--Question Starting--  
1. In the context of clinical and therapeutic nutrition, which of the following dietary adjustments is most appropriate for managing hypertension?  
I. Reduced sodium intake  
II. High potassium foods  
III. Increased trans fats  
IV. High glycemic index foods  
V. Increased omega-3 fatty acids  
Choose the correct answer from the options given below:  
(1) I, II & V  
(2) II, III & IV  
(3) I, III & IV  
(4) II, IV & V  
  
Answer Key: (1)  
Solution:  
Statement I - Reduced sodium intake is widely recommended for managing hypertension, as it helps in reducing blood pressure levels. Thus, Statement I is correct.  
Statement II - High potassium foods can help counteract the effects of sodium and lower blood pressure. Thus, Statement II is correct.  
Statement V - Increased omega-3 fatty acids are beneficial for heart health and can aid in lowering blood pressure. Thus, Statement V is correct.  
Statement III - Increased trans fats are harmful and increase the risk of cardiovascular diseases, not recommended for hypertension management. Thus, Statement III is incorrect.  
Statement IV - High glycemic index foods can lead to quick spikes in blood sugar and are not recommended for managing hypertension. Thus, Statement IV is incorrect.  
Hence, the correct answer is Option (1).  
  
--Question Starting--  
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).  
  
--Question Starting--  
3. Regarding the properties of food, which of the following elements are primarily associated with the chemical properties?  
I. Water activity  
II. Texture  
III. pH level  
IV. Color  
V. Boiling point  
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 - Water activity influences microbial growth in food, which is a chemical interaction. Thus, Statement I is correct.  
Statement III - pH level directly affects the enzymatic activities and stability of food components, a chemical property. Thus, Statement III is correct.  
Statement IV - Color can indicate chemical changes in foods, such as oxidation or caramelization. Thus, Statement IV is correct.  
Statement II - Texture is more related to the physical properties of food rather than its chemical properties. Thus, Statement II is incorrect.  
Statement V - Boiling point is a physical property related to the state change of water in food. Thus, Statement V is incorrect.  
Hence, the correct answer is Option (1).  
  
--Question Starting--  
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).  
  
--Question Starting--  
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).