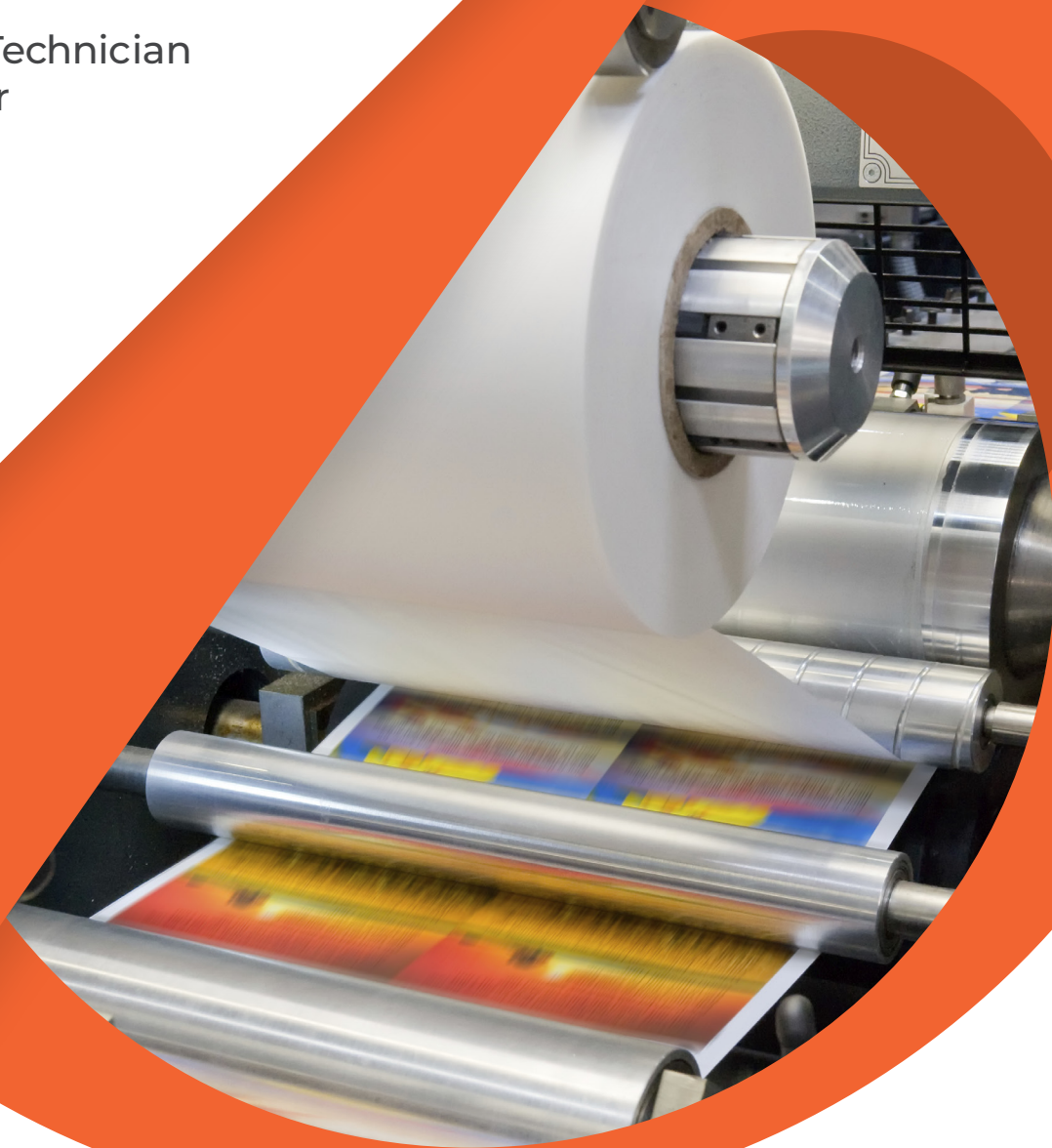# Graphic Communications

Study Guide

Assessments:
4101 Digital Prepress Technician
4104 Bindery Operator

Overview

This study guide is designed to help students prepare for the Graphic Communications assessments. It not only includes information about the assessments, but also the skills standards upon which the assessments are based and test taking strategies.

Each of the four sections in this guide provides useful information for students preparing for the Graphic Communications assessments.

- CareerTech and Competency-Based Education: A Winning Combination

- Graphic Communications assessments

    ▶ Assessment Information

    ▶ Standards and Test Content

    ▶ Sample Questions

    ▶ Abbreviations, Symbols and Acronyms

- Strategies for Test Taking Success

- Notes

The assessments measure a student's ability to apply knowledge of the skills necessary for success in the Graphic Communications sector.

CareerTech and Competency-Based Education: A Winning Combination

Competency-based education uses learning outcomes that emphasize both the application and creation of knowledge and the mastery of skills critical for success. In a competency-based education system, students advance upon mastery of competencies, which are measurable, transferable outcomes that empower students.

