

# Certified Paraoptometric (CPOT) Certification Examination Test Specifications and Content Outline

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## **Domain 01: Clinical Principles, Testing, and Procedures** (48%; 82 operational items, 10 pretest items)

1. Record accurate case history
  - a. Chief complaint
    - i. History of present illness components
    - ii. Pain level, where appropriate
  - b. Ocular history of patient and family
  - c. Pertinent medical history of patient and immediate family
  - d. Current medications – prescription and OTC
  - e. Supplements - prescription and OTC
  - f. Allergies – medication and environmental
  - g. Social – tobacco/alcohol/substance use
  - h. Work/School duties
  - i. Hobbies/How patient uses their vision
2. Perform visual acuity testing
  - a. Types of acuity charts
    - i. Snellen
    - ii. Allen figures
    - iii. Tumbling E's
    - iv. Landolt C's
  - b. Alternative assessment of visual acuity
    - i. Counting fingers (may be referred to as finger count or finger counting)
    - ii. Hand motion
    - iii. Light perception
    - iv. No light perception
  - c. Pinhole acuity testing – how is it done and why it is useful
3. Perform and explain to patient Amsler grid testing
  - a. Understand what conditions necessitate testing
  - b. Perform test and accurately record results
  - c. Explain to patient how to perform test at home
4. Perform blood pressure measurement (manual or automated)
  - a. Know correct procedure and positioning of patient to take BP
  - b. Understand ranges of normal, high, and hypertensive crisis
  - c. Identify reasons for erroneous measurements
5. Perform stereoacuity testing
  - a. Understand common test types
    - i. Randot
    - ii. Stereofly
    - iii. Understand suppression check
6. Perform color vision assessment
  - a. Understand test types
    - i. Pseudo-Isochromatic Plates
      1. Ishihara

- 2. PIP Colorblind test
    - ii. D-15
  - b. Understand and identify types of color deficit
    - i. Genetic
      - 1. Red/Green
      - 2. Blue/Yellow
    - ii. Acquired
7. Perform ocular motility testing
  - a. Understand actions of extraocular muscles
  - b. Assess extraocular muscle movements
  - c. Understand common causes of restriction
    - i. Cranial nerve palsies
      - 1. III Oculomotor
      - 2. IV Trochlear
      - 3. VI Abducens
  - d. Identify nystagmus
    - i. Types
      - 1. Jerk
      - 2. Pendular
      - 3. Latent
    - ii. Visual implications
  - e. Test pursuits and saccades
  - f. Identify and record abnormalities/restrictions
8. Perform pupillary testing
  - a. Understand normal pupillary reaction to light and near point constriction
  - b. Understand and identify afferent pupillary defect
  - c. Properly record size, shape, reaction, any abnormalities, and grading of APD
9. Perform tonometry to measure intraocular pressure
  - a. Non-contact tonometer (NCT)
  - b. Tonopen
  - c. iCare
  - d. Goldmann applanation
  - e. Proper disinfection of tonometers
10. Perform confrontation visual field screening
  - a. Proper test distance from patient
  - b. Procedure and patient instructions
  - c. Properly record any restrictions
11. Perform autorefraction and autokeratometry
  - a. Understand reasons for erroneous results
12. Administer, record, and maintain inventory of diagnostic and therapeutic eye drops
  - a. Understand types of diagnostic eye drops and potential side effects
    - i. Mydriatics
    - ii. Cycloplegics
  - b. Understand types of prescribed drops and potential side effects
    - i. Glaucoma

