

CBSE | DEPARTMENT OF SKILL EDUCATION

TEXTILE DESIGN (SUBJECT CODE: 829)

MARKING SCHEME FOR CLASS XI (SESSION 2023-2024)

Max. Time: 3 Hours

Max. Marks: 60

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section has 06 questions.
 - ii. There is no negative marking.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
 - i. This section contains 18 questions.
 - ii. A candidate has to do 11 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. No.	QUESTION	Source Material (NCERT/PSSCIVE/ CBSE Study Material)	Unit/ Chap. No.	Page no. of source material	Marks
Q. 1	Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)				
i.	Language, Prejudice, Feelings, Culture, Environment. (any 2)	NCERT	1	3	1
ii.	Learning, Career Counselor, Self reflection, Feedback (any 2)	CBSE Study Material	2	21	1
iii.	Work Team structure, Work Team Process, Diversity (any 2)	CBSE Study Material	2	21	1
iv.	Shift+Ctrl+S	CBSE Study Material	3	51	1
v.	Use imagination, take moderate risks, Deal with failure, accept feedback & Criticism positively	CBSE Study material	4	60	1
vi.	Green economy is defined as Biological Economy that is concerned with renewable energy, Green Buildings, clean transportation, water, waste & land management.	CBSE Study material	5	63	1
Q. 2	Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)				
i	Denier is defined as weight in grams of 9000 meters length of yarn	Textile Science	2	34	1
ii	It prevents bagging and accelerates wrinkle recovery.	Textile Science	1	25	1
iii	A weft yarn moves over four consecutive warps and then under three consecutive warps in regular intervals	Textile Science	3	53	1

iv	Asbestos	Textile Science	1	10	1
v	Combed yarns are made from long staple cotton fibers. It is a smooth and finer yarn with more uniformity and less imperfections and irregularities.	Textile Science	2	32	1
vi	They produce less skew in the fabric They have the ability to fashion or shape garment or product parts.	Textile Science	4	67	1
vii	Fusible	Textile Science	4	73	1
Q. 3	Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)				
i	Due to the high number of intersections among warp and weft yarns, these fabrics generally tend to be stiff and have less extent of drape.	Textile Science	3	50	1
ii	High extent of drape Highest Tear strength Lustrous (any 2)	Textile Science	3	54	1
iii	Thicker and Coarser	Textile Science	2	34	1
iv	Chiffon	Textile Science	1	6	1
v	Z- Twist	Textile Science	2	37	1
vi	Olefin and Polyester	Textile Science	4	72	1
vii	Felt has no grain; it does not fray or ravel. Felt has poor pliability, strength, and stretch recovery. (any 2)	Textile Science	4	75	1
Q. 4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)				
i	This happens due to the floats that appear in the fabric out of such weave	Textile Science	3	51	1
ii	Absorbent fibers are used for skin-contact apparel, towels and diapers.	Textile Science	1	4	1
iii	The size paste adds strength to the warp yarns to withstand the wear and tear during weaving. It also reduces abrasion among warp yarns during weaving and related damage like deterioration of fabric appearance. (any 1)	Textile Science	3	47	1
iv	A yarn, which has one type of fiber, wrapped around another yarn with strength and / or stretch. The structure consists of a core, which could be spandex or any other type yarn, and outer layer is usually of natural, man-made or blended fiber yarn.	Textile Science	2	37	1
v	Chenille Yarn	Textile Science	2	39	1
vi	The spring-beard, or bearded, needle	Textile Science	4	64	1
Q5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)				
i	A complete product can be fashioned directly on the knitting machine. The rate of production of knitting machines is relatively high.	Textile Science	4	63	1