Career and technology education uses industry professionals and certification standards to identify the knowledge and skills needed to master an occupation. This input provides the foundation for development of curriculum, assessments and other instructional materials needed to prepare students for wealth-generating occupations and produce comprehensively trained, highly skilled employees demanded by the work force.

Tools for Success

CareerTech education relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

Skills standards provide the foundation for competency-based instruction and outline the knowledge and skills that must be mastered in order to perform related jobs within an industry. Skills standards are aligned with national skills standards and/or industry certification requirements; therefore, a student trained to the skills standards is equally employable in local, state and national job markets.

Curriculum materials and textbooks contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources include supplemental activities that enhance learning by providing opportunities to apply knowledge and demonstrate skills.

Certification Assessments test the student over material outlined in the skills standards and taught using the curriculum materials and textbooks. When used with classroom performance evaluations, certification assessments provide a means of measuring occupational readiness.

Each of these components satisfies a unique purpose in competency-based education and reinforces the knowledge and skills students need to gain employment and succeed on the job.

Measuring Success

Evaluation is an important component of competency-based education. Pre-training assessments measure the student's existing knowledge prior to receiving instruction and ensure the student's training builds upon this knowledge base. Formative assessments administered throughout the training process provide a means of continuously monitoring the student's progress towards mastery.

Certification assessments provide a means of evaluating the student's mastery of knowledge and skills. Coaching reports communicate assessment scores to students and provide a breakdown of assessment results by standard area. The coaching report also shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

Graphic Communications
Assessment Information

What are the Graphic Communications assessments?

The Digital Prepress Technician, Prepress Assembler, Offset Press Operator, and Bindery Operator assessments are end-of-program assessments for students in Graphic Communications programs. The assessments provide an indication of student mastery of knowledge and concepts necessary for success in careers in this area.

How were the assessments developed?

The assessments were developed by the CareerTech Testing Center. Items were developed and reviewed by a committee of subject matter experts.

Frequency: represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

1 = less than once a week   2 = at least once a week   3 = once or more a day

Criticality: denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

1 = slight   2 = moderate   3 = extreme

What do the assessments cover?

Specifically, the tests include multiple-choice test items over the following areas:

Digital Prepress Technician (55 questions)

Perform Digital Processes and Procedures	4%
Perform Advanced Electronic Prepress Operations	56%

Bindery Operator assessment (55 questions)

Perform Bindery Operations	100%

What are the benefits of using these assessments?

Students receive a certificate for each assessment that he/she passes. This certificate may be included in his/her portfolio and used to communicate the student's mastery of the subject matter to potential employers.

When should the assessment be taken?

The CareerTech Testing Center recommends that students take these assessments as soon as possible after receiving all standards-related instruction, rather than waiting until the end of the school year.

Is the assessment timed?

No. Although students may take as long as they need, most students finish an assessment within one hour.

What resources can students use on these assessments?

Students are allowed to use calculators and scratch paper on CTTC assessments; however, these items must be provided by the testing proctor and returned to the proctor before the student's exam is submitted for scoring. Calculator apps on cell phones and other devices may not be used on these assessments.

What accommodations can be made for students with Individualized Education Plans (IEPs)?

Accommodations are allowed for students with an Individualized Education Plan. Examples of allowable accommodations include:

- Extended time — This assessment is not timed; therefore, students may take as much time as needed to finish. The assessment must be completed in one testing session.

- Readers — A reader may be used to read the assessment to a student who has been identified as needing this accommodation.

- Enlarged text — Students needing this accommodation can activate this feature by clicking the AA icon in the upper right corner of the screen.

What can students expect on Test Day?

All CTTC assessments are web-based and delivered exclusively by a proctor in the school's assessment center. The proctor **cannot** be an instructor or anyone who was involved with the students during instruction.

Assessments are delivered in a question-by-question format. When a question is presented, the student can select a response or leave the question unanswered and advance to the next question. Students may also flag questions to revisit before the test is scored. All questions must be answered before the test can be submitted for scoring.

After the assessment is scored, the student will receive a score report that not only shows the student's score on the assessment, but also how the student performed in each standard area.

Can students retake the test?

Students may retake the test unless their school or state testing policies prohibit retesting. Students who can retest must wait at least three days between test attempts.

