

## Detailed Content Outline for the Certified Clinical Transplant Coordinator (CCTC) Examination

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	Cognitive Level			Total
	Recall	Application	Analysis	
<b>I. EVALUATION AND PREPARATION FOR TRANSPLANT</b>	25	43	8	76
<b>A. Education</b>	11	16	0	27
1. Instruct on risks, benefits, alternatives of transplantation and live donation				
2. Review indications and contraindications of transplantation and live donation				
3. Emphasize the importance of commitment for the				
a. candidate to long-term post-transplant follow-up				
b. live donor to long-term follow-up				
4. Discuss with the potential live donor and/or transplant candidate the				
a. evaluation/selection process (for example, medical, psychosocial, financial)				
b. donor organ and recipient matching and distribution process				
c. donor selection criteria (for example, expanded, Center for Disease Control high risk, Donation after Circulatory Death)				
d. expected emotional reactions				
e. transplant recipient and live donor surgical procedures				
f. potential transplant drug regimen and effects				
g. signs/symptoms of infection and organ rejection				
h. diagnostic surveillance of rejection and infection				
i. potential short-term and long-term complications				
j. roles of multi-disciplinary transplant team personnel				
k. patient and graft survival				
l. donor/recipient confidentiality				
5. Respond to educational needs of the candidate, live donor, or support system				
<b>B. Data Collection and Evaluation, and Recommendations</b>	4	6	1	11
1. Obtain and review				
a. medical and surgical history, and physical				
b. social and financial history				
c. laboratory data (for example, histocompatibility, serology)				
d. diagnostic studies (for example, radiology, pathology)				
2. Recommend consultations (for example, infectious disease, psychosocial, dietary)				
<b>C. Suitability Assessment and Determination of the Potential Transplant Candidate and Live Donor</b>	4	6	2	12
1. Identify multi-disciplinary recommendations (for example, psychosocial, social work, nutrition, pharmacology, financial)				
2. Assess donor and/or candidate suitability and adherence				
3. Present findings and make recommendations to the transplant team regarding donor and/or candidate suitability				
4. Communicate the team's recommendations to a candidate and/or live donor (for example, behavior modification, social/financial issues)				
5. Facilitate				
a. additional procedures and tests based on the team's recommendations (for example, CT scan, cholecystectomy, arteriogram)				
b. scheduling of a potential candidate for protocols as indicated (for example, PRA desensitization, incompatible ABO)				
c. recommended health maintenance (for example, colonoscopy, dental, PSA, pap smear, mammogram)				

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	Recall	Application	Analysis	
<b>D. Wait List Management</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>12</b>
1. List a candidate per OPTN policies				
2. Verify listing documentation for accuracy				
3. Maintain effective communication with candidate and local care provider				
4. Maintain listing status per OPTN policies				
a. document updated diagnostic and lab results				
b. record current sera as indicated (for example, PRA, HLA tissue typing)				
c. recognize potential problems and/or changes in eligibility criteria during the waiting period				
d. amend listing status as indicated				
5. Remove candidate or recipient from wait list per OPTN policies				
<b>E. Candidate/Deceased Donor Selection Criteria</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>8</b>
1. Follow transplant center protocol to exclude potential donor organs and candidates				
2. Present donor information (for example, demographics, anatomy, organ condition, medical and social history) to the physician				
3. Participate in the decision regarding organ acceptance/rejection				
4. Review candidate's current medical and crossmatch status with physicians				
5. Verify candidate's acceptance of a donor, including a non-standard organ (for example, expanded, Center for Disease Control high risk, Donation after Circulatory Death)				
<b>F. Donor and Candidate Preoperative Care</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>6</b>
1. Notify staff in appropriate departments (for example, preoperative area, ICU, blood bank, admissions) of a potential transplant				
2. Facilitate preoperative procedures (for example, dialysis, x-rays, final crossmatch)				
3. Facilitate				
a. instruction to the live donor and/or candidate (for example, timing/order of surgical procedures, surgical consent)				
b. appropriate clinical and research protocols				
<b>II. POST-TRANSPLANT CARE</b>	<b>18</b>	<b>33</b>	<b>23</b>	<b>74</b>
<b>A. Education</b>	<b>8</b>	<b>20</b>	<b>0</b>	<b>28</b>
1. Educate transplant recipient and support system about				
a. the transplant drug regimen and effects				
b. applicable self-monitoring data (for example, temperature, BP, weight)				
c. signs and symptoms of infection and organ rejection				
d. diagnostic surveillance of rejection and infection				
e. potential short-term and long-term complications				
f. transplant team personnel and roles				
g. available support services				
h. recipient and graft survival				
i. long-term health maintenance (for example, cancer screening, bone health, behavior modification)				
j. adherence to follow-up visits and laboratory studies				
k. reporting abnormalities to transplant center/primary care provider				
2. Educate live donor and support system about				
a. immediate postsurgical care (for example, wound care, activity limitations, pain management)				
b. reporting abnormalities to transplant center/primary care provider				
c. adherence to follow-up visits and laboratory studies				
d. follow-up of required UNOS data (for example, vital signs, laboratory results, demographics, health status)				

