# Rajasthan RSSB Assistant Professor (Home Science Sample Paper)

**Q1.** Match the List I with the List II:

| List – I | List – II |
|---|---|
| I. Antistatic | A. Alter durability |
| II. Abrasion Resistant | B. Provide environmental protection |
| III. Bacteriostat | C. Enhance care properties |
| IV. Durable press | D. Prepares the fabric for finishing |
| | E. Increases comfort |

Codes:
(a) I-A, II-B, III-C, IV-D
(b) I-E, II-A, III-B, IV-C
(c) I-B, II-C, III-D, IV-A
(d) I-C, II-E, III-A, IV-B

**Ans.(b)**

**Sol.** Textile finishes are applied to fabrics to improve performance, durability, hygiene, and aesthetic qualities.

I. Antistatic → Increases comfort (E) Antistatic finish reduces the buildup of electrostatic charges, especially in synthetic fabrics like polyester and nylon. Static electricity causes discomfort, clinging, and sparks. Therefore, this finish improves wearing comfort and usability.

II. Abrasion Resistant → Alter durability (A) Abrasion-resistant finish enhances the fabric's ability to withstand rubbing and friction, thereby increasing its durability and lifespan. It is commonly applied to workwear, upholstery, and uniforms.

III. Bacteriostat → Provide environmental protection (B) Bacteriostatic finishes inhibit the growth of bacteria on textiles. These finishes provide hygienic protection, reduce odor, and protect users from microbial contamination. Common in medical textiles and sportswear.

IV. Durable press → Enhance care properties (C) Durable press finish reduces wrinkling and creasing. It makes garments easy to wash and wear without ironing. Hence, it improves care and maintenance properties of the fabric.

Thus, the correct answer is option (b).

Information Booster 1. Antistatic Finish: Especially useful in synthetic fibers which are prone to static buildup due to low moisture absorption.

2. Abrasion Resistance Testing: Measured using instruments like the Martindale Abrasion Tester.

3. Bacteriostat vs Bactericidal: Bacteriostat inhibits growth, whereas bactericidal finishes kill bacteria.

4. Durable Press Chemicals: Often achieved using resin treatments such as formaldehyde-based finishes.

5. Application Areas: Medical textiles, sportswear, uniforms, upholstery, and industrial fabrics commonly use these finishes.

6. Eco-friendly Finishes: Modern textile technology focuses on non-toxic and sustainable finishing agents.

**Q2.** A change that occurs during cereal cookery:
(a) Winterization

(b) Homogenization
(c) Retrogradation
(d) Coagulation
**Ans.(c)**
**Sol.** During cereal cookery, several physical and chemical changes occur, primarily involving starch. One of the most important changes is Retrogradation.
When cereals (like rice, wheat, maize) are cooked in water, the starch granules absorb water, swell, and burst — a process known as gelatinization. Upon cooling, the gelatinized starch molecules (especially amylose) begin to reassociate and recrystallize. This process is called Retrogradation.
Retrogradation leads to firming or hardening of cooked cereal products, such as staling of bread or hardening of cooked rice. It is a characteristic change observed after cooking and cooling of starchy foods. Thus, Retrogradation is the correct answer.
Information Booster
1. Gelatinization: Occurs when starch is heated in water (60–80°C). It increases digestibility and thickens the mixture.
2. Retrogradation Effect: Responsible for bread staling and firmness in refrigerated rice or chapati.
3. Amylose vs Amylopectin: Amylose retrogrades faster than amylopectin, leading to quicker firming.
4. Reversibility: Retrogradation can be partially reversed by reheating (e.g., reheating bread softens it).
5. Nutritional Impact: Retrograded starch may form resistant starch, which benefits gut health.
6. Food Industry Importance: Important in bakery, cereal processing, and storage stability.
Additional Knowledge
- (a) Winterization: A process used in edible oil refining to remove waxes by cooling. Not related to cereal cookery.
- (b) Homogenization: A mechanical process mainly used in milk processing to reduce fat globule size and prevent cream separation.
- (d) Coagulation: Refers to protein denaturation and clotting (e.g., egg protein coagulation). Cereals are mainly starch-based, not protein-based.

**Q3.** Following toxins are present in pulses:
I. Luteins
II. Trypsin inhibitor
III. Hemicellulose
IV. Lathyrogens
V. Goitrogens
Codes:
(a) II, IV, V
(b) I, II, III
(c) II, III, IV
(d) III, V, I
**Ans.(a)**
**Sol.** Pulses contain certain anti-nutritional factors and naturally occurring toxins that may interfere with digestion or nutrient utilization if not properly processed (soaking, cooking, fermentation).
The following are toxins present in pulses:

• Trypsin inhibitor (II) – This is a proteinaceous compound found in many legumes such as soybean. It inhibits the enzyme trypsin, thereby reducing protein digestion. Proper heat treatment destroys this inhibitor.
• Lathyrogens (IV) – Found mainly in *Lathyrus sativus* (Kesari dal), lathyrogens can cause lathyrism, a neurological disorder characterized by paralysis of lower limbs when consumed excessively.
• Goitrogens (V) – Certain pulses contain goitrogenic substances that interfere with iodine metabolism and thyroid function.

Information Booster

1. Soaking and cooking pulses help reduce anti-nutritional factors significantly.
2. Excessive consumption of *Kesari dal* may cause neurolathyrism due to lathyrogens.
3. Trypsin inhibitors are heat-labile and are destroyed during proper cooking.
4. Germination and fermentation improve protein digestibility of pulses.
5. Goitrogens may interfere with thyroid hormone synthesis in iodine-deficient individuals.
6. Pulses are still an excellent source of plant protein, fiber, and micronutrients when properly processed.

Additional Knowledge

• Luteins (I) are plant pigments (carotenoids) and are not toxic substances.
• Hemicellulose (III) is a form of dietary fiber and is not a toxin. It contributes to bowel health.

