C. Refractive/Oculomotor/Sensory Integrative Conditions - 125 Items (29%)

"Refractive/oculomotor/sensory integrative conditions" applies the knowledge of Basic Science to the diagnosis, treatment and management of those refractive, oculomotor and/or sensory integrative conditions that can present to the optometrist by patients seeking primary eye care. It is composed of 8 major subdivisions, the first 7 having a common 3-part format (epidemiology, history and symptoms; observation and recognition of clinical signs, and techniques and skills required; diagnosis, treatment and management, and prognosis) with the final subdivision dealing with the use of refractive correction applications to manage the conditions in this section.

1. Anomalies of Refraction: Ametropia (21-27 Items)
   C. Epidemiology, history and symptom inventory
   D. Observation and recognition of clinical signs, and techniques and skills including determination of:
      1. Interpupillary distance
      2. Visual acuity
      3. Corneal curvature and thickness
      4. Objective static and dynamic refractive status, including automatic refractive devices
      5. Standard subjective refraction procedures, including astigmatic dials, crossed cylinders, stenopac slit, fogging methods, bichrome, and accommodation balance (equalization) techniques
      6. Binocular subjective refraction procedures, including Turville Infinity Balance and vectographic (Polaroid) techniques
      7. Cycloplegic subjective and objective techniques
      8. Automatic computer assisted subjective procedures, laser refraction and variations in procedures for the various ametropias
   E. Diagnosis, treatment and management using spectacle and contact lenses (see also (8) below), and prognosis

2. Anomalies of Refraction: Presbyopia (8-10 Items)
   A. Epidemiology, history and symptom inventory
   B. Observation and recognition of clinical signs, and techniques and skills for determining the near add including:
      1. Amplitude of accommodation
      2. Crossed cylinders
      3. Trial lenses
      4. PRA/NRA
   C. Diagnosis, treatment and management with spectacle and contact lenses (see also (8) below), and prognosis

3. Anomalies of Refraction: Aphakia, Pseudophakia, and Aniseikonia (5-9 Items)
   A. Epidemiology, history and symptom inventory
   B. Observation and recognition of clinical signs and phenomena associated with aphakia and pseudophakia:
      1. Magnification
      2. Field of view
      3. Spatial distortion
      4. Convergence demands
      5. Sensitivity to glare
   Techniques and skills for determining, evaluating and/or verifying:
      1. Types and characteristics of intraocular lenses and aphakic spectacle and contact lenses
      2. Intraocular lens power
      3. Special refraction techniques
      4. Aphakic lens prescriptions
C. Observation and recognition of clinical signs, and techniques and skills associated with aniseikonia including:
   1. Detection of aniseikonia
   2. Measurement of aniseikonia

D. Diagnosis, treatment and management with spectacle and contact lenses (see also (8) below), and prognosis

4. Low Vision (10-14 Items)
   A. Epidemiology, history and symptom inventory
   B. Observation and recognition of clinical signs, and techniques and skills for determining a correction:
      1. Visual acuity
      2. Special refraction techniques
      3. Visual fields
      4. Reading skills
      5. Effects of illumination
      6. Magnification determination
      7. In-office evaluation with low vision devices
   C. Diagnosis, treatment and management of low vision patients, and prognosis
      1. Analysis and interpretation of personal, social, vocational, and psychological patient needs and factors
      2. Prescribing low vision devices (e.g., simple magnifiers, telescopes, loupes, and microscopes) with reference to magnification, full field of view, and working distance
      3. Patient education and training
      4. Roles and relationships with other disciplines
      5. Prognostic factors and follow-up care (see also (8) below)

5. Sensory Anomalies of Binocular Vision/Strabismus (16-20 Items)
   A. Epidemiology, history and symptom inventory
   B. Observation and recognition of clinical signs, and techniques and skills to test:
      1. Monocular fixation
      2. Amblyopia
      3. Sensory fusion and stereopsis
      4. Anomalous correspondence
      5. Suppression
   C. Diagnosis, treatment and management procedures, and prognosis
      1. Spectacle and contact lens applications, including prisms (see also (8) below)
      2. Vision therapy

6. Anomalies of Eye Movements (10-14 Items)
   A. Epidemiology, history and symptom inventory
   B. Observation and recognition of clinical signs, and techniques and skills to test:
      1. Comitance
      2. Deviations and measurements thereof
      3. Diplopia
      4. Motor fusion
      5. Paralytic syndromes
      6. Fixation disparity
      7. Nystagmus
   C. Diagnosis, treatment and management of eye movement anomalies, and prognosis
      1. Spectacle and contact lens applications, including prisms (see also (8) below)
      2. Vision therapy
7. Anomalies of Accommodation and Accommodative Vergence (10-14 Items)
   A. Epidemiology, history and symptom inventory
   B. Observation and recognition of clinical signs, and techniques and skills to test:
      1. Amplitude range, facility of accommodation
      2. Analysis of accommodation and vergence relationships
   C. Diagnosis, treatment and management of accommodation and accommodative vergence anomalies, and prognosis
      1. Spectacle and contact lens applications, including prisms and AC/A applications
         (see also (8) below)
      2. Vision therapy

8. Refractive Correction Applications (28-34 Items)
   A. Treatment and management of refractive/oculomotor/sensory integrative conditions using spectacle lenses:
      1. Ametropic spectacle lens prescriptions
      2. Lens problems of aberrations, weight, thickness, limits of field, ghost images, magnification, jump and displacement
      3. Frame and lens design, including types of single vision and multiple focal lenses, kinds of lens materials, base curves and cylinder forms, character and placement of multifocals, optical centers, and frame specifications.
      4. Evaluation of lenses and frames, via lensometer, lens gauge, and observation, for optical center positioning, powers, and other specifications of design
      5. Fitting and adjusting frames
      6. Patient counseling information associated with the dispensing of prescriptions for different ametropias
   B. Treatment and management of refractive/oculomotor/sensory integrative conditions using contact lenses:
      1. Lens types and materials: hard lenses; haptics; lathe-cut, molded, and spin-cast soft lenses
      2. Optics of contact lenses: curves, zones, widths and tear lens effects, sagittal depth; center and edge thickness; flex, asphericity and toric designs
      3. Basic theories and methods of fitting: lens design, specifications of orders, lens verification and evaluation, insertion and removal techniques, design of wearing schedules, fluorescein evaluation and fitting criteria
      4. Patient selection based upon history, analysis of primary care data, correlations of data, facial physiognomy, and contraindications; and management based upon education and patient handling and control
      5. Contact lens selection from presently available types and forms of lenses
      6. Care of lenses; handling; cleaning; preservatives available; disinfection methods and solutions
      7. Follow-up care; adaptation, physiologic and post-fitting complications, allergic responses, lens changes and mechanical problems
      8. Bifocal and astigmatic contact lenses; types, basis of selection and adaptation, techniques of fitting, and care for each
      9. Specially designed lenses and fitting procedures for keratoconus and irregular corneas, sports vision, diseased and traumatic corneas, cosmetic (prosthetic) use, iris color changes and color vision deficiencies
   C. Laser or surgical management of refractive conditions:
      1. Patient selection criteria
      2. Patient counseling information
      3. Peri-operative patient care