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	Cognitive Level			Total
	Recall	Application	Analysis	
<b>B. Postoperative Monitoring, Evaluation, and Reporting</b>	10	13	23	46
1. Evaluate abnormalities in				
a. pertinent physical examination findings				
b. laboratory values				
c. diagnostic tests				
2. Assess for complications				
a. surgical				
b. medical				
c. immunologic				
d. psychosocial issues				
e. adverse effects of the drug regimen				
f. long-term				
3. Consult with the recipient's health care provider to determine interventions for complications				
4. Facilitate				
a. additional laboratory and/or diagnostic studies				
b. follow-up clinic visits				
c. home health care				
d. consultation (for example, social work, psychologist)				
e. outpatient therapies				
f. hospital admission				
g. medication renewal (for example, prior authorization forms, medicine change for insurance reasons)				
h. sharing of information regarding the recipient (for example, primary care provider, case managers)				
5. Refer recipient for emergency evaluation and treatment				
6. Report required data to the OPTN/UNET				
7. Respond to recipient or family inquiries regarding communication with the donor's family				
8. Evaluate recipient's adherence with the treatment regimen				
9. Reinforce need for health maintenance (for example, cancer screening, behavior modification)				
10. Facilitate a return to optimal health status (for example, work, school)				
<b>Totals</b>	<b>43</b>	<b>76</b>	<b>31</b>	<b>150</b>

In addition to the content and cognitive level specifications described above, each multiple-choice item will be associated with one of the following organ specifications:

Organ Specifications	# of Items
General	75
Kidney	28
Liver	19
Heart	10
Lung	9
Kidney-pancreas	4
Pancreas	2
Intestine	2
Heart-lung	1
<b>Total</b>	<b>150</b>

\*Each new test form will include one 25-item pretest (e.g., 1A, 2A).

## Detailed Content Outline for the Certified Procurement Transplant Coordinator (CPTC) Examination

Open cells show an examination could include items from indicated cognitive levels.  
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	Items			
	Recall	Application	Analysis	Total
<b>I. DONATION PROCESS SUPPORT</b>	4	7	4	15
<b>A. Predonation Activities</b>	2	3	3	8
1. Establish clinical triggers to encourage timely referrals of potential donors from each hospital				
2. Develop collaborative relationships with key hospital staff and physicians at all levels that impact the donation process				
3. Follow up routinely on each potential referral				
4. Provide hospital-based education in collaboration with hospital development staff				
<b>B. Postauthorization Activities</b>	2	4	1	7
1. Refer to hospital profiles to identify key information in preparation for starting a case (for example, donation champions, policies)				
2. Determine the impact of other agencies on the donation process (for example, eye/tissue bank, other OPOs, medical examiner/coroner)				
3. Contribute to a formal process for timely follow-up communication (for example, post-donor case conference, unit visits, evaluation forms)				
<b>II. DONOR IDENTIFICATION</b>	11	17	8	36
<b>A. Referral Management</b>	3	3	1	7
1. Determine donor registry status				
2. Inform hospital staff of donor designation and subsequent donation process				
3. Assess family dynamics, availability of hospital support system, and family needs (for example, cultural, religious, physical, emotional, informational)				
4. Support hospital personnel throughout the donation process				
5. Record the outcome of donor referral				
<b>B. Donor Determination</b>	2	3	4	9
1. Confirm a plan of care that includes a decision to withdraw support (for example, patient, family, physician)				
2. Determine suitability for DCD				
3. Support the family throughout the donation process				
4. Confirm legal and hospital requirements for death declaration				
<b>C. Authorization</b>	6	11	3	20
1. Identify				
a. the legal next of kin in the absence of a donor designation to obtain authorization				
b. key individuals involved in authorization and end-of-life decisions (for example, family, friends, clergy, physician)				
2. Coordinate the authorization process in collaboration with hospital staff				
3. Assess a family's understanding of brain death				
4. Inform a family of donor designation and subsequent donation process				
5. Coordinate the donation request by facilitating an informed decision				
6. Document the outcome of the authorization conversation				
7. Confirm a properly executed authorization form (for example, next of kin, highest priority of authorization, directed donation) or donor disclosure form (for example, donor registry card, signed donor card)				
8. Complete the history questionnaire (for example, medical, social, behavioral, admission)				
9. Complete billing and expense information				
<b>III. DONOR MANAGEMENT</b>	16	21	23	60
<b>A. Assessment</b>	8	9	3	20
1. Initiate standing orders for baseline donor assessment				
2. Initiate the confidential donor record (for example, ABO verifications, lab data, serologies, hemodynamics, hemodilution status)				
3. Document the pre-hospital and hospital course (for example, down-time, injuries, hemodynamics, infection status)				