ii	Due to their low strength and durability	Textile Science	4	70	1
iii	Basket Weave- due to high absorption quality	Textile Science	3	52	1
iv	The high level of crimp and loose structure of wool yarn results air to be trapped on the outer surface of the fabric. This 'Trapped air' has insulating behaviour.	Textile Science	1	18	1
v	It is highly flammable	Textile Science	1	19	1
vi	Hand , Appearance, drape, Durability, Texture	Textile Science	2	35	1
Q6	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)				
i	It is defined as a linear form of fibers, twisted as a continuous strand that can be made into a fabric.	Textile Science	1	1	1
ii	Due to poor dimensional stability	Textile Science	1	12	1
iii	Count of 1/24s X 2/40s indicates the warp yarn to be a single yarn of 24 English or Cotton Count and the weft yarn to be a 2-ply or double yarn of 40 English or Cotton Count	Textile Science	3	49	1
iv	600-840	Textile Science	2		1
v	Spun-bonded fiber webs have high tensile and tear strength and low bulk.	Textile Science	4	72	1
vi	Medical gowns and drapes, battery separators, interlinings, roofing substrates, floppy disk liners, mattress pads, table linens, household wipes, wall coverings, window treatment components (Any of the above)	Textile Science	4	72	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Q. No.	QUESTION	Source Material (NCERT/PSSCIVE/ CBSE Study Material)	Unit/ Chap. No.	Page no. of source material	Marks
Answer any 3 out of the given 5 questions on Employability Skills in 20 – 30 words each (2 x 3 = 6 marks)					
Q. 5	Verbal Communication- Sharing of information using words. It can be oral or written. Non Verbal Communication-Sending message to others without using words by the help of signals, gestures, Body postures.	NCERT	1	8, 10	2
Q. 6	Setting & Prioritizing goals, Creating a schedule, Making list of tasks, Balancing Work and leisure, Breaking large tasks into smaller tasks. (Any 2)	Study Material	2	21	2
Q. 7	1. Select the text that has to be copied by clicking on the given copy icon. You	NCERT	3	119	2

	<p>can also use the shortcut key Ctrl+C. Then, move the cursor to where you want to paste the contents and click the Paste icon or Ctrl+V. This copies the text to the new location.</p> <p>2. If you want to delete or remove the text from the original place and move it to a new position in the document,</p> <p>First, select the text. Use the Cut icon on the toolbar or use the Ctrl+X shortcut key.</p> <p>Now place the cursor in the new location and either use the Paste icon or the Ctrl+V shortcut key. This is also called moving the text using the cut/paste method.</p>				
Q. 8	Independence, Respect for work, Trust, Honesty, Vision, Outstanding performance (Any2)	CBSE Study Material	4	62	2
Q. 9	Reduces pollution, Contributes to building of sustainable Economy, Saves Money, Improved Health (Any2)	CBSE Study Material	5	64	2
Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)					
Q. 10	<p>Natural fibers are those fibers that are in fiber form as they grow or develop from animal, plant, or mineral sources.</p> <p>The manufactured fibers or man-made fibers are made from chemical compounds produced in manufacturing facilities.</p>	Textile Science	1	3	2
Q. 11	<p>Composition of fiber</p> <p>Length of fiber (staple or filament)</p> <p>Type of yarn (spun or filament)</p> <p>Count (thickness or fineness)</p> <p>Number of strands of yarn (single or plied)</p> <p>Amount of yarn twist</p>	Textile Science	2	27	2

	Direction of yarn twist Construction of yarn (simple, complex or textured) (any 4)				
Q. 12	Projectile looms- here, the picking is done using a mechanical device called a projectile. It is a small and light weight device that can move fast, thus increasing the loom productivity and decreasing power consumption. Rapier looms- The picking is done by a rod-like or sword-like mechanical device, that carries the weft yarn at its tip and enters the shed when it is open, withdrawing after delivering the weft end at the other end as the shed closes	Textile Science	3	46	2
Q. 13	In case of velvet or velveteen, the loops formed in a pile fabric are cut. This causes the fibers to get separated from each other in the yarn at the point where they are cut. Thus, they tend to fray and give rise to a unique surface texture to the fabric. If the cut piles are left to stand erect, we call the fabric as velvet. If the cut piles are made flat by external pressure, the fabric is termed velveteen.	Textile Science	3	58	2
Q. 14	Dry-laid fiber webs: They are made by carding or air laying the fibers in either a random or oriented fashion. Wet-laid fiber webs: They are made from slurry of short, paper-process-length and textile-length fibers and water. The water is extracted and reclaimed, leaving a random-oriented fiber web behind.	Textile Science	4	71	2
Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)					
Q. 15	Dry Spinning Process: Filaments emerging from the spinnerets are solidified. This is done by drying them with warm air. This process is applicable for procuring acetate,	Textile Science	1	11	3