**Q4.** Which of the following are components of a dye?
I. Auxochrome
II. Chromophore
III. Pigment
IV. Ink
Codes:
(a) I, III
(b) II, IV
(c) I, II
(d) II, III
**Ans.(c)**
**Sol.** A dye is a colored organic compound that has the ability to impart color to a substrate (such as fabric) by chemical bonding. The color-producing structure of a dye molecule mainly consists of two essential components:
• Chromophore (II) – This is the color-bearing group in a dye molecule. It contains conjugated double bonds that absorb specific wavelengths of light, giving the compound its characteristic color. Examples include –N=N– (azo group), $–NO_2$ (nitro group), and –C=O (carbonyl group).
• Auxochrome (I) – This is a functional group attached to the chromophore that intensifies the color and enhances the dye's affinity for fibers. Examples include –OH, $–NH_2$, $–SO_3H$, and –COOH. Auxochromes help in solubility and bonding with textile fibers.

Information Booster

1. Chromophores are responsible for light absorption in the visible region, producing color.
2. Auxochromes increase color intensity and solubility in water.
3. The presence of conjugated double bonds enhances color strength.

4. Dyes form chemical bonds with fibers, whereas pigments require binders.
5. Azo dyes are the most common class of synthetic dyes in textiles.
6. Dyeing involves interaction between dye molecules and textile fibers through ionic or covalent bonds.

Additional Knowledge

• Pigment (III) is a coloring substance but differs from dyes because it is insoluble and requires a binder to adhere to surfaces.
• Ink (IV) is a colored liquid used for writing or printing and is not a structural component of a dye molecule.

**Q5.** Which of the following fibers is used for foundation garments?
(a) Spandex
(b) Kevlar
(c) Carbon
(d) Glass
**Ans.(a)**
**Sol.** Foundation garments such as corsets, bras, girdles, and shapewear require fabrics that provide high elasticity, stretchability, shape retention, and body support. The fiber most suitable for this purpose is Spandex.
Spandex (also known as elastane or Lycra) is a synthetic elastomeric fiber known for its exceptional stretch — it can stretch up to 5–8 times its original length and return to its original shape without deformation. This property makes it ideal for body-fitting and supportive garments.
Foundation garments demand:
✓ Firm control
✓ Flexibility
✓ Comfort
✓ Durability
✓ Shape retention
Spandex fulfills all these requirements due to its high recovery power and elasticity. It is usually blended with cotton, nylon, or polyester to improve comfort and breathability.
Hence, the correct answer is Spandex.

Information Booster

1. Elastic Recovery: Spandex has superior elastic recovery compared to natural rubber.
2. Blended Fabrics: Usually blended (2–20%) with other fibers to enhance fit and durability.
3. Applications: Used in lingerie, sportswear, swimwear, leggings, and compression garments.
4. Lightweight & Comfortable: Provides snug fit without restricting body movement.
5. Wrinkle Resistance: Helps garments maintain smooth appearance.
6. Thermoplastic Nature: Can be heat-set to retain shape permanently.

Additional Knowledge

• (b) Kevlar: A high-strength synthetic fiber used in bulletproof vests and protective clothing; not elastic, hence unsuitable for foundation garments.
• (c) Carbon: Used in industrial applications and composites; rigid and not flexible for apparel use.
• (d) Glass: Glass fibers are used in insulation and reinforcement materials; brittle and unsuitable for clothing.

**Q6.** Following is not a method of dietary survey:
(a) Food frequency questionnaire
(b) 24 hours recall
(c) BMI
(d) Food weighing
**Ans.(c)**
**Sol.** Dietary survey methods are techniques used to assess the food intake and dietary pattern of individuals or groups. These methods help in evaluating nutrient consumption, identifying deficiencies, and planning nutrition interventions.
The Food Frequency Questionnaire (FFQ) records how frequently certain foods are consumed over a specific period. The 24-hour recall method collects detailed information about all foods and beverages consumed in the previous 24 hours. The Food weighing method involves weighing raw or cooked food before consumption to obtain precise intake data. All three are recognized dietary assessment methods. However, BMI (Body Mass Index) is not a dietary survey method. It is an anthropometric measurement calculated using weight (kg) divided by height squared ($m^2$). BMI is used to assess nutritional status (underweight, normal weight, overweight, obesity) but does not measure actual food consumption or dietary intake. Therefore, BMI is the correct answer.
Information Booster
1. 24-Hour Recall: Quick and simple method; depends on memory of the respondent and may have recall bias.
2. Food Frequency Questionnaire (FFQ): Useful for large population studies to assess habitual dietary intake over months or years.
3. Food Weighing Method: Most accurate method; involves weighing food before and after consumption to calculate exact intake.
4. Anthropometric Measurements: Include BMI, mid-upper arm circumference (MUAC), skinfold thickness—used to assess body composition.
5. Dietary Surveys Purpose: Identify nutrient deficiencies, assess food habits, and evaluate effectiveness of nutrition programs.
6. BMI Classification (WHO):
o <18.5 – Underweight
o 18.5–24.9 – Normal
o 25–29.9 – Overweight
o ≥30 – Obese
Additional Knowledge
• (a) Food Frequency Questionnaire: A structured questionnaire used to assess usual dietary intake over a defined period. Common in epidemiological studies.
• (b) 24 Hours Recall: An interview-based method where respondents recall all foods consumed in the past 24 hours.
• (d) Food Weighing: Also called the weighed intake method, considered highly accurate for research purposes.

