5. From the following, which fabric construction methods are most suitable for specific end uses such as filtration and medical applications?  
I. Woven  
II. Knitted  
III. Non-woven  
IV. Bonded  
V. Laminated  
Choose the correct answer from the options given below:  
(1) I, II & IV  
(2) II, III & V  
(3) I, III & V  
(4) III, IV & V  
  
Answer Key: (3)  
Solution:  
Statement I - Woven fabrics are typically used for their strength and durability in various applications, including specialized industrial filters. Thus, Statement I is correct.  
Statement III - Non-woven fabrics are often used in medical applications due to their disposability and barrier properties against infections. Thus, Statement III is correct.  
Statement V - Laminated fabrics are used in both medical and filtration applications for creating barriers and enhancing fabric properties. Thus, Statement V is correct.  
Statement II - Knitted fabrics are generally more elastic and are less likely to be used in rigid applications such as filtration. Thus, Statement II is incorrect.  
Statement IV - Bonded fabrics, while useful in various contexts, are not specified here for their primary use in filtration or medical applications. Thus, Statement IV is incorrect.  
Hence, the correct answer is Option (3).  
  
4. Evaluate the environmental impact of textiles by selecting the options that represent eco-friendly practices:  
I. Using banned dyes  
II. Implementing effluent treatment  
III. Employing eco-labels  
IV. Avoiding contamination  
V. Utilizing technical textiles  
Choose the correct answer from the options given below:  
(1) II & IV  
(2) II & III  
(3) III & V  
(4) I & V  
  
Answer Key: (1)  
Solution:  
Statement II - Effluent treatment reduces harmful waste from textile production, making it an eco-friendly practice. Thus, Statement II is correct.  
Statement IV - Avoiding contamination prevents harmful substances from entering the environment, thus it is correct.  
Statement I - Using banned dyes is not an eco-friendly practice as these dyes are typically prohibited due to their environmental or health impacts.  
Statement III - Employing eco-labels is an eco-friendly practice, but it was not grouped with another correct statement.  
Statement V - Utilizing technical textiles can be eco-friendly, depending on their application and material, but not inherently so without additional context.  
Hence, the correct answer is Option (1).

4. Consider the following methods used for the quality evaluation of foods and determine which are typically subjective assessments:  
I. Sensory evaluation by consumer panels  
II. Laboratory analysis of nutrient content  
III. Expert review of texture and flavor  
IV. Consumer preference surveys  
V. Shelf-life testing under controlled conditions  
Choose the correct answer from the options given below:  
(1) I, II, III & IV Only  
(2) I, III, IV & V Only  
(3) I, II, III & V Only  
(4) I, III & IV Only  
Answer Key: (1)  
Solution:  
Statement I is correct. Sensory evaluation by consumer panels relies on personal perceptions and tastes, making it subjective.  
Statement II is incorrect as laboratory analysis of nutrient content is an objective method based on measurable data.  
Statement III is correct. Expert reviews of texture and flavor are based on personal judgments and experiences, hence subjective.  
Statement IV is correct. Consumer preference surveys gather individual preferences and opinions, which are inherently subjective.  
Statement V is incorrect. Shelf-life testing is an objective method based on observable and measurable changes under controlled conditions.  
Hence, the correct answer is Option (1).

3. Within the domain of housing and interior design, identify which principles of planning spaces directly emphasize practicality and efficient use of space:  
I. Flexibility  
II. Economy  
III. Proximity  
IV. Privacy  
V. Aesthetics  
Choose the correct answer from the options given below:  
(1) I & IV  
(2) I & III  
(3) II & III  
(4) III & V  
  
Answer Key: (3)  
Solution:  
Statement II - Economy in construction and space planning focuses on cost-effective and efficient use of resources, including space. Thus, Statement II is correct.  
Statement III - Proximity in planning refers to the logical and practical placement of spaces based on their use and relationship to one another, enhancing functionality. Thus, Statement III is correct.  
Statement I - Flexibility relates to adaptable use of space but doesn’t necessarily emphasize practicality or efficiency.  
Statement IV - Privacy is important for comfort but doesn't directly relate to efficiency or practical use of space.  
Statement V - Aesthetics focuses on the visual and sensory aspects of space, not directly on practicality.  
Hence, the correct answer is Option (3).  
  
4. Which activities best support holistic development in early childhood education?  
I. Structured play  
II. High-stakes testing  
III. Cross-disciplinary projects  
IV. Competitive sports  
V. Storytelling  
Choose the correct answer from the options given below:  
(1) I, II & IV  
(2) II, III & V  
(3) I, III & V  
(4) III, IV & V  
  
Answer Key: (3)  
Solution:  
Statement I - Structured play supports both cognitive and social development, integral to holistic development. Thus, Statement I is correct.  
Statement III - Cross-disciplinary projects integrate multiple areas of learning, enhancing cognitive, social, and emotional development. Thus, Statement III is correct.  
Statement V - Storytelling enhances imagination, language skills, and emotional understanding, beneficial for holistic development. Thus, Statement V is correct.  
Statement II - High-stakes testing is generally not conducive to holistic development, focusing narrowly on academic performance. Thus, Statement II is incorrect.  
Statement IV - Competitive sports, while beneficial for physical development, might not always promote social and emotional development. Thus, Statement IV is incorrect.  
Hence, the correct answer is Option (3).  
  