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	Items			
	Recall	Application	Analysis	Total
4. Perform a bedside assessment (for example, ventilator settings, vital signs, physical findings, neurologic examination)				
5. Obtain samples for				
a. tissue-typing				
b. serology				
c. laboratory values (for example, CBC, electrolytes, culture results, organ function tests)				
6. Evaluate diagnostic procedure results (for example, cardiac, pulmonary, pathology)				
7. Assess suitability of organs for donation				
<b>B. Interventions</b>	<b>8</b>	<b>12</b>	<b>20</b>	<b>40</b>
1. Initiate orders to optimize organ viability (for example, ventilator settings, infusions, pharmacological support)				
2. Optimize ongoing donor hemodynamic and pulmonary stability				
3. Treat acute and chronic clinical abnormalities				
<b>IV. ALLOCATION AND RECOVERY</b>	<b>15</b>	<b>21</b>	<b>3</b>	<b>39</b>
<b>A. Allocation</b>	<b>7</b>	<b>10</b>	<b>0</b>	<b>17</b>
1. Register a donor with OPTN				
2. Determine donor type (for example, SCD, ECD, DCD)				
3. Disclose current and past medical history and behavioral history				
4. Adhere to OPTN allocation policies				
5. Complete required documentation (for example, match-run list, Deceased Donor Registration)				
6. Coordinate OR times				
7. Arrange for transportation (for example, personnel, organs)				
8. Provide required documentation to agencies (for example, transplant centers, OPTN, tissue recovery)				
9. Place organ(s) for research and education				
<b>B. Organ Recovery and Preservation</b>	<b>8</b>	<b>11</b>	<b>3</b>	<b>22</b>
1. Ensure necessary surgical personnel and supplies are present				
2. Verify recovery surgeon credentials (for example, ACIN)				
3. Maintain donor stability during transport to the OR (for example, IV line patency, oxygenation, vital signs)				
4. Support OR and anesthesia staff (for example, management and documentation guidelines, scrub and assist during recovery)				
5. Coordinate the activity and interaction of the recovery team(s)				
6. Ensure aseptic technique is used throughout the donor's time in the OR (for example, donor prep, organ packaging, preservation)				
7. Facilitate organ preservation (for example, solutions, equipment, ice, pulsatile preservation)				
8. Document data associated with organ recovery (for example, anatomy, flush, cross-clamp, warm time, biopsies, operative note)				
9. Ensure all organs and specimens are obtained, packaged, and labeled in accordance with current OPTN policies				
10. Complete post-mortem care				
11. Notify agencies and individuals of case completion (for example, tissue agency, family, funeral home, medical examiner/coroner)				
<b>Totals</b>	<b>46</b>	<b>66</b>	<b>38</b>	<b>150</b>