	<p>acrylic, modacrylic, triacetate.</p> <p>Wet Spinning Process: Filaments emerge from the spinnerets and are passed directly into a chemical bath where they are solidified or regenerated. This process is applicable for producing acrylic, rayon</p> <p>Melt Spinning Process: Fiber-forming substance is melted for extrusion and hardened by cool air. This process is applicable for producing nylon, polyester, olefin, aramid, and glass.</p>				
Q. 16	<p>Shedding: This is the operation that helps in opening up the warp sheet creating the gaps through which the weft yarns will pass.</p> <p>Picking: This is the operation in which the weft or the pick, also referred as the fill, passes through the open warp sheet</p> <p>Beat-up: The beat-up action is to ensure that the newly introduced weft is closely packed in the body of the fabric, and hence, a mechanical force or thrust is exerted on the new weft by a device called the reed to embed it into the main fabric already woven, closely with the prior weft yarns.</p>	Textile Science	3	45	3
Q. 17	<p>Braids are narrow fabrics in which yarns are interlaced both diagonally and lengthwise.</p> <p>Braid is stretchy and easily shaped.</p> <p>Braid can be flat or three-dimensional.</p> <p>Braid is used for trim and industrial products</p> <p>Lace is an open-work fabric with complex patterns or figures, handmade or machine made on special lace machines or on Rachel knitting machines.</p> <p>Yarns may be twisted around each other to create open areas.</p> <p>Lace remains important today as a trim or accessory in apparel and furnishings.</p>	Textile Science	4	76	3

Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

<p>Q. 18</p>	<p>Boucle Yarn: A three-ply yarn with small, tight loops protruding from the body of the yarn at widely spaced intervals.</p> <p>Brushed / Napped Yarn: A staple yarn in which the short fibers of the yarn are brushed to the surface to form a soft bulked effect.</p> <p>Chenille Yarn: A yarn with pile fibers held between plied core yarns producing a hairy or velvety effect.</p> <p>Corkscrew Yarn: A two-ply yarn consisting of one slack twisted and one hard-twisted fine yarn where the different size yarns are twisted together at a different rate with the thinner yarn twisting around the thicker yarn.</p> <p>Flock / Flake Yarn: A single yarn</p> <p>Nub Yarn: A multiple-ply yarn in which one yarn is twisted around the other yarn several times forming a built-up enlarged or knotted effect on the surface of the base yarn. Which round or elongated tufts of fibers are inserted at regular intervals; the tufts are held in place by the twist of the base yarn.</p> <p>Ratine Yarn: A core yarn with a rough surface effect in an overall appearance in which the small loops are closely spaced and securely twisted to the core yarn. A yarn is twisted over a base yarn at regular intervals.</p> <p>Seed Yarn: A tiny, round or oval enlarged nub produced by crimping and twisting a yarn repeatedly over a base yarn at regular intervals.</p> <p>Slub Yarn: A thick and thin yarn with randomly spaced soft, lofty portions produced by irregular intervals of twist and lack of twist in the yarn formation.</p> <p>Spiral Yarn: It is a two-ply yarn consisting of the staple twisted soft, thick yarn and one hard-twisted fine yarn. Where the thick yarn is twisted and wound spirally around the</p>	<p>Textile Science</p>	<p>2</p>	<p>39</p>	<p>4</p>
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	<p>fine yarn.</p> <p>Splash Yarn: An elongated enlargement or nub produced by crimping and</p> <p>Blended Yarns: Yarns are prepared from fiber blends in order to improve their performance by drawing upon the best available properties of both fibers and also to reduce the cost of fabric as well as to create interesting surface texture by utilizing the technique of chemical processing. (Any 4)</p>				
Q. 19	<p>a) Spinning is the process of converting fibers into yarns.</p> <p>b) The processing of staple fibres in to yarn requires the following steps:</p> <p>Blow room process: sorting, opening, separating, cleaning, and blending of fibres</p> <p>Carding: intensive cleaning through individualization of fibres</p> <p>Drawing: alignment of fibres through doubling and drafting of fibres</p> <p>Combing: micro cleaning and alignment of fibres through parallelization</p> <p>Roving: attenuating drawn slivers</p> <p>Spinning: twisting drafted roving in to yarn</p>	Textile Science	2	27	4
Q. 20	<p>COTTON</p> <p>Cotton fabrics have poor luster due to its natural colour.</p> <p>Drape, luster, texture, hand etc are affected by type of yarn, yarn count, fabric structure and finishes.</p> <p>Feels cool, inelastic, soft and dry</p> <p>Poor resilience: Cotton fabrics wrinkle easily.</p> <p>Poor dimensional stability: Shrinks easily.</p> <p>No problem with pilling but Cotton fabrics has 'lint'</p> <p>Good strength and abrasion resistance- In</p>	Textile Science	1	16	4

