

Complete Question Bank with Answers

Material Exploration & Hard Materials in Fashion Design

Section A: Very Short Answer Questions (1–2 marks)

Q: Define material exploration in fashion design.

A: Material exploration refers to the systematic study and experimentation of different materials to understand their properties, behavior, and creative potential in garment design.

Q: Name any two metals commonly used in fashion.

A: Aluminum and Steel.

Q: What is chainmail?

A: A flexible metal mesh created by interlinking metal rings, used historically as armor and in avant-garde fashion.

Q: Give two characteristics of aluminum.

A: Lightweight and corrosion-resistant.

Q: Name a designer famous for using metal.

A: Paco Rabanne.

Q: What is glass beading?

A: The decorative technique of stitching small glass beads onto fabric for embellishment.

Q: Define blown glass elements.

A: Hollow shapes formed by blowing air into molten glass, used as sculptural components in couture.

Q: Name a designer who used glass bubbles.

A: Iris van Herpen.

Q: What is porcelain sculpting?

A: Shaping and firing ceramic material to create rigid sculptural fashion components.

Q: Give one use of ceramic tiles in garments.

A: Used as panels or mosaic-like surfaces in couture pieces.

Q: Define full-grain leather.

A: The highest quality leather made from the top layer of hide, retaining natural grain.

Q: What is vegan leather?

A: Synthetic or bio-based alternatives to animal leather such as PU, PVC, or mushroom leather.

Q: What is PVC?

A: Polyvinyl Chloride—a thermoplastic polymer used for transparent or glossy fashion pieces.

Q: Define vacuum forming.

A: A technique in which heated plastic is shaped over a mold using suction.

Q: What is a thermoplastic?

A: A material that becomes moldable upon heating and solidifies upon cooling, repeatedly.

Q: Name any two thermoplastics.

A: PVC and TPU.

Q: What is resin casting?

A: Pouring liquid resin into molds to create hardened shapes once cured.

Q: Define draping.

A: A technique of positioning and pinning fabric on a mannequin to develop garment silhouettes.

Q: What is smocking?

A: A decorative technique of gathering fabric into stitched patterns for elasticity and texture.

Q: What is sample exploration?

A: Small-scale trial experiments of techniques/materials to study their design applications.

Section B: Short Answer Questions (3–5 marks)

Q: Explain any three properties of metal used in fashion.

A: Metals used in fashion possess properties like rigidity for structure, shine for visual appeal, and malleability allowing sculpting into wearable forms.

Q: Write a short note on Paco Rabanne's metal fashion.

A: Paco Rabanne revolutionized fashion in the 1960s with aluminum disc dresses, chainmail-like garments, and futuristic anti-fabric aesthetics.

Q: Differentiate metal mesh and chainmail.

A: Metal mesh is a woven sheet of metal, whereas chainmail consists of individually interlinked rings creating flexible armor-like surfaces.

Q: Describe two techniques of using glass in fashion.

A: Glass beading for embellishment and blown glass elements for sculptural couture components.

Q: Explain significance of glass beads in 1920s fashion.

A: Glass beads added sparkle, movement, and weight to flapper dresses, enhancing their fluidity under club lighting.

Q: Advantages of ceramic in fashion.

A: High sculptural quality, symbolic aesthetic, durable surface, and ability to create rigid couture shapes.

Q: Explain ceramic-coated fabrics.

A: Fabrics coated with ceramic layers for structure, durability, heat-resistance, and sculptural texture.

Q: Describe three types of leather.

A: Full-grain (premium), top-grain (refined), and suede (soft underside of hide).

Q: How is leather embossed?

A: Leather is pressed with heated patterned plates to imprint textures like croc or snake skin.

Q: Three treatments done on leather.

A: Tanning for durability, dyeing for color, and oil/wax finishing for flexibility.

Q: Explain vacuum forming with example.

A: Heated plastic is pulled over a mold—used to create molded bodices or futuristic capes.

Q: Acrylic as a plastic material.

A: Acrylic is transparent, stiff, and used for sculptural garments, accessories, and panels.

Q: Sustainability concerns around plastic.

A: Slow decomposition, microplastic pollution, and high carbon footprint.

Q: Define TPU & its use.

A: Thermoplastic polyurethane—used for flexible transparent structures in futuristic couture.

Q: Explain resin embedding.

A: Objects like flowers or threads are embedded inside resin molds for aesthetic storytelling.

Q: Difference: epoxy vs. UV resin.

A: Epoxy cures chemically and is stronger; UV resin cures instantly under UV light.

Q: Short note on draping.

A: Draping helps designers visualize 3D silhouettes directly on mannequins.

Q: Explain pleating.

A: Pleating folds fabric repeatedly to add structure and volume; examples include knife and box pleats.

Q: What is fabric behavior lab?

A: A study session where students test drape, stiffness, transparency, and stretch of fabrics.

Q: Purpose of sample exploration journal.

A: To document techniques, materials, and applications for learning and portfolio use.