## Detailed Content Outline for the Transplant Preservationist Certification Examination

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	Items			
	Recall	Application	Analysis	Total
<b>I. Professional Practice</b>	4	6	0	10
<b>A. Responsibilities</b>	2	3	0	5
1. Identify roles and responsibilities of OPO, OPO staff, and transplant center staff in organ donation				
2. Adhere to all regulatory requirements				
<b>B. Professional Conduct</b>	2	3	0	5
1. Maintain donor/recipient confidentiality throughout the entire donation process				
2. Maintain appropriate behavior in accordance with established codes of conduct				
<b>II. Organ Recovery</b>	6	15	4	25
<b>A. Preoperative Phase</b>	3	6	1	10
1. Communicate with on-site OPO staff				
2. Review the scope of the recovery process (i.e., consent, research, allocated organs)				
3. Prepare supplies to bring to the donor hospital				
4. Instruct hospital staff on their roles during the recovery process				
5. Verify donor identification and documentation				
6. Ensure that appropriate staff are on-site and readily available				
7. Arrange for supplies at the recovery hospital				
8. Ensure donor is properly positioned for the procedure				
9. Obtain necessary blood samples				
<b>B. Intraoperative Phase</b>	3	9	3	15
1. Prepare preservation solution				
2. Set up back table with supplies				
3. Prepare flush lines				
4. Communicate with recovery staff (e.g., venting, donor stability, perfusion systems, flush status)				
5. Ensure medications have been administered				
6. Prepare for cannulation and cross-clamp				
7. Establish control for flush				
8. Ensure adequate suction is available				
9. Document critical information (e.g., Heparin administration, cross-clamp, warm ischemic time, anatomy, flush characteristics)				
10. Identify abnormalities in the recovery process				
11. Coordinate the recovery of biopsies				
12. Coordinate lymph node, spleen, and vessel recovery				
<b>III. Aseptic Technique</b>	4	6	0	10
<b>A. Gowning and Gloving</b>	3	4	0	7
1. Verify that all recovery staff are properly attired				
2. Utilize proper personal protective equipment (PPE)				
3. Perform standardized gowning technique				
4. Perform standardized gloving technique				
5. Perform standardized scrub technique				
<b>B. Back Table Setup</b>	1	2	0	3
1. Create a sterile field				
2. Introduce sterile supplies onto field				
3. Decant solutions				
<b>IV. Organ Preservation</b>	8	12	0	20
<b>A. Heart, Lungs, Liver, Kidneys, Pancreas</b>	6	9	0	15
1. Anatomy				
a) Identify anatomic structures (e.g., inflow, outflow)				
b) Document aberrant findings				

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	Items			
	Recall	Application	Analysis	Total
2. Recovery Technique				
a) Identify most common cannulation sites				
b) Identify most common cross-clamp sites				
<b>B. Solutions</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>5</b>
1. Maintain temperature and sterility				
2. Regulate flow pressure				
3. Assess for stability				
<b>V. Specimen Collection</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>10</b>
<b>A. Blood</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>
1. Select proper type and quantity of blood tubes				
2. Facilitate specimen collection				
3. Label tubes with standard information				
<b>B. Lymph Nodes and Spleen</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>
1. Identify quantity of each specimen needed				
2. Facilitate specimen collection				
3. Store in preservative medium				
4. Label containers with standard information				
<b>C. Vessels</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>5</b>
1. Identify proper vessels to be recovered				
2. Facilitate vessel collection				
3. Store in preservation solution				
4. Label containers with standard information				
<b>VI. Packaging, Labeling, and Shipping</b>	<b>10</b>	<b>15</b>	<b>0</b>	<b>25</b>
<b>A. Labeling Requirements</b>	<b>5</b>	<b>7</b>	<b>0</b>	<b>12</b>
1. Prepare and verify accuracy of labels				
2. Follow standard procedures when affixing labels to organs				
3. Affix labels to shipping containers				
<b>B. Packaging Requirements</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>13</b>
1. Utilize standardized packaging materials (e.g., disposable transport boxes, coolers, hard containers)				
2. Maintain proper insulation and temperature				
3. Include required documentation				
4. Include required specimens				
5. Verify package contents				
6. Seal packaging containers				
<b>Totals</b>	<b>35</b>	<b>60</b>	<b>5</b>	<b>100</b>