3. Assess the following elements involved in human resource management in terms of their importance for strategic organizational development:  
I. Comprehensive manpower planning  
II. Regular training needs assessments  
III. Adoption of modern training methodologies  
IV. Systematic evaluation of training outcomes  
V. Recruitment of externally trained specialists  
Choose the correct answer from the options given below:  
(1) I, II, III & IV Only  
(2) I, III, IV & V Only  
(3) II, III, IV & V Only  
(4) I, II, IV & V Only  
Answer Key: (1)  
Solution:  
Statement I is correct. Manpower planning is crucial for aligning the workforce with organizational goals.  
Statement II is correct. Regular assessments of training needs ensure that employee skills are up-to-date and relevant.  
Statement III is correct. Adoption of modern training methodologies can enhance learning and efficiency.  
Statement IV is correct. Evaluating training outcomes helps in measuring effectiveness and making necessary adjustments.  
Statement V is incorrect. While recruitment of externally trained specialists can be beneficial, it is not a core element of strategic human resource management.  
Hence, the correct answer is Option (1).  
  
2. Which of the following strategies best aligns with the principles of energy efficiency in buildings?  
I. Use of high thermal mass materials  
II. Installation of large, single-pane windows  
III. Incorporation of passive solar design  
IV. Regular energy audits  
V. Utilization of volatile organic compound (VOC) emitting materials  
Choose the correct answer from the options given below:  
(1) I, III & IV  
(2) II, III & V  
(3) I, II & V  
(4) III, IV & V  
  
Answer Key: (1)  
Solution:  
Statement I - Use of high thermal mass materials helps in moderating indoor temperatures and reducing energy costs, making it energy efficient. Thus, Statement I is correct.  
Statement III - Incorporation of passive solar design utilizes natural sources of energy, such as sunlight, for heating and lighting, thereby reducing energy usage. Thus, Statement III is correct.  
Statement IV - Regular energy audits help identify ways to reduce energy consumption and improve efficiency. Thus, Statement IV is correct.  
Statement II - Large, single-pane windows are poor insulators compared to double-glazed options, leading to higher energy costs. Thus, Statement II is incorrect.  
Statement V - Utilization of VOC emitting materials contributes to poor indoor air quality and does not directly relate to energy efficiency. Thus, Statement V is incorrect.  
Hence, the correct answer is Option (1).  
  
1. In the context of family studies, identify the parenting styles that are predominantly focused on balancing responsiveness and demandingness:  
I. Authoritative  
II. Permissive  
III. Uninvolved  
IV. Authoritarian  
V. Neglectful  
Choose the correct answer from the options given below:  
(1) I & IV  
(2) I & II  
(3) I & III  
(4) II & IV  
  
Answer Key: (2)  
Solution:  
Statement I - Authoritative parenting style is known for high responsiveness and high demandingness, making it a balanced approach. Thus, Statement I is correct.  
Statement II - Permissive parenting style is characterized by high responsiveness but low demandingness, which represents a skewed balance towards responsiveness. Thus, Statement II is incorrect.  
Statement III - Uninvolved parenting style features low responsiveness and low demandingness, which is not balanced as it leans towards neglect rather than a balance of responsiveness and demandingness. Thus, Statement III is incorrect.  
Statement IV - Authoritarian parenting style is high in demandingness and low in responsiveness, which does not represent a balance. Thus, Statement IV is incorrect.  
Hence, the correct answer is Option (2).

5. Analyze the following components essential for effective scientific report writing in community development research:  
I. Clear statement of research objectives  
II. Detailed description of methodology  
III. Inclusion of extensive statistical analysis  
IV. Discussion of implications for policy and practice  
V. Attribution of sources and proper citations  
Choose the correct answer from the options given below:  
(1) I, II, III & IV Only  
(2) I, III, IV & V Only  
(3) II, III, IV & V Only  
(4) I, II, IV & V Only  
Answer Key: (4)  
Solution:  
Statement I is correct. A clear statement of research objectives sets the foundation for the entire report.  
Statement II is correct. Detailed methodology description is crucial for the reproducibility and credibility of research.  
Statement III is incorrect as extensive statistical analysis, while important, is not essential for all types of community development research, which may also rely on qualitative data.  
Statement IV is correct. Discussing the implications for policy and practice links the research findings to real-world applications.  
Statement V is correct. Proper citation and attribution of sources are fundamental to academic integrity and credibility.  
Hence, the correct answer is Option (4).  
  
2. Evaluate the effectiveness of different international agencies in fostering development communication, focusing on the following characteristics:  
I. Cultural sensitivity in communication strategies  
II. Implementation of grassroots communication programs  
III. Promotion of technology-driven communication platforms  
IV. Integration of local leadership in program design  
V. Emphasis on top-down communication approaches  
Choose the correct answer from the options given below:  
(1) I, II, III & IV Only  
(2) I, II, IV & V Only  
(3) I, III, IV & V Only  
(4) II, III, IV & V Only  
Answer Key: (2)  
Solution:  
Statement I is correct. Effective international agencies prioritize cultural sensitivity in their communication strategies.  
Statement II is correct. The implementation of grassroots communication programs is essential for local engagement and effectiveness.  
Statement III is incorrect as not all successful agencies focus predominantly on technology-driven platforms; some prioritize more traditional or mixed methods.  
Statement IV is correct. Integrating local leadership ensures that communication strategies are relevant and accepted.  
Statement V is correct. Some agencies still use top-down approaches effectively, depending on the context and objectives.  
Hence, the correct answer is Option (2).