- ii. Anti-infective
      - 1. Antibiotic
      - 2. Antiviral
    - iii. Dry Eye Medications
    - iv. Allergy
    - v. Steroid
    - vi. NSAID
  - c. Instill drops and properly record in patient record
- 13. Perform testing to evaluate cornea (including ultrasound pachymetry, topography)
  - a. Pachymetry as used in:
    - i. Glaucoma
    - ii. Preoperative evaluation (LASIK, PRK)
  - b. Topography as used for:
    - i. Keratoconus
    - ii. Other corneal irregularities
- 14. Perform fundus photograph and optical coherence tomography (OCT) of posterior segment
  - a. Posterior pole vs. wide field photos
  - b. OCT of optic nerve vs. macula
  - c. How to achieve quality images
  - d. Identify and mitigate image artifacts
- 15. Perform automated visual field testin)
  - a. Use appropriate trial lenses when needed
  - b. Give proper instructions to patient
  - c. 10-2
  - d. 24-2
  - e. 30-2
  - f. Superior lid field
  - g. Threshold vs. SITA Fast
  - h. Understand reliability indices and mitigation strategies
- 16. Perform subjective refraction (including manual, automated/programmed)
  - a. Understand types of refraction
    - i. Undilated
    - ii. Cycloplegic
  - b. Perform and record refraction
    - i. Distance
      - 1. Sphere power
      - 2. Jackson crossed cylinder to determine axis and cylinder power
      - 3. Binocular balance
        - a. Red-green balance
      - 4. Final sphere power
      - 5. Horizontal and vertical phorias
    - ii. Near
      - 1. Binocular crossed cylinder
      - 2. Negative relative accommodation
      - 3. Positive relative accommodation
      - 4. Determination of add power
      - 5. Horizontal and vertical phorias
- 17. Perform cover test (including cover-uncover, alternating)

- a. Cover-uncover
  - b. Alternating
  - c. Identify latent nystagmus
  - d. Accurately record findings
18. Perform dry eye testing (including tear volume/Schirmer's, tear osmolarity, meibography, tear inflammation, tear break up time, vital dye staining with fluorescein, lissamine green, rose bengal)
- a. SPEED symptom questionnaire
  - b. Tear breakup time
  - c. Vital dye staining
    - i. Fluorescein
    - ii. Lissamine green
    - iii. Rose bengal
  - d. Tear volume (Schirmer's)
  - e. Tear osmolarity
  - f. Tear inflammation
    - i. MMP-9
    - ii. Cytokines
  - g. Meibography
  - h. Meibomian gland expression
19. Perform optical coherence tomography (OCT) of anterior segment
- a. Anterior chamber angles
  - b. Pachymetry
  - c. How to achieve quality images
  - d. Identify and mitigate image artifacts
20. Perform chairside scribing
- a. Accurately record doctor's exam findings in electronic record
  - b. Accurately record doctor's diagnosis and plan
  - c. Code exam type, testing, and procedures appropriately
21. Perform dry eye treatment [including patient education of procedures, expectations, ongoing care; meibomian gland treatment, intense pulsed light (IPL) therapy]
- a. Meibomian gland treatment
  - b. Intense pulsed light therapy (IPL)
  - c. Patient education
    - i. Preparing for procedures
    - ii. What to expect during procedures
    - iii. Patient guidelines for after care
22. Assist with lacrimal dilation and irrigation, foreign body and rust ring removal (including patient education pre- and post-procedure and management options and expectations)
- a. Have necessary tools available
  - b. Patient education before and after procedures
  - c. Proper sterilization of used tools
23. Perform anterior segment photography
- a. Lids and lashes
  - b. Cornea
  - c. Conjunctiva
  - d. Iris
  - e. Lens
24. Coordinate referrals to other offices for surgery or other specialty services

