

Date: _____		Educational organization of origin: _____		
Title/Version: _____		Course Code: TSG-4060-2: General Science 2		
CONCEPTS AND TECHNIQUES				
General Concepts	Compulsory Concepts	Theory Part		Practical Part
		Evaluation of Competencies	Evaluation of Explicit Knowledge	
Musculoskeletal system	Functions of the musculoskeletal system			
	Types of joint movements			
Organization of matter	Pure substance: compound, element			
	Homogeneous and heterogeneous mixtures			
Transformation of energy	Forms of energy: electrical, chemical, thermal, mechanical, radiant			
Graphical language	Basic lines			
	Scales			
	Oblique projection			
	Orthogonal projections: multiview, isometric			
	Standards and representations: diagrams and symbols			
	Dimensioning			
Mechanical engineering	Typical functions: linking, guiding, sealing, and lubricating			
	Typical mechanical links			
	Function, components, and use of motion transmission systems			
	Function, components, and use of motion transformation systems			
	Speed changes			

CONCEPTS AND TECHNIQUES (Cont'.)				
General Concepts	Compulsory Concepts	Theory Part		Practical Part
		Evaluation of Competencies	Evaluation of Explicit Knowledge	
Materials	Mechanical properties			
	Constraints: tension, compression, torsion			
Electrical engineering	Power supply			
	Conduction and insulation			
	Control			
	Transformation of energy			
Categories of Techniques	Techniques			Practical Part
Graphical language	Using scales			
	Producing a graphic representation using instruments			
Manufacturing	Safely using materials and equipment			
	Assembling and disassembling			
	Measuring and laying out			
	Making a part			
Measurements	Using measuring instruments			

The seven general concepts and the three categories of techniques are covered in the examination. It is not necessary, however, to include all the compulsory concepts for a given general concept. Similarly, it is not necessary to include all the techniques for a given category of techniques.

For the knowledge targeted by the evaluation of the competencies:

Theory Part:

- At least four general concepts must be covered, among which, a representative sample of the compulsory concepts must be covered.

Practical Part:

- At least one of the general concepts must be covered.
- The **three categories of techniques** must be covered. For these categories, at least five of the **techniques** listed above must be covered, including *Safely using materials and equipment*.

For the knowledge targeted by explicit evaluation:

Theory Part:

- At least **four** three general concepts must be covered; those not covered in the evaluation of competencies are to be given priority.
- Priority is given to compulsory concepts that were not covered in the evaluation of competencies.

THEORY PART			
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions
<b>GUIDE</b>			
General and compulsory concepts are clearly identified.			
The number of general concepts evaluated respects the requirements of the DED.			
For each general concept, representative samples of the compulsory concepts are evaluated.			
Provided materials:			
• Adult's Booklet			
• Correction Key			
• Guide			
• Evaluation Booklet			
The authorized material complies with the Definition of the Evaluation Domain (DED).			
Duration of the examination is 2 hours.			
<b>ADULT'S BOOKLET—EVALUATION OF COMPETENCIES 2 AND 3 SECTION 1</b>			
Scenarios with tasks are related to the <i>Expertise</i> family of situations.			
The scenarios each cover an issue or technological application related to the content of the course.			
The four or five tasks are designed to be unbiased, avoiding bias related to a lack of knowledge of context, technology or situation. Each task must belong to one of the following categories: • Providing an explanation • Providing an opinion • Providing a calculation • Providing a representation An examination must include at least three categories of tasks.			

THEORY PART (Cont.)			
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions
<b>ADULT'S BOOKLET — EVALUATION OF COMPETENCIES SECTION (Cont.)</b>			
Tasks are complex, incorporating the following characteristics: <ul style="list-style-type: none"> <li>• Mobilize several concepts</li> <li>• Permit several solutions</li> <li>• Use judgment, reasoning or analysis</li> <li>• Require an opinion or a choice to be made</li> <li>• Propose a problem to be solved</li> <li>• Mobilize the 3 evaluation criteria</li> </ul>			
<b>ADULT'S BOOKLET—EVALUATION OF EXPLICIT KNOWLEDGE SECTION 2</b>			
The booklet comprises 6 to 8 questions.			
Questions are devoted to the explicit evaluation of certain knowledge.			
The questions are varied in form and relate to each of the first three levels of cognitive skill (Knowing, Understanding and Applying).			
Priority is given to general concepts and compulsory concepts that were not covered in the evaluation of competencies.			

