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# EcoDesign in the Textile sector

Unit 6: Life Cycle Assessment in the textile sector

UNIT QUIZ



Unit 06: Life Cycle Assessment in the textile sector						
N°	Question	Result	Answ 1	Answ 2	Answ 3	Answ 4
1	From the concept of "sustainable development", according to which the spheres of economic, social and environmental development must be integrated, the philosophy of thought called Life Cycle Thinking is born.	T				
2	The textile sector is the subject of strong attention to sustainability.	T				
3	The textile sector is the second most polluting industry in the world, second only to that of:		crude oil	building	chemistry	plastic
4	LCA is a structured, complete and standardized method.	T				
5	The Gate to gate approach focuses on:		only production phase	on the phases of extraction, transformation and production	All life cycle	only end of life
6	The Cradle to grave approach considers the life cycle as a whole.	T				
7	The elimination of UPSTREAM flows (upstream of the company) is the exclusion of all the processes due to suppliers' activities, related to the production of raw materials. Manufacturing of the finished product, use and end of life are included.	T				
8	The Cradle to gate approach considers only the production phase.	F				
9	<i>Simplified LCA</i> it is used in the case where decisions have to be made for the development of new products and services, especially when these systems are not complex.	T				
10	Detailed LCA it is used when the key actions for environmental improvement in the life cycle of products have to be identified.	F				
11	LCA is regulated by the ISO 14000 series (14040 and 14044).	T				
12	Depending on the purpose of the study and the objectives to be pursued, an LCA can be conducted in a more or less detailed manner.	T				
13	How many phases is an LCA study organized?		3	4	5	6



14	Definition of the objective and the field of application is the first fundamental step that establishes the reasons for which the LCA analysis is conducted.	T				
15	The scope of an LCA study does not necessarily have to be sufficiently well defined.	F				
16	The inventory analysis of an LCA study consists of modeling the system and collecting appropriate data by compiling a budget of inputs and outputs.	T				
17	The third phase of an LCA study is the assessment of potential environmental impacts, direct and indirect, associated with input and output.	T				
18	Each environmental impact is associated with one or more environmental effects and it is the executor of the study who is responsible for the choice of the level of detail and the impacts to be evaluated, in line with the objectives and scope defined during the first phase of the study.	T				
19	The data collected in an LCA study are analyzed in order to obtain specific interpretations to be used to improve the environmental performance of the analyzed system / product.	T				
20	The objectives established in the initial phase of the LCA study are not concretized in the actions that are defined following the data interpretation phase.	F				
21	The critical review of the data collected is a process aimed at verifying whether an LCA study complies with the requirements	T				
22	The critical review does not improve understanding and increases the credibility of the LCA study, especially if it is set up as a participatory process involving stakeholders.	F				
23	In an LCA study, the review is mandatory when the results are intended for external use and in the case of comparative studies between multiple systems / products.	T				



24	Through an LCA study it is possible to obtain an improvement in the environmental performance of products at various levels of the life cycle.	T				
25	Through an LCA study it is possible to support the decisions taken by private / public companies, governmental and non governmental institutions, to design products, processes that are eco - friendly services.	T				
26	Through an LCA study it is possible to communicate the environmental benefits of a product through an Environmental Product Declaration (EPD).	T				
27	In an LCA study, the "Use phase" includes the impacts associated with use and maintenance.	T				
28	In an LCA study, the "Disposal / End of Life" phase contains the impacts of end-of-life activities (eg disposal, incineration, reuse or recycling).	T				
29	In an LCA study, how are other activities such as transportation, storage and sale considered?		production	use	other impacts	end of life
30	Textile fibers can be present in nature or produced by man.	T				
31	Artificial fibers are obtained from raw materials already present in nature and subjected to simple chemical transformation processes.	T				
32	The synthetic fibers are obtained through more complex chemical synthesis processes and originate from the polymers.	T				
33	In the elimination of DOWNSTREAM flows (downstream of the company), where processes are excluded?		production, use and end of life of the product	truck, use and end of life of the product	core activities of the company	end of life



34	Textile fibers are substances with a filamentous aspect that lend themselves to being spun and woven, by virtue of their morphology and their mechanical characteristics of resistance, elasticity and flexibility.	T				
35	In an LCA study, the "maintenance process" is related to the associated impacts:		core processes	use and maintenance	truck, storage and sale	end of life activities
36	Cotton and wool, require less energy to be produced than synthetic fibers.	T				
37	To produce polyester, more water is used than cotton.	F				
38	The textile sector is not the subject of strong attention to sustainability.	F				
39	The chemical fibers can be further divided into two categories: artificial and synthetic.	T				
40	In an LCA study, the "use phase" includes the impacts associated with the production of the product.	F				
41	Through an LCA study it is not possible to obtain an improvement in the environmental performance of products at various levels of the life cycle.	F				
42	The third phase of an LCA study consists of an inventory analysis.	F				
43	The fourth phase of an LCA study consists of interpreting the results.	F				
44	In an LCA study, the environmental impact category related to the greenhouse effect [kg CO2 eq] will measure the potential for acidification.	F				
45	In an LCA study, the collection methodology does not guarantee a consistent and consistent subdivision of data.	T				
46	In an LCA study, the environmental impact category related to the greenhouse effect [kg CO2 eq] will measure the potential for eutrophication.	F				