	<p>wet condition, strength is increased by 20%</p> <p>Hydrophilic and good wicking absorbs moisture quickly and dries quickly.</p> <p>Good resistance to alkalis and organic solvents; Poor resistance to Acids. Easily attacked by fungus and mildew; Poor resistance to sunlight.</p> <p>It can be handled by machine wash and dry clean (apparel)</p> <p>SILK: Silk is an only natural fiber available as filaments. It takes luxurious appearance and high brightness after sericin is removed.</p> <p>Excellent drape gives graceful appearance, good resilience</p> <p>Luxurious hand, warm feels, crispy, smooth and dry fabrics are the other properties.</p> <p>Strongest animal fiber, loses 15% - 20% when wet; Good resistance to acids. Poor resistance to alkalis; better than wool; Good resistance to dry cleaning solvents;</p> <p>Poor resistance to sun light, prolonged exposure results in change of colour; Very elastic, Poor recovery if stretched beyond 2% of elongation</p> <p>Usually dry cleaned; could be laundered depending upon finishing agents, fabric structure and garment construction.</p>				
<p>Q. 21</p>	<p>Shedding mechanism: On the basis of this, looms can be classified as:</p> <p>(a) Hand looms- shedding done manually by leg-driven pedals.</p> <p>(b) Cam looms- shedding done with the help of cams. They are less productive and limited in design repeat size, although less complicated.</p> <p>(c) Dobby looms- shedding done by doobby mechanism. Design repeat size increases along with productivity, but it is complicated and costlier than cam looms and hand looms.</p>	<p>Textile Science</p>	<p>3</p>	<p>46</p>	<p>4</p>

	(d) Jacquard looms- shedding done by jacquard mechanism. Costliest of all, but design repeat size is virtually unlimited. Although a complicated mechanism, they give fabrics with very rich look and texture.				
Q. 22	<p>The first stitch is the knit stitch. This is the basic stitch used to produce the majority of filling knit fabrics.</p> <p>The tuck stitch is used to create a pattern in the fabric. In the tuck stitch, the old stitch is not cleared from the needle.</p> <p>The float or miss stitch is also used to create a pattern in the fabric. In the float stitch, no new stitch is formed at the needle while adjacent needles form new stitches.</p> <p>The purl, or reverse, stitch forms a fabric that looks like the technical back of a basic-knit fabric on both sides. The fabric is reversible.</p>	Textile Science	4	68	4