

01	☐ A	☐ B	☐ C	☐ D	☐ E
02	☐ A	☐ B	☐ C	☐ D	☐ E
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31	☐ A	☐ B	☐ C	☐ D	☐ E
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36	☐ A	☐ B	☐ C	☐ D	☐ E
37	☐ A	☐ B	☐ C	☐ D	☐ E
38	☐ A	☐ B	☐ C	☐ D	☐ E
39	☐ A	☐ B	☐ C	☐ D	☐ E

PRACTICE QUESTIONS

American Board for Transplant Certification (ABTC)

AAGYZZFM

Certified Transplant Preservationist Examination

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for American Board for Transplant Certification (ABTC) AAGYZZFM , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, AAGYZZFM
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1 SINGLE CHOICE

Which perfusion strategy maintains the organ with oxygenated, warmed, blood-based solution and is intended to mimic near-physiologic conditions for assessment before transplantation?

- ☐ A Static cold storage
- ☐ B Hypothermic machine perfusion at 4–8 °C
- ☒ C Normothermic machine perfusion
- ☐ D Subzero non-frozen preservation

ANSWER C

WHY Normothermic machine perfusion circulates an oxygenated, warmed ($\approx 37^\circ\text{C}$), blood-based perfusate, allowing near-physiologic metabolism and functional assessment. Static cold storage and hypothermic machine perfusion ($4\text{--}8^\circ\text{C}$) suppress metabolism rather than restore it, and subzero preservation is research-stage.

QUESTION 2 SINGLE CHOICE

Lactobionate and raffinose are characteristic impermeants included in which preservation solution originally developed for pancreas and now widely used for abdominal organs?

- ☐ A Custodiol HTK
- ☐ B Euro-Collins (EC)
- ☒ C University of Wisconsin (UW/Viaspan)
- ☐ D Marshall's solution

ANSWER C

WHY University of Wisconsin (UW/Viaspan) solution contains lactobionate and raffinose as impermeants to reduce cellular swelling, along with glutathione, adenosine, and allopurinol. Custodiol HTK uses histidine buffer with mannitol, and Euro-Collins is a simpler glucose-based intracellular solution.

QUESTION 3

SINGLE CHOICE

A donation after circulatory death (DCD) donor is categorized as Maastricht Category III when:

- ☐ A Cardiac arrest occurs before hospital admission with unsuccessful resuscitation
- ☐ B Cardiac arrest occurs in a patient awaiting withdrawal of life-sustaining therapy
- ☒ C Cardiac arrest follows planned withdrawal of life support in the hospital
- ☐ D Cardiac arrest occurs after brain death determination

ANSWER C

WHY Maastricht Category III describes 'awaiting cardiac arrest'—planned withdrawal of life-sustaining therapy in the hospital. Category I (dead on arrival), Category II (unsuccessful resuscitation), Category IV (cardiac arrest after brain death), and Category V (e.g., euthanasia) round out the classification.

QUESTION 4

SINGLE CHOICE

Sterile preservation fluid within the organ transport container is designed to remain in contact with the organ and is acceptable to use when:

- ☐ A It has been stored at room temperature longer than 8 hours
- ☒ B It is sterile, endotoxin-tested, FDA-approved for the intended organ, and within the manufacturer's labeled expiry
- ☐ C It is a custom-formulated pharmacy admixture prepared on site
- ☐ D It shows visible hemolysis from donor blood

ANSWER B

WHY Perfusion/preservation fluid used to maintain an organ must be sterile, endotoxin-screened, FDA-cleared for the specific organ, and used within the manufacturer's labeled shelf-life and storage conditions. Disregard of these requirements risks contamination and organ loss.

QUESTION 5 SINGLE CHOICE

Diffuse birefringence (intravascular 'glittering') of flush effluent from a kidney graft shortly after reperfusion most likely indicates:

- ☐ A Adequate washout of preservation solution
- ☒ B Air embolism within the renal vasculature
- ☐ C Preformed donor-specific antibodies
- ☐ D Hyperacute antibody-mediated rejection

ANSWER B

WHY Diffuse birefringent sparkles seen in effluent during flushing reflect small air bubbles passing through the renal microvasculature; this is consistent with air embolism and is generally preventable by complete de-airing of flush lines and perfusate containers.

QUESTION 6 SINGLE CHOICE

During multi-organ recovery, the standard order of cross-clamp and perfusion to minimize warm ischemia in the thoracic organs is to:

- ☐ A Perfuse the kidneys first, then the liver, then flush the thoracic organs
- ☒ B Cross-clamp the aorta and immediately vent the suprahepatic IVC, then sequentially flush liver/kidneys while cardioplegia is administered to the heart
- ☐ C Administer pneumoplegia via the pulmonary artery only after the abdominal flush is complete
- ☐ D Avoid venting the IVC to keep the heart distended during cardioplegia delivery

ANSWER B

WHY After cross-clamp, the IVC is vented to decompress the heart and allow outflow; cardioplegia is delivered to the heart while the liver and kidneys are flushed in turn. Failing to vent the IVC impairs cardioplegia delivery and worsens warm ischemic injury to thoracic grafts.

QUESTION 7 SINGLE CHOICE

During hypothermic machine perfusion of a kidney, which parameter most directly reflects rising microvascular resistance and may signal poor graft quality?

- ☐ A Increasing renal flow at a fixed perfusion pressure
- ☐ B Decreasing intrarenal resistance ($R = \Delta P/Q$)
- ☒ C Progressive rise in vascular resistance with declining flow at a set pressure
- ☐ D Stable perfusate lactate dehydrogenase (LDH) trending downward

ANSWER C

WHY Renal vascular resistance is calculated from pressure divided by flow at a constant temperature; rising resistance with declining flow generally indicates microvascular obstruction, edema, or established ischemic injury and correlates with higher discard risk and delayed graft function.

QUESTION 8 SINGLE CHOICE

In the United States, the day-to-day governance of organ allocation policies and the operation of the national transplant waiting list are the responsibility of:

- ☐ A The Food and Drug Administration (FDA)
- ☒ B The Organ Procurement and Transplantation Network (OPTN), operated under contract with HRSA
- ☐ C The Centers for Disease Control and Prevention (CDC)
- ☐ D The College of American Pathologists (CAP)

ANSWER B

WHY The OPTN, operated under contract with the Health Resources and Services Administration (HRSA), maintains the national transplant waiting list and develops allocation policies. The FDA regulates donor screening and donor-eligibility determination for cells, tissues, and certain recovered products, while the CDC supports infection-related guidance.

QUESTION 9

SINGLE CHOICE

A kidney recovered from a standard criteria brain-dead donor is placed in static cold storage. Which temperature range is the recommended target for the storage solution surrounding the allograft during transport?

- ☒ **A** 0 to 4 °C
- ☐ **B** 10 to 15 °C
- ☐ **C** 20 to 25 °C
- ☐ **D** -20 to -10 °C

ANSWER A

WHY Static cold storage aims to reduce cellular metabolic demand by cooling the organ to approximately 0 to 4 °C. Storage temperatures below freezing risk ice crystal formation and cellular injury, while temperatures above this range provide insufficient metabolic suppression for cold ischemia.