific and correct information.

1. Content validity
2. Process validity
3. Context validity
4. Cognitive validity

**Options :**

60348960645. 1

60348960646. 2

60348960647. 3

60348960648. 4

**Question Number : 20 Question Id : 60348916127 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

NCF-2005 recommended that .....approach is to be followed at secondary stage for Science teaching-learning.

1. Integrated
2. Inclusive
3. Subjective
4. Disciplinary

**Options :**

60348960649. 1

60348960650. 2

60348960651. 3

60348960652. 4

**Question Number : 21 Question Id : 60348916128 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Awareness and knowledge about one's own cognition comes under ..... knowledge.

1. Factual
2. Procedural
3. Conceptual
4. Metacognitive

**Options :**

60348960653. 1

60348960654. 2

60348960655. 3

60348960656. 4

**Question Number : 22 Question Id : 60348916129 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Identifying the problems of an electric circuit, if a fan is not blowing, come under which cognitive process dimension?

1. Applying
2. Analyzing
3. Evaluating
4. Creating

**Options :**

60348960657. 1

60348960658. 2

60348960659. 3

60348960660. 4

**Question Number : 23 Question Id : 60348916130 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following software is used to develop a concept map?

1. Audacity
2. Active Presenter
3. Cmap
4. OBS

**Options :**

60348960661. 1

60348960662. 2

60348960663. 3

60348960664. 4

**Question Number : 24 Question Id : 60348916131 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following reflects the nature of connection in a concept map?

1. Node
2. Internode
3. Connecting Line
4. Level on line

**Options :**

60348960665. 1

60348960666. 2

60348960667. 3

60348960668. 4

**Question Number : 25 Question Id : 60348916132 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Who authored the book "Teaching in Secondary Schools"?

1. N. L. Bossing
2. B. S. Bloom
3. W. H. Kilpatrick
4. John Dewey

**Options :**

60348960669. 1

60348960670. 2

60348960671. 3

60348960672. 4

**Question Number : 26 Question Id : 60348916133 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

According to evaluation approach of lesson planning, Expected Behavioral Outcomes (EBOs) are the major component in:

1. Input level
2. Process level
3. Output Level
4. Execution process

**Options :**

60348960673. 1

60348960674. 2

60348960675. 3

60348960676. 4

**Question Number : 27 Question Id : 60348916134 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

..... phase enables students to describe their understanding and questions about the concept.

1. Engage
2. Elaborate
3. Explain
4. Explore

**Options :**

60348960677. 1

60348960678. 2

60348960679. 3

60348960680. 4

**Question Number : 28 Question Id : 60348916135 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is **not** correct about laboratory method?

1. Develop Practical Skills
2. Learning by Doing
3. Retention of Learned Material
4. Contact with Abstraction

**Options :**

60348960681. 1

60348960682. 2

60348960683. 3

60348960684. 4

**Question Number : 29 Question Id : 60348916136 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which one among the following is **not** an objective of problem-solving approach?

1. willingness to try and solve problems
2. problems can be solved in more than one way
3. the appreciation of existence of a problem
4. awareness of problem generating strategies

**Options :**

60348960685. 1

60348960686. 2

60348960687. 3

60348960688. 4

**Question Number : 30 Question Id : 60348916137 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

In ..... inquiry, students are given a problem and informed about the process to follow.

1. Confirmation
2. Structured
3. Guided
4. Open

**Options :**

60348960689. 1

60348960690. 2

60348960691. 3

60348960692. 4

**Question Number : 31 Question Id : 60348916138 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**



Which one of the following is **not** among 5-Cs of effective and inspiring learning?

1. Collaboration
2. Communication
3. Contextualization
4. Critical Thinking

**Options :**

60348960693. 1

60348960694. 2

60348960695. 3

60348960696. 4

**Question Number : 32 Question Id : 60348916139 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which is the correct sequence of the events in experiential learning cycle?

1. abstract conceptualization, concrete experience, reflective observation, active experimentation
2. concrete experience, reflective observation, abstract conceptualization, active experimentation
3. concrete experience, abstract conceptualization, active experimentation, reflective observation
4. active experimentation, concrete experience, abstract conceptualization, reflective observation

**Options :**

60348960697. 1

60348960698. 2

60348960699. 3

60348960700. 4

**Question Number : 33 Question Id : 60348916140 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Perceiving and observing for accurate results is part of which phase of heuristic learning process?

1. Planning
2. Developing
3. Execution
4. Conclusion

**Options :**

60348960701. 1

60348960702. 2

60348960703. 3

60348960704. 4

**Question Number : 34 Question Id : 60348916141 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

When a specific knowledge or information is available with very few learners, which one is best cooperative learning method to use?

1. Circle the Sage
2. Team Pair Solo
3. Round-Robin Brainstorming
4. Think-pair-share

**Options :**

60348960705. 1

60348960706. 2

60348960707. 3

60348960708. 4

**Question Number : 35 Question Id : 60348916142 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which one among the following is an example of an adaptation in an inclusive classroom?