## Detailed Content Outline for the Certified Clinical Transplant Nurse (CCTN)\* Examination

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	Items			Total
	Recall	Application	Analysis	
<b>I. PRETRANSPLANTATION CARE</b>	9	11	3	23
<b>A. Evaluate End-Stage Organ Failure</b>	1	1	1	3
1. History and physical assessment				
2. Vital signs and / or hemodynamic parameters				
3. Lab values				
4. Diagnostic tests				
<b>B. Monitor a Patient Awaiting Transplantation</b>	1	1	2	4
1. Kidney				
2. Liver				
3. Pancreas				
4. Heart				
5. Lung				
<b>C. Provide Education to a Patient Awaiting Transplantation</b>	2	5	0	7
1. Organ matching (e.g., HLA, living donor)				
2. Post-operative course				
3. Lines, tubes, and wires that will be inserted				
4. Incision care				
5. Pain management plan				
6. Physical activity				
7. Explanation of pre-operative tests / procedures				
8. Medications and side effects				
<b>D. Provide support for psycho-social issues</b>	3	3	0	6
1. Changes in lifestyle and body image				
2. Adherence to the plan of care				
3. Coping strategies while waiting				
4. Financial implications				
5. Support systems				
6. Cultural / religious issues				
7. End of life / palliative care				
<b>E. Prepare Pre-Transplant Patient for Surgery</b>	2	1	0	3
1. Administration of transplant-related medications as ordered				
2. Implementation of desensitization procedures				
3. Advocating for patient and family in decision making				
<b>II. CARE IMMEDIATELY POSTTRANSPLANTATION</b>	7	9	16	32
<b>A. Evaluate Objective Criteria</b>	2	2	4	8
1. Vital signs				
2. Hemodynamic monitoring				
3. Cardiac monitoring				
4. Tubes, lines, and wires				
5. Pain management				
6. Neurological status				
7. Volume status (e.g., intake / output, weight)				
<b>B. Monitor Laboratory Results</b>	2	2	4	8
1. Evidence of primary graft nonfunction				
a. kidney				
b. liver				
c. pancreas				
d. heart				
e. lung				
2. Evidence of other postoperative complications				
a. hematological (e.g., bleeding, clotting)				
b. infection				

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	Items			Total
	Recall	Application	Analysis	
<b>C. Assess for Complications, Intervene, or Evaluate Response to Intervention</b>	2	4	7	13
1. Organ specific				
a. kidney (e.g., clots, leaks)				
b. liver (e.g., thrombosis, bile duct complications, effusions)				
c. pancreas (e.g., pancreatitis, thrombosis, cystitis)				
d. heart (e.g., arrhythmias, ventricular failure, tamponade)				
e. lung (e.g., pneumothorax, effusion, stenosis)				
2. General				
a. Impaired wound healing				
b. Fluid and electrolyte imbalance				
c. Hypoglycemia and hyperglycemia				
d. Hypotension and hypertension				
e. Altered bowel function				
f. Altered nutrition				
g. Altered mobility / self-care deficit				
<b>D. Care for the Living Donor</b>	1	1	1	3
1. Pain control				
2. Psychological support				
3. Complications				
<b>III. TRANSPLANTATION MANAGEMENT</b>	8	11	10	29
<b>A. Evaluate Graft Function</b>	2	2	3	7
1. Primary graft non-function				
2. Reperfusion injury				
3. Rejection surveillance				
a. signs and symptoms				
b. diagnostic testing				
4. Post-biopsy monitoring and education				
<b>B. Recognize Signs and Symptoms of Infections</b>	1	4	0	5
1. Viral				
2. Bacterial				
3. Fungal				
4. Protozoal				
<b>C. Prevent Infections</b>	2	1	0	3
1. Implementation of infection control precautions				
2. Implication of donor / recipient viral status (e.g., CMV, EBV, HSV)				
<b>D. Monitor for Long Term Complications</b>	2	2	3	7
1. Chronic rejection				
2. Post-Transplant Lymphoproliferative Disorder (PTLD)				
3. Malignancies				
4. Metabolic disorders				
5. Renal failure				
<b>E. Provide Support for Psycho-Social Issues</b>	1	2	4	7
1. Adjustment to new health status				
2. Encouraging recipient to express feelings (e.g., donor death, finances)				
3. Educating recipient and family regarding donor correspondence				
4. Intervening for changes in mood (e.g., psychosis, anxiety, depression)				
5. Confirming engagement of support systems				
<b>IV. PHARMACOLOGICAL THERAPEUTICS</b>	4	8	14	26
<b>A. Administer Immunosuppressive Drugs</b>	2	4	7	13
1. Indications				
2. Side effects				
3. Interactions				