Standards and Test Content
Digital Prepress Technician

Duty K: Perform Digital Processes and Procedures (24 questions)

CODE	TASK	F	C
K.01	Utilize safe work habits in digital process operations	3	3
K.02	Read and comprehend production information on a job ticket/jacket	3	3
K.03	Explain the difference in quality of electronic imaging output devices	3	3
K.04	Identify the various types of jobs that can be designed and produced using desktop publishing	2	2
K.05	Identify basic process color principles	3	3
K.06	Start up a page layout program and demonstrate a functional knowledge of keyboarding, mouse operations, and procedures	3	3
K.07	Demonstrate software capabilities	3	3
K.08	Distinguish between word processing, page layout, and graphics software	3	3
K.09	Organize a file management system for opening, copying, saving, and deleting files	3	3
K.10	Perform computer commands/codes/menus for the software in use		
K.11	Conduct basic search operations	3	3
K.12	Proofread a document and make necessary corrections using basic proofreading marks	3	3
K.13	Export PDF files for appropriate work flow (i.e. printing and proofing)	3	3
K.14	Place graphics from an existing file into a publication	3	3
K.15	Evaluate basic scanner software, its uses, and limitations	1	3

Duty L: Perform Advanced Electronic Prepress Operations (31 questions)

CODE	TASK	F	C
L.01	Read and comprehend production information on job jacket/ticket	3	3
L.02	Evaluate the capabilities, productivity, and quality levels of high-end output vs. low-end output	3	3
L.03	Identify and understand digital and analog proofs	2	3
L.04	Demonstrate an understanding of the postscript page description language	1	3
L.05	Use a file compression utility for file transfer or storage	3	3
L.06	Transfer files via the internet/intranet	3	3
L.07	Create a work and turn layout	2	3
L.08	Produce a job on the computer using electronic imposition	3	3

L.09	Create a job that incorporates electronic trapping	**3**	**3**
L.10	Follow instructions to produce, modify, preflight, or output files according to customer supplied criteria	**3**	**3**
L.11	Calibrate a desktop scanner for producing scans	**1**	**3**
L.12	Identify the proper resolution for images printed on coated or uncoated stock	**3**	**3**
L.13	Use a photo manipulation program to perform basic color correction	**3**	**3**
L.14	Identify the differences between Type I, Postscript, and Open Type fonts	**3**	**3**
L.15	Perform font management activities	**3**	**3**
L.16	Understand basic archiving techniques	**3**	**3**
L.17	Use backup utility to restore files to the hard drive or diskette	**2**	**3**
L.18	Perform system troubleshooting procedures	**3**	**3**
L.19	Demonstrate troubleshooting procedures for postscript errors, such as limit check	**3**	**3**
L.20	Calibrate a color monitor	**1**	**3**
L.21	Calibrate and perform quality control checks on input/output and film processor	**1**	**3**

Standards and Test Content
Bindery Operator

Duty P: Perform Bindery Operations (55 questions)

CODE	TASK	F	C
P.01	Utilize safe work habits in bindery operations	3	3
P.02	Read and comprehend production information on job jacket/ticket	3	3
P.03	Create a bindery make-ready example for common jobs	3	3
P.04	Manually and/or machine jogging stock	3	3
P.05	Perform stock cutting calculations	2	3
P.06	Set-up and use a programmable paper-cutter	3	3
P.07	Produce pads of paper • Pad #20 stock • Pad carbonless paper	3	3
P.08	Perform multiple folds using an automatic folding machine	3	3
P.09	Make sets of paper using collating equipment in proper sequence	2	2
P.10	Produce side and saddle stitched products	3	3
P.11	Measure and punch/drill holes for 3-ring notebook pages	3	3
P.12	Perform numbering operations	2	3
P.13	Perform perforation and scoring operations	2	3
P.14	Perform book-binding operations	3	3
P.15	Perform packaging and shrink wrapping operations	3	3
P.16	Identify binding and finishing techniques (i.e. die cutting, laminating, embossing, foil stamping, flocking, etc.)	1	3

Sample Questions

_____ 1. Using the standard stock cutting formula, how many 6" x 9" pieces can be cut from a 25" x 38" sheet with the least waste?

    a. 6
    b. 8
    c. 12
    d. 16

_____ 2. What book binding method requires hot glue?

    a. coil binding
    b. GBC
    c. perfect binding
    d. saddlestich

_____ 3. Forcing tiny fibers into a wet ink image to add an unusual texture is called:

    a. embossing.
    b. flocking.
    c. foil stamping.
    d. varnishing.

_____ 4. A misregister occurs when printing a process color job on uncoated paper with separate passes because of:

    a. low pH.
    b. paper stretch.
    c. too little ink.
    d. too much alcohol.

_____ 5. A form roller ink strip shows a uniform stripe all the way across the plate. This means the roller is:

    a. new.
    b. out of parallel.
    c. parallel.
    d. worn.

6. The arrangement of pages in a signature so that they will be in the proper sequence after the sheet is printed and folded is known as:

   a. creep.
   b. imposition.
   c. pagination.
   d. trim allowance.