**Q7.** Which of the following are the tools in time-management?
I. Work curve

II. Rest period
III. Posture
IV. Peak load
Codes:
(a) I, II, III
(b) I, II, IV
(c) II, III, IV
(d) I, III, IV
**Ans.(b)**
**Sol.** In Home Management, time-management tools are techniques that help in effective planning and utilization of time and energy to achieve personal and family goals.
The following are recognized tools of time management:
• Work Curve (I) – It represents the relationship between time and work capacity. It helps an individual understand peak efficiency periods (morning, afternoon, or evening) and plan tasks accordingly.
• Rest Period (II) – Planned rest intervals help prevent fatigue and maintain productivity. Proper scheduling of rest improves efficiency and reduces exhaustion.
• Peak Load (IV) – Refers to the period when many tasks are performed simultaneously. Identifying peak load helps in distributing work evenly and avoiding time pressure.
Information Booster
1. Work curve helps in planning difficult tasks during high-energy periods.
2. Managing peak load prevents stress caused by overlapping responsibilities.
3. Scheduled rest pauses increase productivity and reduce fatigue.
4. Time plans can be made daily, weekly, monthly, or yearly.
5. Prioritizing tasks based on urgency improves efficiency.
6. Effective time management enhances family welfare and goal achievement.
Additional Knowledge
• Posture (III) relates to body mechanics and energy management rather than time management specifically. It helps reduce fatigue but is not categorized as a time-management tool.

**Q8.** Assertion (A): Extension workers have to be sensitive to the cultural changes taking place in the communities they work with. Reason (R): Outsiders do not realize that villages ever change because often there is little outward change as compared with urban areas.
Codes:
(a) (A) is correct, (R) is incorrect.
(b) (A) is incorrect and (R) is correct.
(c) Both (A) and (R) are correct.
(d) Both (A) and (R) are incorrect.
**Ans.(c)**
**Sol.** The Assertion (A) is correct because extension work is fundamentally based on community participation and cultural understanding. Extension workers operate within rural or community settings and must be aware of ongoing cultural, social, economic, and behavioral changes. Sensitivity to cultural shifts ensures that development programmes are relevant, acceptable, and sustainable. Without cultural awareness, extension interventions may fail due to resistance or misunderstanding.

The Reason (R) is also correct. Often, outsiders perceive villages as static or unchanging because visible infrastructural transformation may be limited compared to urban areas. However, rural communities continuously experience changes in values, aspirations, technology adoption, education levels, and social norms. Failure to recognize these subtle internal changes can lead to inappropriate programme planning.

Thus, both statements are correct. Moreover, the Reason explains why extension workers must be culturally sensitive—because rural change may not always be outwardly visible but is nevertheless real and significant.

Information Booster

1. Extension education emphasizes participatory and need-based approaches.
2. Cultural sensitivity improves community trust and cooperation.
3. Rural societies experience gradual but meaningful social transformation.
4. Extension workers must understand local customs, traditions, and belief systems.
5. Ignoring cultural dynamics may result in programme rejection.
6. Successful extension work requires continuous community interaction and feedback.

**Q9.** As per the Aristotle's model of communication, the three dimensions of persuasive speech are

(a) Ethos, Empathy, Mathos

(b) Ethos, Logos, Pathos

(c) Empathy, Chaos, Pathos

(d) Logos, Ethos, Laos

**Ans.(b)**

**Sol.** According to Aristotle, the foundation of persuasive communication lies in three core dimensions: Ethos, Logos, and Pathos. These elements were described in his classical work *Rhetoric* and continue to influence modern communication theory.

1. Ethos (Credibility): Refers to the character and credibility of the speaker. A speaker must appear trustworthy, knowledgeable, and ethical to persuade the audience effectively.
2. Logos (Logic): Refers to the logical appeal—the use of facts, statistics, reasoning, and evidence to support arguments. It addresses the rational aspect of the audience.
3. Pathos (Emotion): Refers to the emotional appeal, aiming to evoke feelings such as sympathy, fear, happiness, or anger to influence the audience's response.

Together, these three dimensions form the classical Aristotelian model of persuasion, widely applied in speeches, advertising, leadership communication, and media discourse.

Hence, the correct answer is (b) Ethos, Logos, Pathos.

Information Booster

1. Foundation of Rhetoric: Aristotle's rhetorical theory remains the basis of persuasive communication studies even today.
2. Balance of Appeals: Effective persuasion requires a proper balance of credibility, logic, and emotion.
3. Modern Applications: Used in political speeches, marketing campaigns, courtroom arguments, and academic presentations.
4. Ethos Builds Trust: Without credibility, even logical arguments may fail to convince the audience.
5. Logos Strengthens Argument: Statistical data and structured reasoning improve message clarity and acceptance.
6. Pathos Influences Behavior: Emotional engagement increases audience connection and action-taking.

Additional Knowledge

- (a) Ethos, Empathy, Mathos: *Empathy* and *Mathos* are not classical rhetorical dimensions in Aristotle's model.
- (c) Empathy, Chaos, Pathos: *Chaos* is unrelated to persuasive communication theory.
- (d) Logos, Ethos, Laos: *Laos* refers to "people" in Greek but is not part of Aristotle's persuasive model.

**Q10.** " In static continuous exertions:
(a) Blood flow is irregular
(b) Blood flow is fast
(c) Blood flow is normal
(d) Blood flow is diminished
**Ans.(d)**
**Sol.** During static continuous exertions, muscles maintain a prolonged contraction without relaxation. This sustained contraction compresses the blood vessels within the muscles, reducing blood flow. The diminished blood flow leads to a lack of oxygen supply to the muscles, causing fatigue and discomfort. This phenomenon is common in tasks involving heavy lifting or holding a position for a long time, where muscles are not allowed to relax.
Information Booster:

- Static muscular work refers to when a muscle or group of muscles remains contracted for an extended period without movement, such as holding a tool in a fixed position. It often leads to local muscle fatigue and a reduction in efficiency due to restricted blood circulation.
- This type of exertion contrasts with dynamic exertions, where muscle activity involves alternating contractions and relaxations, allowing for better blood flow and oxygenation.