1. Modifying Instructions
2. Providing mnemonics
3. Enhancing Behaviour
4. Altering Curriculum

**Options :**

60348960709. 1

60348960710. 2

60348960711. 3

60348960712. 4

**Question Number : 36 Question Id : 60348916143 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The term Praxis means:

1. criticizing explanations
2. doing experiments
3. challenging beliefs
4. thoughtful examination

**Options :**

60348960713. 1

60348960714. 2

60348960715. 3

60348960716. 4

**Question Number : 37 Question Id : 60348916144 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

In the "Classroom as Ecosystem Model", resource identification depends upon:

1. Text-book
2. Institutional Policy
3. learning environment
4. Curriculum

**Options :**

60348960717. 1

60348960718. 2

60348960719. 3

60348960720. 4

**Question Number : 38 Question Id : 60348916145 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which of the following online tool can be used to develop quizzes?

1. Gmeet
2. Kahoot
3. Presentation Tube
4. Screencastify

**Options :**

60348960721. 1

60348960722. 2

60348960723. 3

60348960724. 4

**Question Number : 39 Question Id : 60348916146 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which among the following is **not** a MOOC platform?

1. Swayam
2. Coursera
3. Futurelearn
4. Swayamprabha

**Options :**

60348960725. 1

60348960726. 2

60348960727. 3

60348960728. 4

**Question Number : 40 Question Id : 60348916147 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which one among the following is **not** a step of the process of formulating learning indicators?

1. Selecting the Content
2. Identifying Learning Outcomes
3. Following textbook sequence of event
4. Framing Assessment Indicators

**Options :**

60348960729. 1

60348960730. 2

60348960731. 3

60348960732. 4

**Question Number : 41 Question Id : 60348916148 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

If a teacher makes an assessment indicator as "are learners communicating in simple language", he/she is trying to assess..... skill.

1. Planning
2. Reporting
3. Observation
4. Application

**Options :**

60348960733. 1

60348960734. 2

60348960735. 3

60348960736. 4

**Question Number : 42 Question Id : 60348916149 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

According to WHO, which core life skill is enlisted as social skill?

1. Effective Communication
2. Coping with emotions
3. Self-awareness
4. Problem solving

**Options :**

60348960737. 1

60348960738. 2

60348960739. 3

60348960740. 4

**Question Number : 43 Question Id : 60348916150 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Rashtriya Avishkar Abhiyan is targeting learners in the age group of:

1. 6-10 years
2. 6-14 years
3. 6-18 years
4. 6-21 years

**Options :**

60348960741. 1

60348960742. 2

60348960743. 3

60348960744. 4

**Question Number : 44 Question Id : 60348916151 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The nutrition in bacteria particularly important in nitrogen fixation, nitrification and denitrification are known as:

1. Saprophytic
2. Parasitic
3. Chemoautotrophic
4. Heterotrophic

**Options :**

60348960745. 1

60348960746. 2

60348960747. 3

60348960748. 4

**Question Number : 45 Question Id : 60348916152 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The value of Avogadro's number is:

1.  $2.026 \times 10^{23}$ atoms/ions
2.  $6.022 \times 10^{21}$ atoms/ions
3.  $6.203 \times 10^{21}$ atoms/ions
4.  $6.022 \times 10^{23}$ atoms/ions

**Options :**

60348960749. 1

60348960750. 2

60348960751. 3

60348960752. 4

**Question Number : 46 Question Id : 60348916153 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

Which phylum belongs to pseudocoelomate?

1. Ctenophora
2. Aschelminths
3. Annelida
4. Echinodermata

**Options :**

60348960753. 1

60348960754. 2

60348960755. 3

60348960756. 4

**Question Number : 47 Question Id : 60348916154 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**



The ..... of a conductor is the obstruction posed by the conductor to the flow of electric current.

1. resistance
2. potential
3. potential difference
4. resistivity

**Options :**

60348960757. 1

60348960758. 2

60348960759. 3

60348960760. 4

**Question Number : 48 Question Id : 60348916155 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

The rate of change of velocity is known as:

1. Horsepower
2. Potential
3. Acceleration
4. Momentum

**Options :**

60348960761. 1

60348960762. 2

60348960763. 3

60348960764. 4

**Question Number : 49 Question Id : 60348916156 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

the number of complete waves that pass a point in one second, is called:

1. Oscillation
2. Amplitude
3. Speed
4. Frequency

**Options :**

60348960765. 1

60348960766. 2

60348960767. 3

60348960768. 4

**Question Number : 50 Question Id : 60348916157 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 2 Wrong Marks : 0**

If the incident ray is coming through center of curvature of a concave mirror, it will return through:

1. Focus
2. principal axis
3. same way
4. between F and C

**Options :**

60348960769. 1

60348960770. 2

60348960771. 3

60348960772. 4