47	In an LCA study, the environmental impact category related to the greenhouse effect [kg CO2 eq] will measure the greenhouse gas emission content.	T				
48	To be produced, cotton and wool, require more water than synthetic fibers.	T				
49	To produce polyester, more energy than cotton is used.	T				
50	The elimination of UPSTREAM flows (downstream of the company) is the exclusion of all processes due to suppliers' activities, related to the production of raw materials. Manufacturing of the finished product, use and end of life are included.	F				
51	The textile sector is the second most polluting industry in the world, second only to that of oil.	T				
52	An LCA study is divided into 4 phases.	T				
53	The Cradle to grave approach considers only the extraction of raw materials.	F				
54	In an LCA study, the collection methodology ensures a constant and consistent division of data.	T				
55	In an LCA study, the "production process" is related to the associated impacts:		processes related to production	use and maintenance	truck, storage and sale	end of life activities
56	In an LCA study, the scope must be sufficiently well defined.	T				
57	The modern textile industry uses a great variety of materials, some of natural origin, others artificial.	T				
58	The first phase of an LCA study is data collection.	F				
59	The production / cultivation and subsequent processing of textile materials are very varied and consequently may involve a great diversity of potential impacts.	T				



60	Viscose has intermediate consumption values compared to natural and artificial fibers.	T				
61	To produce polyester, more water than wool is used.	F				
62	The objectives established in the initial phase of the LCA study are embodied in the actions that are defined following the data interpretation phase.	T				
63	The third phase of an LCA study is the assessment of environmental impacts.	T				
64	The second phase of an LCA study consists of an inventory analysis.	T				
65	The second phase of an LCA study is the assessment of environmental impacts.	F				
66	The third phase of an LCA study is the definition of the objective.	F				
67	The first phase of an LCA study is to define the goal.	T				
68	The objectives established in the initial phase of the LCA study are embodied in the actions that are defined following the data interpretation phase.	T				
69	LCAs provide important data for assessing environmental impacts and implementing good practices to improve the sustainability of textile products.	T				
70	The level of energy required in the production of natural fibers is lower requires more water and high levels of ecotoxicity.	T				
71	In an LCA study, the "goal definition" consists of modeling the system and collecting appropriate data by compiling a budget of inputs and outputs.	F				
72	The methodology used by the LCA studies must be coherent and unified so that the data can be representative, compatible and comparable.	T				



73	Synthetic garments are potentially less impactful during the use phase.	T				
74	The evaluation of the environmental impacts consists in modeling the system and collecting the appropriate data through the compilation of a budget of inputs and outputs	F				
75	Ironing, washing of a garment are considered as the phase of:		production	end of life	use and maintenance	truck, storage and sale
76	In an LCA study, studying the use phase can result in a large number of errors.	T				
77	The creation of verified patterns of consumer habits can provide useful information to identify ways to change behavior in order to minimize environmental impact.	T				
78	The recycling of materials, which would otherwise be considered waste, allows energy benefits.	T				
79	Recycled PET bottles that are used as clothing fibers bring greater benefits to the environment when compared to virgin PET.	T				
80	The Cradle to gate approach considers only the end of life phase of a product.	F				
81	The final stage of a garment's life cycle is defined as downcycling.	T				
82	The fabric recycling hypothesis has a positive environmental potential.	T				
83	In an LCA study, data collection represents:		first phase	second phase	third fase	fourth phase
84	The use phase does not have a high environmental impact compared to the consumption of water, energy and chemicals used in the washing process to which drying and ironing are added.	F				
85	In an LCA study, the definition of the objective and of the application field represents the:		first phase	second phase	third fase	fourth phase





86	The fabric recycling hypothesis has a negative environmental potential.	F				
87	The use phase has a high environmental impact due to the consumption of water, energy and chemicals used in the washing process to which drying and ironing are added.	T				
88	In an LCA study, transportation, storage and retailing are neglected in the assessment for their reduced impact.	T				
89	In an LCA study, the assessment of environmental impacts corresponds to:		first phase	second phase	third fase	fourth phase
90	The type of material used for the production of clothing greatly influences the impact of the production process	T				
91	We speak of upcycling when a certain product is transformed into another different, but of similar or superior value and quality.	T				
92	In an LCA study, the interpretation of the results corresponds to:		first phase	second phase	third fase	fourth phase
93	The production and use phases have a strong impact on the environment and most of the indicators refer to them.	T				
94	In an LCA study, "interpretation of results" consists of modeling the system and collecting appropriate data by compiling a balance sheet of inputs and outputs.	F				
95	Natural and synthetic fibers produce different environmental impacts.	T				
96	In the life cycle of a product, the phase that has the greatest environmental impact is:		Use phase	production	truck	storage
97	The Cradle-to-Cradle approach implies a "closed-loop" mode.	T				
98	Which of these fibers has a greater impact on energy consumption:		acrylic	wool	cotton	polyester
99	Which of these fibers has a greater impact on water consumption:		acrylic	wool	silk	cotton
100	these fibers has a greater impact on greenhouse gas emissions:		nylon	polyester	silk	cotton