25. Meibomian gland expression Administer, record, and transmit prescribed medications (E-Rx, samples, refills)
26. Identify tropias and phorias (including Hirschberg, Maddox rod, etc.)
  - a. Esophoria
  - b. Esotropia
  - c. Exophoria
  - d. Exotropia
  - e. Hypertropia
  - f. Hirschberg technique
  - g. Maddox rod technique
27. Perform near point testing (including convergence, accommodation)
  - a. Near point of convergence
  - b. Near point of accommodation
28. Perform slit lamp examination of anterior segment structures
  - a. Evaluate anterior chamber angles
29. Provide patient education
  - a. Procedures and instructions for all in-office testing
  - b. How to perform home treatments
  - c. How to administer drops and oral medications
  - d. Expectations prior to and following surgical procedures
    - i. Cataract removal
    - ii. YAG laser for capsular opacity (secondary cataract)
    - iii. Refractive correction
    - iv. SLT laser for glaucoma
    - v. Minimally invasive glaucoma procedures
    - vi. Laser repair of retinal tears
    - vii. Retinal detachment surgeries involving vitrectomy
30. Assist with myopia management (including patient education about management options such as low dose atropine, multifocal contact lenses, ortho K)
  - a. Patient education about options
    - i. Low dose atropine
    - ii. Multifocal contact lenses
    - iii. Ortho-K contact lenses

Tasks in Domain 01 draw upon the following competencies: C02, C03, C04, C05, C06, C07, C08, C09, C11, C15

**Domain 02: Ophthalmic Optics and Dispensing** (12.5%; 21 operational items, 2 pretest items)

1. Recognize and use components of eyeglass prescriptions
  - a. Sph/Cyl/Axis/Add power
  - b. Pupillary distance
  - c. Optical center/Seg/Fitting cross height
  - d. Transposition to minus or plus cylinder format
  - e. Conversion of distance prescription to
    - i. Near power

- ii. Intermediate power
- f. Slab off
- 2. Perform lensometry (automated and manual) to verify prescription (including prism)
  - a. All lens types: single vision, progressive, bifocal, trifocal, anti-fatigue, ~~prism~~
    - i. Expand range of lensometer when needed for prism verification
  - b. Identify errors outside ANSI standards for all parameters
- 3. Measure base curve with lens clock
- 4. Measure C-size, frame boxing measurements (including A, B, DBL, ED, temple)
- 5. Perform interpupillary distance measurement at distance, intermediate, and near
- 6. Measure segment/optical center/fitting cross heights, frame fit (including pantoscopic tilt, vertex distance, face form)
  - a. Standard placement for each type of multifocal (progressive, bifocal, trifocal)
  - b. Adult vs. children's measurements
- 7. Educate and assist patient in selecting eyewear (including frames, specialty considerations, lens materials and coatings)
  - a. Understand principles of frame selection based on style, shape, type of spectacle prescription
  - b. Understand different types of lens materials (polycarbonate, plastic, etc.)
  - c. Understand lens features such as anti-reflective coatings, adaptive lenses, blue light protection
- 8. Use digital dispensing technology for as worn measurements
- 9. Place an order for frames and eyeglass prescriptions, including relevant components
- 10. Dispense/adjust/repair eyewear
- 11. Troubleshoot patients' problems with eyewear
  - a. Ask appropriate questions to discover root issue
    - i. How they feel on the nose, ears, temples
    - ii. Blurred or distorted vision
    - iii. What improves vision (tilting or turning head a certain way)
  - b. Understand common reasons for non-adaptation to eyewear
    - i. Frame fit
    - ii. Induced prism
    - iii. Lens material
    - iv. Lens design (progressive, digital)
    - v. Base curve

Tasks in Domain 02 draw upon the following competencies: C01, C02, C09, C13, C15

**Domain 03: Contact Lenses** (14.4%; 24 operational items, 3 pretest items)

- 1. Use components of contact lens prescriptions
  - a. Convert spectacle prescription to contact lens prescription
    - i. Using vertex distance as appropriate
    - ii. Using spherical equivalent as appropriate
    - iii. Determine add power for monovision or multifocal contact lenses
- 2. Order diagnostic contact lenses
  - a. For individual patients
  - b. For in-office trial lens sets