Additional Knowledge:

- (a) Blood flow is irregular: This is incorrect because, during static exertions, blood flow is consistently restricted rather than being irregular.
- (b) Blood flow is fast: This is incorrect because, in static exertions, blood flow is slowed or diminished due to sustained muscle contraction.
- (c) Blood flow is normal: This is incorrect as static exertions lead to impaired blood circulation.

**Q11.** " Which type of packaging method is used for extending the life of food products by changing the atmosphere surrounding the food inside the package?
(a) Aseptic Packaging
(b) Shrink Wrap Packaging
(c) Modified Atmospheric Packaging
(d) CPET Packaging
**Ans.(c)**
**Sol.** Modified Atmospheric Packaging (MAP) is a method used to extend the shelf life of food products by altering the atmosphere inside the package. This is done by modifying the levels of gases such as oxygen, carbon dioxide, and nitrogen that surround the food. The primary goal of MAP is to slow down the respiration rate of fresh produce or reduce the growth of spoilage organisms like bacteria and mold, thereby maintaining freshness and extending the food's shelf life.

• For example, in packaging for fruits, vegetables, or meats, reducing oxygen and increasing carbon dioxide can slow down spoilage.
Information Booster:
Modified Atmospheric Packaging is commonly used for perishable products such as fresh meat, seafood, fruits, vegetables, and bakery products. The technique is used extensively in the food industry to keep products fresh for a longer period without the use of preservatives.
• Benefits:
• Extends the product's freshness.
• Reduces the need for artificial preservatives.
• Retains the natural color and texture of the food.
• Reduces the growth of spoilage microorganisms.
Additional Knowledge:
• (a) Aseptic Packaging: Involves sterilizing both the food and the packaging separately and then combining them in a sterile environment. Commonly used for long-life milk and juices.
• (b) Shrink Wrap Packaging: Involves wrapping food items in a plastic film that shrinks tightly when heat is applied. It is mainly used for protection rather than for changing the atmosphere around the food.
• (d) CPET Packaging: Refers to Crystallized Polyethylene Terephthalate, a type of packaging material often used for ready meals that can be heated in the oven or microwave, but it does not modify the internal atmosphere.

**Q12.** " Utensil to keep food hot without actually boiling by standing the dish containing the food in a large pan filled with water which is kept just below boiling point is called:
(a) Casserole
(b) Hot case
(c) Steamer
(d) Bain-Marie
**Ans.(d)**
**Sol.** A Bain-Marie is a utensil used to keep food hot without actually boiling. It works by placing the dish containing the food in a larger container filled with water that is kept just below boiling point. The gentle heat helps maintain the temperature of the food without overcooking or boiling it. This technique is often used in professional kitchens and is ideal for dishes like custards, sauces, or for melting chocolate.
Information Booster:
The Bain-Marie technique is commonly used in both cooking and food service to maintain gentle heat. It prevents direct exposure to intense heat, which is ideal for delicate dishes. The water acts as a buffer, ensuring even heating and reducing the risk of burning or curdling.
• Function: The Bain-Marie prevents food from boiling, simmering, or drying out. It is also used in buffet setups to keep food warm for extended periods.
Additional Knowledge:
(a) Casserole: A casserole is a large, deep dish used for baking or slow cooking, but it does not involve keeping food warm by using water like a Bain-Marie.

(b) Hot case: A hot case is an insulated container or electrical device used to keep food warm, but it does not use the water bath method like a Bain-Marie.
(c) Steamer: A steamer uses boiling water to create steam for cooking food. Unlike a Bain-Marie, it does not keep food warm but rather cooks it using steam.

**Q13.** " Fabrics prepared by two layers of fabrics combined onto one fabric with form.
(a) Bonded fabric
(b) Laminated fabric
(c) Coated fabric
(d) Poromeric fabric
**Ans.(b)**
**Sol.** Laminated fabrics are made by combining two or more layers of fabric, with one of the layers often being foam, to create a single composite material. This method involves bonding a face fabric to a backing material using adhesives, heat, or pressure. Laminated fabrics are used for various applications, including upholstery, sportswear, and outerwear, where added durability, structure, or cushioning is required.
Information Booster:
Laminated fabrics are commonly used in environments requiring additional strength, weather resistance, or insulation. The layers include a foam layer for cushioning or thermal insulation and a fabric layer for surface finish and aesthetics.
• Applications: Used in raincoats, upholstery, automotive fabrics, and industrial applications.
• Characteristics: Enhanced durability, insulation, and water resistance, depending on the materials used.
Additional Knowledge:
(a) Bonded fabric: Bonded fabrics are made by permanently joining two layers of fabric together using adhesives, but they do not necessarily include foam. They are generally thinner and are used for products like garments and bedding.
(c) Coated fabric: Coated fabrics have a polymer coating (such as PVC or polyurethane) applied to the surface of the fabric, providing specific properties like waterproofing or increased durability. However, coated fabrics are not typically layered with foam.
(d) Poromeric fabric: Poromeric fabrics are synthetic fabrics, often made from plastic, which are breathable but water-resistant. They are typically used in items like shoes and accessories. They are not made by laminating fabrics with foam.

**Q14.** Food Safety and Standards Act was implemented in the year
(a) 2008
(b) 2006
(c) 2000
(d) 2010
**Ans.(b)**
**Sol.** The Food Safety and Standards Act was enacted by the Government of India in 2006 to consolidate various laws relating to food safety and establish a single reference point for food regulation. The Act led to the formation of the Food Safety and Standards Authority of India (FSSAI), which is responsible

for laying down science-based standards for food products and regulating their manufacture, storage, distribution, sale, and import.

Before this Act, food regulation in India was governed by multiple laws such as the Prevention of Food Adulteration Act, 1954. The 2006 Act integrated these scattered laws into a single comprehensive legislation, ensuring better coordination and improved consumer protection.