Section C: Long Answer Questions (8–10 marks)

Q: Discuss evolution of metal from embellishment to garment structure.

A: Metal moved from decorative trims to full structural garments with designers like Paco Rabanne, McQueen, and Van Herpen using metal discs, armor-like corsets, chainmail, and molded metal forms.

Q: Compare design philosophies of McQueen and Iris van Herpen (metal use).

A: McQueen used metal symbolically as emotional armor, while Van Herpen uses metal for futuristic fluidity through 3D-printed titanium and aluminum meshes.

Q: Explain major techniques to manipulate metal.

A: Techniques include molding, casting, chainmail weaving, metal-thread embroidery, laser-cutting, 3D printing, and mesh draping.

Q: Describe use of glass in fashion from 1920s to today.

A: From glass beads in flapper dresses to blown-glass couture by Iris van Herpen and mirror-shard garments by Margiela, glass evolved into a dramatic couture medium.

Q: Symbolism and aesthetic power of glass on runway.

A: Glass expresses fragility, elegance, danger, transparency, and reflective storytelling.

Q: Ceramic incorporation into garments.

A: Ceramic tiles, broken ceramic mosaics, porcelain bustiers, 3D printed ceramic polymers, and glazed beads create sculptural fashion forms.

Q: Ceramic as fragility + strength.

A: Designers use ceramic to symbolize protection, memory, tradition, and contrast with soft fabrics.

Q: Types of leather and their effect on garment design.

A: Full-grain is durable for jackets; suede adds softness; patent leather adds high gloss; vegan leather supports sustainability.

Q: Innovations by Rick Owens and Balmain using leather.

A: Rick Owens emphasizes draped leather architecture; Balmain uses embossed, studded leather for power silhouettes.

Q: Explain leather techniques (laser cutting, foiling, embossing, molding).

A: Laser cutting creates precision; foiling adds shine; embossing creates texture; molding forms structured shapes.

Q: Major plastic types used in fashion.

A: PVC, acrylic, nylon, polyester, PU, polyethylene, and bioplastics each offer unique flexibility, transparency, durability, and sustainability angles.

Q: Role of thermoplastics in futuristic fashion.

A: Used in 3D-printed couture, molded bodices, transparent pieces, and flexible techwear.

Q: Compare luxury vs. streetwear PVC usage.

A: Luxury brands (Chanel, Valentino) use PVC for elegance; streetwear brands (Off-White) use it for industrial modernism.

Q: Processing plastic: laminating, heat molding, UV tinting.

A: Lamination adds strength; heat molding shapes silhouettes; UV tinting adds lasting color.

Q: Resin as a fashion material.

A: Resin allows casting, tinting, embedding, sculpting accessories, footwear elements, and couture pieces.

Q: Designers using resin.

A: Van Herpen (fluid resin forms), McQueen (embedded insects/skulls), Margiela (resin-coated fabrics).

Q: Importance of fabric manipulation in modern design.

A: Manipulation adds uniqueness, volume, texture, motion, and couture value.

Q: Ten fabric techniques with applications.

A: Includes pleating, draping, smocking, appliqué, embroidery, painting, patchwork, fraying, cutwork, and fabric sculpting.

Q: Importance of sample journals.

A: Builds technical vocabulary, exploration mindset, and portfolio-ready documentation.

Q: How material exploration builds design thinking.

A: Encourages experimentation, problem-solving, concept development, and multidimensional creativity.

Section D: Essay / Design Application (12–15 marks)

Q: Metal as structural + symbolic: Discuss.

A: Metal symbolizes strength and futurism. Designers like Rabanne used metal as identity; McQueen used it as emotional armor; Van Herpen used it for fluid sculptural forms.

Q: Design a couture glass garment (concept + materials + construction).

A: A couture gown using blown glass bubbles at shoulders, glass-beaded embroidery, and mirrored panels. Construction uses reinforced mesh, resin stabilization, and hand-beading.

Q: Ceramic as fragility vs. power.

A: Ceramic bustiers and mosaic skirts express themes of protection, identity, and artistic craftsmanship.

Q: Leather-based collection using three treatments.

A: Collection uses embossed leather jackets, hand-painted leather skirts, and suede appliqué tops with mixed textures.

Q: Future of sustainable plastics.

A: Innovations include recycled PET, bio-plastics, circular production, and biodegradable polymers.

Q: Design a thermoplastic-based garment.

A: Futuristic dress with TPU molded panels, PLA 3D-printed motifs, and PVC transparent layers.

Q: Accessory collection using resin.

A: Neckpieces with embedded flowers, tinted resin bangles, and cast resin buttons.

Q: Fabric manipulation transforms couture.

A: Manipulation adds signature textures, sculptural forms, and personalized surface identity.

Q: Garment combining fabric + metal + resin.

A: A structured bodice with metal mesh, resin embedded panels, and draped fabric skirt.

Q: Importance of material exploration mindset.

A: It encourages innovation, critical thinking, and future-ready fashion practice.