THEORY PART (Cont.)			
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions
<b>ADULT'S BOOKLET GENERAL</b>			
The visual aspect is appropriate (layout, illustrations, spaces for answers, etc.).			
The methods of representation are varied (graphs, tables, texts, equations, diagrams, etc.).			
The level of difficulty is appropriate.			
Scenarios are free of stereotypes, discriminations or offensive elements.			
The appendices include the DED approved <i>List of Standards Symbols, Diagrams of Motion Transmission Systems, Diagrams of Motion Transformation Systems, Electrical Symbols, and Criterion-Referenced Rubrics.</i>			
Copyright:			
<ul style="list-style-type: none"> <li>The source of each image, photo, drawing, and text is clearly indicated.</li> <li>Rights have been obtained, with supporting documents clearly indicating sources (if necessary).</li> <li>Content is original (not based on educational accounts or other reference materials) and is mathematically and scientifically sound.</li> </ul>			
<b>CORRECTION KEY</b>			
Examples of appropriate responses are provided for all tasks and questions.			
Marking scales are clear.			
A total of 20 marks are allotted for the explicit knowledge section.			

THEORY PART (Cont.)			
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions
<b>EVALUATION BOOKLET</b>			
Examples of appropriate responses are provided for all tasks and questions.			
Each observable element connects with the concepts evaluated and respects the criterion evaluated.			
The observable elements guide evaluation with the Criterion-Referenced Rubrics.			
Evaluation with the Criterion-Referenced Rubrics is necessary to establish a mark of 40 for the evaluation of the competencies.			
<b>CONCORDANCE OF BOOKLETS</b>			
There is a concordance between all the documents: <i>Guide, Adult's Booklet, Correction Key, and Evaluation Booklet.</i>			

PRACTICAL PART				
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions	
<b>GUIDE</b>				
The general and compulsory concepts evaluated as well as the category of techniques and the techniques are clearly identified.				
Provided materials: <ul style="list-style-type: none"> <li>• Adult's Booklet</li> <li>• Correction Key</li> <li>• Guide</li> <li>• Evaluation Booklet</li> </ul>				
Duration of the examination is 2 hours.				
The list of materials needed for the technological design process is provided for the adult.				
Instructions and techniques for preparing materials are provided for the technician. Manufacturing process details are provided for in the appendix.				
Evaluation instructions are provided. The appendix contains the Decision Tree, Supervisor's Checklist and the Plan of Action (if needed).				
<b>ADULT'S BOOKLET</b>				
The scenario is safe for the adult and safety instructions are clearly stated, if necessary.				
The scenario proposes at least four tasks associated with each of the four evaluation criteria.				

PRACTICAL PART (Cont.)			
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions
<b>ADULT'S BOOKLET (Cont.)</b>			
The template complies with the DED.			
The task is complex with the following characteristics: <ul style="list-style-type: none"> <li>Mobilizes several concepts</li> <li>Permits several solutions</li> <li>Proposes a problem to be solved using the design process</li> <li>Requires representation by means of a sketch and the manufacture of a prototype.</li> <li>Uses judgment and reasoning during analysis.</li> </ul>			
The level of difficulty is appropriate.			
Scenarios are free of stereotypes, discrimination, and offensive elements.			
The appendices include the DED approved <i>List of Standards Symbols, Diagrams of Motion Transmission Systems, Diagrams of Motion Transformation Systems, Electrical Symbols, and Criterion-Referenced Rubrics.</i>			
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PRACTICAL PART (Cont.)			
Global Appreciation	Satisfactory	Revision Required	Comments and Suggestions
CORRECTION KEY			
Examples of appropriate steps and expected results are given for all tasks.			
Examples of appropriate steps and responses are clear.			
EVALUATION BOOKLET			
The information gathering tool contains observable elements for each criterion evaluated.			
Each observable element connects with the concepts evaluated and respects the criterion evaluated.			
The observable elements guide evaluation with the Criterion-Referenced Rubrics.			
Evaluation with the Criterion-Referenced Rubrics is necessary to establish a mark of 40 for the evaluation of the competencies.			
CONCORDANCE OF BOOKLETS			
There is a concordance between all the documents: <i>Guide, Adult's Booklet, Correction Key, and Evaluation Booklet.</i>			