3. Determine/verify gas permeable contact lens measurements (using radiuscope, lensometer, reticle, calipers)
  - a. Base curve
  - b. Power
  - c. Diameter
    - i. Overall
    - ii. Optic zone
    - iii. Peripheral curves
  - d. Thickness
  - e. Edge quality
4. Place an order for a patient's contact lens prescription, including relevant components
5. Educate patients concerning contact lens options (including soft, gas permeable, hybrid, scleral)
  - a. Understand types of available contact lenses
    - i. Soft
      1. Daily disposable
      2. Frequent replacement (2-week, 3-month, extended wear)
      3. Daytime vs overnight wear
      4. Toric
      5. Multifocal
        - a. For presbyopia
        - b. For myopia management
      6. Combined toric/multifocal
    - ii. Gas permeable
      1. Single vision
      2. Toric and bitoric
      3. Bitoric and multifocal
      4. Ortho K
        - a. Vision correction
        - b. Myopia management
    - iii. Hybrid
    - iv. Scleral
      1. Single vision
      2. Multifocal
6. Educate patient on contact lens care
  - a. Informed consent
  - b. Selection of care system
    - i. Soft lenses
      1. Multipurpose
      2. Peroxide-based
    - ii. Gas permeable and scleral lenses
      1. Cleaning and conditioning
      2. Multipurpose
      3. Peroxide-based
      4. HydraPEG-appropriate care
  - c. Educate patients on contact lens care and handling
    1. Hygiene
    2. Wearing time
    3. Replacement schedule
    4. Cleaning/disinfection
    5. Symptoms requiring removal of lenses

6. Techniques to remove a dislodged lens
7. Follow up appointments
7. Insert and remove specialty contact lenses (soft, gas permeable, hybrid, scleral)
8. Train new contact lens patients in insertion and removal techniques (of soft, gas permeable, hybrid, scleral lenses)
  - a. Hygiene/handwashing
  - b. Insertion/removal methods
9. Screen patients on their experience with contact lenses (including comfort, vision, adherence to care guidelines)
10. Perform horizontal visible iris diameter (HVID) measurement
11. Perform slit lamp evaluation of contact lens fit
  - a. Centration
  - b. Movement
  - c. Toric orientation and stability
12. Perform anterior segment optical coherence tomography (OCT) over scleral contacts to assess fit
  - a. Central clearance
  - b. Limbal clearance
  - c. Edge lift or compression
  - d. Ask appropriate questions about comfort and vision
  - e. Verify compliance with cleaning/disposal/wearing time
13. Perform progress checks on contact lens patients (including evaluating fit with slit lamp of soft, gas permeable, hybrid, scleral lenses)
  - a. Evaluate fit with slit lamp
  - b. Evaluate condition of lens surface
14. Troubleshoot contact lens problems
  - a. Vision-related
  - b. Comfort-related
  - c. Redness, pain, and photophobia
  - d. Symptoms of overwear or poor care

Tasks in Domain 03 draw upon the following competencies: C02, C12

**Domain 04: Professional Issues** (17.6%; 30 operational items, 3 pretest items)

1. Resolve patient complaints and concerns
  - a. Listen to patient, gather & document all pertinent details, document conversation
  - b. Convey information to manager or doctor for assistance as needed
2. Perform telephone triage
  - a. Determine patient needs
    - i. Emergency visit
      1. Understand symptoms necessitating an emergency visit
    - ii. Non-urgent visit
      1. Understand non-urgent symptoms and schedule accordingly
    - iii. Routine exam
3. Document incoming calls appropriately and take messages when necessary
  - a. Transfer and/or document incoming calls appropriately



- i. Patients
  - ii. Other healthcare providers
  - iii. Vendors/Sale representatives
  - iv. Take and deliver accurate messages to appropriate parties
  - v. Record details in electronic health record as appropriate
4. Manage patient appointments (including scheduling/rescheduling, sending reminders/confirmations, recalls, referrals/co-management)
5. Take inventory and reorder as needed
  - a. Miscellaneous office supplies
  - b. Frames
  - c. Contact lens trials & supplies
  - d. OTC sales items
  - e. Ophthalmic & medical supplies
  - f. Exam room supplies
6. Comply with federal, state, and local regulations (including HIPAA, OSHA, and CMS guidelines)
7. Explain to patients the difference between vision plans and medical insurance and reasons for billing each
8. Perform medical billing and coding (including filing claims)
  - a. Evaluate for accuracy
    - i. Diagnostic codes
    - ii. Procedure codes
    - iii. Any necessary modifiers
  - b. Periodic internal audits
9. Maintain accounts receivable/payable
10. Hire, recruit, and terminate employees