The Act aims to:

- Ensure availability of safe and wholesome food
- Protect consumer health
- Regulate food business operators
- Establish uniform standards across the country

Although the Act was passed in 2006, it became fully operational in phases after the establishment of FSSAI.

Therefore, the year of implementation (enactment) is 2006.

Information Booster

1. The Act replaced multiple food laws including the Prevention of Food Adulteration Act, 1954.
2. FSSAI functions under the Ministry of Health and Family Welfare, Government of India.
3. The Act introduced the concept of Food Safety Management Systems (FSMS) including HACCP principles.
4. It mandates licensing and registration of all Food Business Operators (FBOs).
5. The Act ensures strict penalties for food adulteration and unsafe food practices.
6. It aligns Indian food standards with international standards like Codex Alimentarius.

**Q15.** Individual reflection, contemplation and meditation are the chief functions of the following type of communication

(a) Intrapersonal communication
(b) Interpersonal communication
(c) Dyadic communication
(d) Intracultural communication

**Ans.(a)**

**Sol.** Intrapersonal communication refers to communication that takes place within an individual. It involves processes such as self-talk, reflection, contemplation, meditation, and internal analysis of thoughts and emotions. It is the foundation of personality development, self-awareness, and decision-making.

In this type of communication, the sender and receiver are the same person. It includes thinking, evaluating one's behavior, planning future actions, recalling memories, and forming attitudes. Activities such as meditation, introspection, and moral reasoning are classic examples of intrapersonal communication.

Information Booster

1. Intrapersonal communication enhances self-awareness and emotional intelligence.
2. It plays a crucial role in decision-making and problem-solving.
3. Self-motivation and goal setting are outcomes of effective intrapersonal communication.
4. Meditation and self-analysis improve mental health and stress management.
5. It forms the basis of all other forms of communication.
6. Strong intrapersonal skills contribute to better interpersonal relationships.

Additional Knowledge

• (b) Interpersonal communication – Communication between two or more individuals involving exchange of ideas, feelings, and information.

• (c) Dyadic communication – A subtype of interpersonal communication involving exactly two people (e.g., teacher-student interaction).

• (d) Intracultural communication – Communication among people belonging to the same culture, sharing common values and beliefs.

**Q16.** Which of the following is the theory of clothing?

(a) Individuality

(b) Conformity

(c) Tattooing

(d) Modesty

**Ans.(d)**

**Sol.** The Modesty Theory is one of the earliest and most widely accepted theories of clothing origin. According to this theory, clothing originated primarily to cover the human body due to feelings of shame, modesty, or moral consciousness. As human societies evolved, awareness regarding privacy and social norms led individuals to cover certain body parts.

The Modesty Theory suggests that clothing was not initially for decoration or protection, but rather for concealment of private parts to maintain social decency. Over time, clothing also began to serve additional functions such as protection from climate, decoration, and social status identification.

Other major theories of clothing origin include:

• Protection Theory – Clothing developed to protect from climatic conditions.

• Adornment Theory – Clothing began as body decoration.

• Immodesty Theory – Clothing draws attention rather than conceals.

Among the given options, Modesty is the correct theory explaining the origin of clothing.

Information Booster

1. Psychological Basis: Modesty theory is based on the development of self-consciousness and moral awareness in human beings.

2. Cultural Variation: Standards of modesty vary across cultures and time periods. What is modest in one society may not be in another.

3. Social Control: Clothing often reflects societal expectations regarding gender roles and behavior.

4. Evolution of Clothing Functions: Beyond modesty, clothing now serves purposes like fashion, protection, identification, and communication.

5. Religious Influence: Many religions emphasize modest dressing as a moral or spiritual requirement.

6. Criticism of Theory: Anthropologists argue that primitive societies often had minimal clothing without feelings of shame, challenging the universality of the theory.

Additional Knowledge

• (a) Individuality: Individuality relates to self-expression through clothing but is not considered a classical theory of clothing origin.

• (b) Conformity: Conformity refers to dressing according to social norms or group expectations, not an origin theory.

• (c) Tattooing: Tattooing is a form of body adornment and relates more to the Adornment Theory rather than a clothing theory.

**Q17.** Plasma technology optimizes following properties in textiles:
(a) Increases effluent
(b) Hydrophobic
(c) UV protection
(d) Flame retardancy
Codes:
(a) A, B, C
(b) B, C, D
(c) A, C, D
(d) A, B, D
**Ans.(b)**
**Sol.** The correct answer is (b) B, C, D. Plasma technology is an advanced surface modification technique used in textile processing to enhance functional properties without affecting the bulk characteristics of the fabric. It is considered an eco-friendly finishing method because it reduces water and chemical usage.
• B. Hydrophobic property – Plasma treatment can modify the surface energy of textiles, making them either hydrophobic (water-repellent) or hydrophilic depending on the gas used. It is widely used to impart water-repellent finishes without heavy chemical coatings.
• C. UV protection – Plasma technology can enhance the bonding of UV-absorbing agents onto textile surfaces, thereby improving ultraviolet protection properties of fabrics.
• D. Flame retardancy – Plasma treatment improves adhesion of flame-retardant chemicals to the textile surface, increasing resistance to ignition and flame spread.
Information Booster 1. Plasma treatment is considered a clean and eco-friendly textile finishing technique.
2. It modifies only the surface layer of fibres, preserving bulk strength and flexibility.
3. It reduces water, energy, and chemical consumption in textile processing.
4. Widely used in technical textiles for enhanced functional performance.
Additional Information • A. Increases effluent – Plasma processing significantly reduces wastewater discharge since it is a dry and low-chemical process.