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	Items			Total
	Recall	Application	Analysis	
4. Therapeutic levels				
5. Effect on other lab values				
<b>B. Administer Transplant Related Non-Immunosuppressive Drugs</b>	2	4	7	13
1. Indications				
2. Side effects				
3. Interactions				
4. Therapeutic levels				
5. Effect on other lab values				
<b>V. EDUCATION AND DISCHARGE</b>	6	17	2	25
<b>A. Discharge a Recipient Safely</b>	3	8	2	13
1. Validating return-demonstration and recording of home regimen (e.g., vital signs, intake / output, glucose monitoring)				
2. Reinforcing the medication regimen				
a. dose and frequency				
b. side effects				
c. interactions (e.g., other meds, over the counter, herbals, diet)				
d. financial issues				
e. refills (e.g., generic, brand)				
3. Reinforcing discharge instructions				
a. when and who to call with urgent issues				
b. signs and symptoms of infection / rejection				
c. outpatient follow-up				
d. infection control measures				
<b>B. Ensure the Recipient Understands the Long-Term Care Plan</b>	3	9	0	12
1. Immunizations				
2. Physical activities				
3. Sexuality, pregnancy, and birth control				
4. Travel				
5. Dietary changes				
6. Emergency resources / disaster preparedness				
7. Health maintenance (e.g., cancer screening, high-risk behaviors)				
8. Follow up with primary care provider				
9. Return to work / school				
<b>VI. PROFESSIONAL RESPONSIBILITIES</b>	7	6	2	15
<b>A. Support Transplantation Research and Education</b>	3	2	0	5
1. Verifying informed consent was obtained				
2. Obtaining research data per protocol				
3. Educating new staff and nursing students				
<b>B. Act on Ethical / Legal Issues</b>	1	2	2	5
1. Maintaining donor and recipient confidentiality				
2. Addressing discrepancies between personal values and difficult candidate / recipient situations				
3. Addressing ethical / moral dilemmas				
<b>C. Articulate Trends in Organ Donation</b>	3	2	0	5
1. Advocating for living donation				
2. Donation after cardiac death				
3. High risk donors (e.g., HCV, incarceration)				
<b>Totals</b>	<b>41</b>	<b>62</b>	<b>47</b>	<b>150</b>

**Specifications by Transplant Type**

Content Domain	Total Items	Limits on Items							
		General	Kidney	Liver	Heart	Lung	Pancreas	Intestine	Multi-Organ
I. PRETRANSPLANTATION CARE	23	10-14	6-8	2-4	0-2	0-2	0-1	0-1	0-1
II. CARE IMMEDIATELY POSTTRANSPLANTATION	32	3-7	14-18	4-8	1-3	0-2	0-1	0-1	0-1
III. TRANSPLANTATION MANAGEMENT	29	8-12	10-14	2-6	0-2	0-2	0-1	0-1	0-1
IV. PHARMACOLOGICAL THERAPEUTICS	26	11-26	0-5	0-3	0-1	0-1	0-1	0-1	0-1
V. EDUCATION AND DISCHARGE	25	12-25	0-5	0-3	0-1	0-1	0-1	0-1	0-1
VI. PROFESSIONAL RESPONSIBILITIES	15	7-15	0-3	0-2	0-1	0-1	0-1	0-1	0-1
Minimums	150	51	30	8	1	0	0	0	0
Maximums	150	99	53	26	10	9	6	6	6

Effective Date: July 2014

**Specifications by Recipient Age**

Recipient	Items
Pediatric	10
Adult or General	140
Total	150

\* Each new test form will include one 25-item pretest (e.g., 1A, 2A).

**Sample Questions**

Three sample questions follow to provide you a sample of each of the different types of questions that are presented. These sample questions include one example of each item format described and one example of each of the three performance levels (recall, application, and analysis) on the examination. These sample questions are not intended to be difficult or necessarily reflect the difficulty of the examination. The correct answer is noted by an asterisk.

**Sample 1: One best response item format**

Performance Level: Recall

The primary purpose of immunosuppressive therapy is to

- A. prevent postoperative complications.
- \*B. prevent graft rejection.
- C. increase the circulating white blood cells.
- D. enhance the function of the patient’s native kidneys.

**Sample 2: One best response item format**

Performance Level: Application

Four weeks following heart transplant, a recipient undergoes an endomyocardial biopsy that shows endothelial thickening, interstitial inflammation, and intravascular coagulation. This biopsy result indicates

- A. acute cellular rejection.
- \*B. humoral rejection.
- C. normal postoperative changes.
- D. cytomegalovirus infection.

**Sample 3: Complex Multiple-Choice – Element/phrase combination item format**

Performance Level: Analysis

A kidney transplant candidate has congenital uropathy with an ileal conduit. Which of the following would be required pre-transplantation to determine the ureteral implantation site?

- I. IVP
  - II. Loopogram
  - III. KUB
  - IV. Cytometrics
- A. I and III only
  - B. I and II only
  - \*C. II and IV only
  - D. III and IV only

**Best Way to Prepare for the Examination**

***Know what is to be tested.***

The examination questions reflect standard transplant practices of a minimally competent first year transplant professional, within the scope of legally licensed practice. The examinations include topics covering kidney, liver, pancreas, heart, intestine, and lung transplantation. The examinations are not center-specific and do not reflect advanced practice professionals, i.e.: Nurse Practitioners or Physician Assistants.