APPLIED EXAMINATION

Objective Structured Clinical Examination
Each OSCE scenario will address one of the following skills:

A. Communications & Professionalism
   1. Informed consent (Obtain informed consent from a patient)
      The successful candidate will demonstrate the following behaviors:
      - Explains why the procedure is needed
      - Explains conduct of procedure in lay terms
      - Explains benefits and risks of procedure, including both less severe/more common and more severe/less common material risks
      - Presents alternatives if appropriate
      - Identifies all persons who will participate in the procedure
      - Elicits questions and responds appropriately in lay terms
      - Elicits affirmative consent without coercion
      - Demonstrates understanding of and concern for the situation of the patient

   2. Treatment options (Analyze a clinical scenario, formulate appropriate treatment options, and discuss these options with a patient)
      The successful candidate will demonstrate the following behaviors:
      - Discusses relevant treatment options
      - Presents risks and benefits of options
      - Elicits questions and responds appropriately in lay terms
      - Confirms final decision regarding treatment choice with the patient
      - Demonstrates understanding of and concern for the situation of the patient

   3. Peri-procedural complications (Conduct a focused evaluation of a peri-procedural complication, formulate an action plan, and discuss this plan with the patient)
      The successful candidate will demonstrate the following behaviors:
      - Elicits history relevant to the complication and current symptoms
      - Performs focused physical evaluation if appropriate
      - Discusses potential causes
      - Discusses potential outcomes
      - Presents plan for further evaluation and/or treatment if appropriate
      - Elicits questions and responds appropriately in lay terms
      - Demonstrates understanding of and concern for the situation of the patient
4. Ethical issues *(Frame and discuss appropriate plans to address common ethical dilemmas in clinical care settings)*

   The ASA Guideline for the Ethical Practice of Anesthesiology provides guidance into ethical issues facing anesthesiologists. The successful candidate will demonstrate behaviors consistent with application of the principles articulated in these guidelines, including the principles of patient autonomy, beneficence, and non-maleficence.

5. Communication with other professionals *(Effectively communicate with other healthcare team members in a professional manner)*

   The successful candidate will demonstrate the following behaviors:
   - Communicate in a clear and professional manner
   - Prioritize communication of information most relevant to patient care
   - Demonstrate understanding of the concerns and perspective of other health care professionals through active listening
   - Recognize the potential for conflict and initiate conflict resolution as appropriate

6. Practice-based Learning and Improvement *(Articulate and apply principles of patient safety and quality improvement to a clinical scenario)*

   The successful candidate will demonstrate behaviors consistent with application of the commonly-accepted elements of quality improvement processes; these elements include the following:
   - Measures current outcomes and benchmarks if appropriate
   - Devises change in practice in collaboration with stakeholders if appropriate
   - Educates and trains clinicians regarding change in practice as appropriate
   - Implements change in practice
   - Measures outcomes after change in practice
B. Technical Skills

1. Interpretation of monitors (*Identify clinical conditions associated with patterns of data presented on monitors*)

The candidate will be presented with simulated monitors which will include relevant parameters from the list below:

- Electrocardiogram
- Arterial blood pressure: non-invasive (value) or invasive (waveform and value)
- Central venous pressure – waveform and value
- Pulmonary arterial pressure – waveform and value
- Pulmonary artery occlusion pressure - value
- Cardiac output - value
- Mixed venous oxygen saturation - value
- Pulse oximetry – waveform and value
- Capnography – waveform and end tidal value
- Airway pressure – waveform and peak, PEEP values
- Airway flow - waveform
- Tidal volume – waveform and end-tidal values
- Respiratory rate, Inspiratory and Expiratory Times
- Flow-volume loops - waveform
- Temperature - value

The successful candidate will integrate this information to identify clinical conditions chosen from among the following areas:

a. Perioperative cardiac events  
b. Perioperative respiratory events  
c. Other perioperative emergencies  
d. Ventilatory modes used in normal and critically-ill patients

2. Interpretation of echocardiograms (*Interpret basic transesophageal echocardiographic images relevant to anesthesia practice*)

The successful candidate will be able to identify the view, identify relevant anatomy, make diagnostic assessments, and provide treatment recommendations for scenarios chosen from among the following areas:

a. Biventricular function and wall motion  
b. Presence or absence of an atrial septal defect  
c. Volume status assessment- hypovolemia and response to volume therapy  
d. Pulmonary emboli  
e. Air emboli  
f. Basic valvular lesions  
g. Pericardial effusions  
h. Aortic dissection

Images used in this station will include perioperative transesophageal echocardiograms chosen
from the 11 views specified in the Consensus Statement on Basic Perioperative Transesophageal Echocardiography (J Am Soc Echocardiogr 2013;26:443-56). These include:
   a. Midesophageal Four Chamber
   b. Midesophageal Two chamber
   c. Midesophageal Long Axis
   d. Midesophageal Ascending Aortic Long Axis
   e. Midesophageal Ascending Aortic Short Axis
   f. Midesophageal Aortic Valve Short Axis
   g. Midesophageal Right Ventricular Inflow-Outflow
   h. Midesophageal Bicaval
   i. Transgastric Midpapillary Short Axis
   j. Descending Aortic Short Axis
   k. Descending Aortic Long Axis

3. Application of ultrasonography (Identify relevant normal anatomy using ultrasonography)

The successful candidate will identify the relevant anatomy using an ultrasound probe with a simulated patient and may be asked to demonstrate simulated needle placement technique for scenarios chosen from among the following procedures:
   a. Vascular cannulation
      i. Internal jugular vein
      ii. Cubital fossa vessels
      iii. Radial artery
      iv. Femoral vessels
   b. Nerve blocks
      i. Interscalene
      ii. Supraclavicular
      iii. Transversus abdominis plane (TAP)
      iv. Femoral
      v. Adductor canal (saphenous)
      vi. Popliteal