**Q18.** Which of the following fibres are stretch fibres?
(a) Neoprene
(b) Spandex
(c) Sisal
(d) Lyocell
Codes:
(a) A, B
(b) B, C
(c) C, D
(d) D, A
**Ans.(a)**

**Sol.** • A. Neoprene – Neoprene is a synthetic rubber (polychloroprene) known for its elasticity, flexibility, and resilience. It is widely used in wetsuits, sportswear, orthopedic supports, and fashion garments requiring stretch and recovery properties. Its ability to stretch and return to original shape makes it a stretch fibre material.

• B. Spandex – Spandex (also known as elastane or Lycra) is a highly elastic synthetic fibre capable of stretching up to 5–8 times its original length and recovering quickly. It is extensively used in activewear, swimwear, leggings, and fitted garments due to its superior elasticity.

Information Booster 1. Stretch fibres are also called elastic fibres and are widely used in sportswear and performance textiles.

2. Spandex is often blended with cotton, polyester, or nylon to provide comfort and flexibility in garments.

3. Elastic recovery is an important property in stretch fabrics to maintain garment shape.

4. Synthetic stretch fibres are commonly used in compression garments and medical textiles.

Additional Information • C. Sisal – A hard natural fibre used in cordage and industrial products; lacks elasticity.

• D. Lyocell – A semi-synthetic fibre derived from wood pulp; valued for softness and moisture absorption but not for stretch properties.

**Q19.** ___is the process of treating cotton with sodium hydroxide solution to improve its lustre, strength and dyeability

(a) Mercerization

(b) Sanforization

(c) Calendering (ironing with rollers)

(d) Parchmentization

**Ans.(a)**

**Sol.** Mercerization is a chemical finishing process applied mainly to cotton fabrics (and sometimes cotton yarns) in which the material is treated with a concentrated sodium hydroxide (NaOH) solution, usually under controlled tension. This treatment causes the cotton fibres to swell and change their internal structure, leading to significant improvements in lustre, tensile strength, absorbency, and dye affinity.

As a result of mercerization, cotton develops a silk-like sheen, becomes stronger, and shows enhanced dye uptake, producing brighter and more uniform colours. The process also improves the smoothness and dimensional stability of the fabric. Mercerized cotton is therefore widely used in high-quality garments, bed linen, sewing threads, and home textiles.

Information Booster:

• Mercerization uses concentrated NaOH on cotton fibres.

• It increases lustre, strength, absorbency, and dyeability.

• Fibres become rounder and smoother, enhancing appearance.

• Produces brighter and more colour-fast fabrics.

• Common in premium cotton textiles and apparel.

Additional Knowledge:

• (b) Sanforization: A mechanical finishing process used to control shrinkage in cotton fabrics; it does not improve lustre or dyeability.

• (c) Calendering: A mechanical finishing process where fabric is passed between heated rollers to improve surface smoothness and temporary shine, not fibre strength or dye affinity.
• (d) Parchmentization: A chemical finish using sulphuric acid to produce a transparent, stiff, paper-like effect on cotton; it weakens the fabric and is unrelated to lustre or dyeability improvement.

**Q20.** Which of the following is not an embroidery stitch?
(a) Dabka
(b) Menthi
(c) Phanda
(d) Murri
**Ans.(a)**
**Sol.** Dabka is a coiled metallic wire (spring-like structure) used extensively in zardozi embroidery. It is laid on the fabric and secured using couching stitches, but it does not form a stitch by itself.
On the other hand, Menthi, Phanda, and Murri are all embroidery stitches commonly used in traditional Indian embroidery, especially zardozi and surface embroidery. These stitches are used to create raised, textured decorative effects on fabric.
Hence, since Dabka is a raw decorative element and not a stitch, option (a) is the correct answer.
Information Booster
• Dabka is a metallic embellishment, not a stitch.
• Phanda and Murri are raised embroidery stitches.
• Menthi stitch resembles a small knot/seed effect.
• Zardozi embroidery uses a combination of materials and stitches.
• Competitive exams often test the difference between stitch and material.
Additional Knowledge
• Menthi Menthi is a traditional raised embroidery stitch that creates a small seed-like or knot effect. It is commonly used for floral detailing in Indian surface embroidery.
• Phanda Phanda is a round, raised knot stitch, similar to a French knot but more compact. It is often used to depict flower buds, jewellery motifs, or dotted patterns.
• Murri Murri is an elongated raised stitch, shaped like a grain of rice. It is usually worked along with phanda to add texture and depth to embroidery designs.

**Q21.** After shearing, which of the following steps transforms raw wool into a fine, high-quality fabric by untangling fibers and preparing them for spinning?
(a) Carbonizing
(b) Carding
(c) Fulling
(d) Combing
**Ans.(d)**
**Sol.** After shearing, wool undergoes several processing steps. Combing is the stage where fibers are thoroughly straightened, aligned, and untangled, and shorter fibers are removed. This process produces long, parallel fibers, which are essential for making fine, smooth, and high-quality yarns used in premium fabrics.
Information Booster

 Wool processing involves steps like shearing → scouring → carding → combing → spinning.
 Combing removes short fibers (noils), improving yarn strength and smoothness.
 It is essential for producing worsted yarns, known for fine quality fabrics.
 Carding is a preliminary step, while combing is a refinement step.
 High-quality wool fabrics like suits and fine textiles require combed fibers.
 Proper fiber alignment ensures better durability and appearance of fabric.

Additional Knowledge

 (a) Carbonizing: A chemical process used to remove vegetable impurities from wool, not for fiber alignment.
 (b) Carding: Untangles fibers but does not produce the fine alignment needed for high-quality fabric.
 (c) Fulling: A finishing process that thickens and shrinks wool fabric after weaving.

**Q22.** Which communication model emphasizes the dynamic and interactive nature of the communication process, involving feedback from the receiver?
(a) Linear Model
(b) Transactional Model
(c) Shannon-Weaver Model
(d) Berlo's SMCR Model
**Ans.(b)**
**Sol.** The Transactional Model of communication emphasizes the dynamic and interactive nature of communication. Unlike the Linear Model, which views communication as a one-way process, the Transactional Model considers both participants as senders and receivers simultaneously, with continuous feedback and interaction. This model highlights how communication is a reciprocal and ongoing process.