7. What must be considered when obtaining proper trapping in multicolor printing?

   a. film emulsion
   b. three tone posterization
   c. type of paper and ink
   d. typeset composition

8. What method corrects problems with scratches or pinholes on negatives?

   a. knifing out
   b. masking with goldenrod
   c. opaqueing
   d. reshooting copy

9. What adjustment is needed if the first plate shows the copy is light?

   a. decrease development time
   b. increase development time
   c. lengthen exposure
   d. shorten exposure

10. What regulates the position of the paper against the paper stops as it is fed into the cylinder gripper?

   a. buckle control
   b. gripper
   c. pull out roller
   d. stack height

Sample Questions — Key

1. Using the standard stock cutting formula, how many 6" x 9" pieces can be cut from a 25" x 38" sheet with the least waste?

   a. 6   Wrong, but plausible
   b. 8   Wrong, but plausible
   c. 12   Wrong, but plausible
   d. 16   Correct

2. What book binding method requires hot glue?

   a. coil binding   Wrong, but plausible
   b. GBC   Wrong, but plausible
   c. perfect binding   Correct
   d. saddlestich   Wrong, but plausible

3. Forcing tiny fibers into a wet ink image to add an unusual texture is called:

   a. embossing.   Wrong, but plausible
   b. flocking.   Correct
   c. foil stamping.   Wrong, but plausible
   d. varnishing.   Wrong, but plausible

4. A misregister occurs when printing a process color job on uncoated paper with separate passes because of:

   a. low pH.   Wrong, but plausible
   b. paper stretch.   Correct
   c. too little ink.   Wrong, but plausible
   d. too much alcohol.   Wrong, but plausible

5. A form roller ink strip shows a uniform stripe all the way across the plate. This means the roller is:

   a. new.   Wrong, but plausible
   b. out of parallel.   Wrong, but plausible
   c. parallel.   Correct
   d. worn.   Wrong, but plausible

6. The arrangement of pages in a signature so that they will be in the proper sequence after the sheet is printed and folded is known as:

   a. creep.   Wrong, but plausible
   b. imposition.   Correct
   c. pagination.   Wrong, but plausible
   d. trim allowance.   Wrong, but plausible

7. What must be considered when obtaining proper trapping in multicolor printing?

   a. film emulsion   Wrong, but plausible
   b. three tone posterization   Wrong, but plausible
   c. type of paper and ink   Correct
   d. typeset composition   Wrong, but plausible

8. What method corrects problems with scratches or pinholes on negatives?

   a. knifing out   Wrong, but plausible
   b. masking with goldenrod   Wrong, but plausible
   c. opaqueing   Correct
   d. reshooting copy   Wrong, but plausible

9. What adjustment is needed if the first plate shows the copy is light?

   a. decrease development time   Wrong, but plausible
   b. increase development time   Wrong, but plausible
   c. lengthen exposure   Correct
   d. shorten exposure   Wrong, but plausible

10. What regulates the position of the paper against the paper stops as it is fed into the cylinder gripper?

   a. buckle control   Correct
   b. gripper   Wrong, but plausible
   c. pull out roller   Wrong, but plausible
   d. stack height   Wrong, but plausible

Abbreviations, Symbols and Acronyms

The following is a list of abbreviations, symbols, and acronyms used in the Advertising Design study guide and on the Advertising Design tests.

%	percent
"	inches
#	pound
bmp	bitmap image file
CMYK	cyan, magenta, yellow, and key (black)
CTP	computer to plate
DOS	Disk Operating System
DPI	dots per inch
eps	encapsulated postscript file
JDF	job definition format
lb	pound
LPI	lines per inch
mm	millimeter
PDF	portable document format
PDL	Perl Data Language
pH	Hydrogen ion concentration
pict	picture file
PMS	pantone matching system
PPF	Picture Publisher File
RAM	random access memory
RGB	red, green, blue
TIFF	tagged image file format
US	United States
USB	Universal Serial Bus
™	trademark

Test Taking Strategies

This section of the study guide contains valuable information for testing success and provides a common-sense approach for preparing for and performing well on any test.

General Testing Advice

1. Get a good night's rest the night before the test — eight hours of sleep is recommended.
2. Avoid junk food and "eat right" several days before the test.
3. Do not drink a lot or eat a large meal prior to testing.
4. Be confident in your knowledge and skills!
5. Relax and try to ignore distractions during the test.
6. Focus on the task at hand — taking the test and doing your best!
7. Listen carefully to the instructions provided by the exam proctor. If the instructions are not clear, ask for clarification.

Testing Tips

1. Read the entire question before attempting to answer it.
2. Try to answer the question before reading the choices. Then, read the choices to determine if one matches, or is similar, to your answer.
3. Do not change your answer unless you misread the question or are certain that your first answer is incorrect.
4. Answer questions you know first, so you can spend additional time on the more difficult questions.
5. Check to make sure you have answered every question before you submit the assessment for scoring — unanswered questions are marked incorrect.

NOTES

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____