**Q23.** Which of the following is the correct sequence of steps for washing clothes by hand?
(a) Rinse, Soak, Scrub, Dry
(b) Soak, Scrub, Rinse, Dry
(c) Scrub, Soak, Rinse, Dry
(d) Soak, Rinse, Scrub, Dry
**Ans.(b)**
**Sol.** Soak: Start by soaking the clothes in water to loosen dirt and stains.
Scrub: Next, scrub the clothes using detergent to clean them thoroughly.
Rinse: After scrubbing, rinse the clothes with clean water to remove detergent and dirt.
Dry: Finally, dry the clothes by hanging them up or using a drying method.

**Q24.** Which money management method involves allocating a fixed percentage of income to different expense categories, such as housing, food, and savings
(a) Envelope system
(b) 50/30/20 rule
(c) Debt snowball method
(d) Zero-based budgeting
**Ans.(b)**

**Sol.** The 50/30/20 rule is a money management method where individuals allocate 50% of their income to essentials (such as housing and utilities), 30% to discretionary spending (such as entertainment and dining out), and 20% to savings and debt repayment. It provides a simple guideline for budgeting and managing finances based on percentages of income.

**Q25.** Which stage of the management process involves evaluating results against objectives and making necessary adjustments?
(a) Organizing
(b) Leading
(c) Controlling
(d) Planning
**Ans.(c)**
**Sol.** Controlling: Controlling is the stage of the management process where managers monitor organizational performance, compare actual results against planned objectives, and take corrective action if necessary. It involves measuring performance, identifying deviations from plans, and ensuring that activities are in line with organizational goals.

**Q26.** Which part of the cereal grain contains the majority of the fiber and B vitamins?
(a) Aleurone layer
(b) Pericarp
(c) Embryo
(d) Endosperm
**Ans.(b)**
**Sol.** The pericarp, also known as the bran, is the outermost layer of the cereal grain that contains the majority of the grain's dietary fiber and B vitamins. It serves as the protective covering of the grain and is rich in nutrients such as iron, magnesium, and antioxidants. In whole grains, the pericarp remains intact, contributing significantly to the fiber content of the grain, which is essential for digestive health and helps in regulating blood sugar levels.
Information Booster:
The pericarp, or bran, is crucial for providing dietary fiber, which helps in promoting healthy digestion and preventing constipation. It also plays a vital role in weight management by promoting a feeling of fullness. Additionally, the B vitamins found in the bran, such as niacin, thiamin, and riboflavin, are important for energy production and maintaining healthy skin, hair, and eyes. Whole grains with the bran intact are nutritionally superior to refined grains where the bran is removed.
Additional Knowledge:
• Option (a) Aleurone layer: This layer lies just beneath the bran and contains proteins and enzymes that are important during germination but doesn't contribute significantly to dietary fiber.
• Option (c) Embryo: The embryo (or germ) contains healthy fats, proteins, and essential nutrients such as vitamin E but is not a significant source of dietary fiber.
• Option (d) Endosperm: The endosperm primarily contains starch and provides energy in the form of carbohydrates but is low in fiber and B vitamins compared to the bran.

**Q27.** According to ICMR (2020), what is the recommended daily iron requirement for pregnant women?
(a) 30 mg

(b) 35 mg
(c) 40 mg
(d) 45 mg

**Ans.(c)**

**Sol.** The ICMR (2020) recommends a daily iron intake of 40 mg for pregnant women. Iron is essential during pregnancy due to the increased demand for hemoglobin, the protein in red blood cells that transports oxygen to tissues and the developing fetus. The additional iron supports the expansion of blood volume, the growth of the placenta, and fetal development. A lack of adequate iron can result in iron deficiency anemia, which can lead to complications such as preterm birth, low birth weight, and maternal fatigue. Proper iron levels are vital to ensuring a healthy pregnancy for both the mother and the child.

**SUMMARY OF RDA FOR INDIANS – 2020**

| Age Group | Category of work | Body Wt | Protein | CHO | Calcium | Magnesium | Iron | Zinc | Iodine | Thiamine | Riboflavin | Niacin | Vit B6 | Folate | Vit B12 | Vit C | Vit A | Vit D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (kg) | (g/d) | (g/d) | (mg/d) | (mg/d) | (mg/d) | (mg/d) | (µg/day) | (mg/d) | (mg/d) | (mg/d) | (mg/d) | (µg/d) | (µg/d) | (mg/d) | (µg/d) | (IU/d) |
| Men | Sedentary | 65 | 54.0 | 130 | 1000 | 385 | 19 | 17 | 150 | 1.4 | 2.0 | 14 | 1.9 | 300 | 2.5 | 80 | 1000 | 600 |
| | Moderate | | | | | | | | | 1.8 | 2.5 | 18 | 2.4 | | | | | |
| | Heavy | | | | | | | | | 2.3 | 3.2 | 23 | 3.1 | | | | | |
| Women | Sedentary | 55 | 45.7 | 130 | 1000 | 325 | 29 | 13.2 | 150 | 1.4 | 1.9 | 11 | 1.9 | 220 | 2.5 | 65 | 840 | 600 |
| | Moderate | | | | | | | | | 1.7 | 2.4 | 14 | 1.9 | | | | | |
| | Heavy | | | | | | | | | 2.2 | 3.1 | 18 | 2.4 | | | | | |
| | Pregnant woman | 55 + 10 | +9.5 (2nd trimester) +22.0 (3rd trimester) | 175 | 1000 | 385 | 40 | 14.5 | 250 | 2.0 | 2.7 | +2.5 | 2.3 | 570 | +0.25 | +15 | 900 | 600 |
| | Lactation 0-6m | | +16.9 | 200 | 1200 | 325 | 23 | 14 | 280 | 2.1 | 3.0 | +5 | +0.26 | 330 | +1.0 | +50 | 950 | 600 |
| | 7-12m | | +13.2 | 200 | | | | | | 2.1 | 2.9 | +5 | +0.17 | 330 | | | | |
| Infants | 0-6 m* | 5.8 | 8.1 | 55 | 300 | 30 | - | - | 100 | 0.2 | 0.4 | 2 | 0.1 | 25 | 1.2 | 20 | 350 | 400 |
| | 6-12m | 8.5 | 10.5 | 95 | 300 | 75 | 3 | 2.5 | 130 | 0.4 | 0.6 | 5 | 0.6 | 85 | 1.2 | 27 | 350 | 400 |
| Children | 1-3y | 11.7 | 11.3 | 130 | 500 | 135 | 8 | 3.0 | 90 | 0.7 | 0.9 | 7 | 0.9 | 110 | 1.2 | 27 | 390 | 600 |
| | 4-6y | 18.3 | 15.9 | 130 | 550 | 155 | 11 | 4.5 | 120 | 0.9 | 1.3 | 9 | 1.2 | 135 | 1.2 | 32 | 510 | |
| | 7-9 y | 25.3 | 23.3 | 130 | 650 | 215 | 15 | 5.9 | 120 | 1.1 | 1.6 | 11 | 1.5 | 170 | 2.5 | 43 | 630 | |
| Boys | 10-12y | 34.9 | 31.8 | 130 | 850 | 270 | 16 | 8.5 | 150 | 1.5 | 2.1 | 15 | 2.0 | 220 | 2.5 | 54 | 770 | 600 |
| Girls | 10-12y | 36.4 | 32.8 | 130 | 850 | 255 | 28 | 8.5 | 150 | 1.4 | 1.9 | 14 | 1.9 | 225 | 2.5 | 52 | 790 | 600 |
| Boys | 13-15y | 50.5 | 44.9 | 130 | 1000 | 355 | 22 | 14.3 | 150 | 1.9 | 2.7 | 19 | 2.6 | 285 | 2.5 | 72 | 930 | 600 |
| Girls | 13-15y | 49.6 | 43.2 | 130 | 1000 | 325 | 30 | 12.8 | 150 | 1.6 | 2.2 | 16 | 2.2 | 245 | 2.5 | 66 | 890 | 600 |
| Boys | 16-18y | 64.4 | 55.4 | 130 | 1050 | 405 | 26 | 17.6 | 150 | 2.2 | 3.1 | 22 | 3.0 | 340 | 2.5 | 82 | 1000 | 600 |
| Girls | 16-18y | 55.7 | 46.2 | 130 | 1050 | 335 | 32 | 14.2 | 150 | 1.7 | 2.3 | 17 | 2.3 | 270 | 2.5 | 68 | 860 | 600 |

* AI

Information Booster:

Iron requirements increase significantly during pregnancy because the mother's blood volume expands to accommodate the growing fetus, and the baby needs iron for its own development. Foods rich in iron include red meat, poultry, fish, beans, lentils, and fortified cereals. Non-heme iron (from plant sources) can be absorbed more efficiently when consumed with vitamin C-rich foods, such as citrus fruits and tomatoes. Maintaining adequate iron levels is critical to prevent anemia and ensure a healthy pregnancy and delivery.

Additional Knowledge:

- Option (a) 30 mg: This amount is lower than the ICMR's recommended 40 mg and may not be sufficient for the increased demands of pregnancy. While 30 mg may help prevent mild anemia, it may not fully support the increased need for iron during pregnancy.
- Option (b) 35 mg: Although closer to the recommended intake, 35 mg still falls short of the 40 mg needed to support the increased blood volume and iron demands during pregnancy, potentially leading to complications like fatigue and anemia.

• Option (d) 45 mg: While some pregnant women might require higher amounts of iron, particularly those with pre-existing anemia, 45 mg could exceed the general recommendation and might cause digestive issues like constipation or nausea when taken excessively without medical supervision.

**Q28.** Which of the following factors is not typically considered in the sensory evaluation of food quality?
(a) Color
(b) Texture
(c) Nutritional content
(d) Flavor
**Ans.(c)**
**Sol.** Sensory evaluation in food quality typically focuses on attributes that can be perceived through the senses, such as color, texture, flavor, aroma, and appearance. Nutritional content, while crucial for overall food quality, is usually assessed through chemical analysis and nutritional testing rather than sensory evaluation.

**Q29.** Which of the following is considered a psychological barrier to communication?
(a) Noise
(b) Language differences
(c) Stereotypes
(d) Poor articulation
**Ans.(c)**
**Sol.** Psychological barriers to communication are mental factors that can hinder the effectiveness of communication. Stereotypes, which are preconceived notions or generalized beliefs about a group of people, can influence how messages are sent, received, and interpreted, often leading to misunderstandings and biases.
Information booster: Noise is a physical barrier, language differences are linguistic barriers, and poor articulation is a mechanical barrier.

**Q30.** What does FIFO stand for in food service management?
(a) First In, First Out
(b) Fast In, Fast Out
(c) Fresh In, Fresh Out
(d) Food Inspection, Food Operations
**Ans.(a)**
**Sol.** FIFO (First In, First Out) is a method used in food service management and inventory control to ensure the freshness and quality of food products. The concept is simple: older inventory (food items) should be used or sold before newer inventory to prevent spoilage, waste, or expiration of food products. By following the FIFO method, food service establishments can reduce food waste, maintain product quality, and ensure that customers receive fresh food items. This practice is particularly important in perishable food items such as fruits, vegetables, dairy products, and meats to minimize the risk of serving expired or low-quality food to customers.