Tasks in Domain 04 draw upon the following competencies: C08, C09, C10, C14, C15, C16, C17, C18, C19, C20, C21, C22

**Domain 05: Science of the Eye** (7.5%; 13 operational items, 2 pretest items)

1. Identify the components and function of the uvea (including ciliary body)
  - a. Iris
  - b. Ciliary body
    - i. Function
      1. Aqueous production
      2. Accommodation
  - c. Choroid
    - i. Function
    - ii. Nevi
    - iii. Neovascularization
2. Describe surgical corrections of refractive error
  - a. LASIK
  - b. PRK
  - c. Presbyopic lens exchange
  - d. Refractive correction during cataract surgery

- i. Monovision
  - ii. Toric intraocular lenses
  - iii. Multifocal intraocular lenses
- 3. Describe amblyopia and pleoptics
  - a. Definition of amblyopia
  - b. Refractive
    - i. Anisometropic
    - ii. Isoametropic
  - c. Strabismic forms
  - d. Deprivational forms
  - e. Patching treatment and accompanying exercises to enhance patching
- 4. Describe treatments for strabismus (including surgical procedures)
  - a. Spectacle correction of high hyperopia
  - b. Spectacle prism
  - c. Strabismus surgery
- 5. Compare and contrast the types of treatments for corneal dystrophies, at appropriate level
  - a. Fuch's (endothelial) dystrophy
    - i. Symptoms
    - ii. Slit lamp signs
    - iii. Treatments
      - 1. Topical agents such as Muro-128
      - 2. DSAEK endothelial transplant
      - 3. Penetrating keratoplasty
- 6. Describe treatment and surgical options for cataracts, at appropriate level
  - a. Preoperative preparation
    - i. Antibiotic drops
    - ii. Lid scrubs for blepharitis
    - iii. Discontinuation of contact lens wear
  - b. Basic cataract surgery procedure
    - i. Lens removal
    - ii. Intraocular implant insertion
    - iii. Restrictions after surgery
    - iv. Preventive treatments after surgery
  - c. Refractive correction options
    - i. Distance or near
    - ii. Monovision
    - iii. Toric
    - iv. Multifocal
- 7. Describe treatments for retinal procedures at an appropriate level (including laser, injections, scleral buckles, vitrectomy, cryo therapy, pneumatic retinopexy)
  - a. Laser treatment of tears
  - b. Cryotherapy treatment of tears
  - c. Vitrectomy
  - d. Pneumatic retinopexy
  - e. Scleral buckle
- 8. Describe surgical treatments for glaucoma at an appropriate level
  - a. Laser treatment such as SLT
  - b. Minimally-invasive procedures (MIGS) such as iStent and OMNI

- c. Trabeculectomy
- 9. Describe purpose of red cap test

Tasks in Domain 05 draw upon the following competency: C03

### **CPOT Competencies**

- C01 Ophthalmic optics (including refractive status of the eye and binocularity)
- C02 Basic math and algebra (as they relate to clinical applications)
- C03 Basic medical terminology and abbreviations
- C04 Mitigating quality issues to improve results from imaging, testing, and procedures
- C05 Required documentation for proper recordkeeping
- C06 Eyecare instrumentation
- C07 Infection control
- C08 Telephone etiquette and triage
- C09 Patient confidentiality
- C10 Diversity in the workplace/cultural competency
- C11 Proper storage of tools and supplies
- C12 Contact lens care
- C13 Considerations in proper frame styling and fitting
- C14 Office emergency protocols
- C15 Building good rapport with patients/chairside manner
- C16 Medical/healthcare/workplace ethics
- C17 Patient and staff rights
- C18 Principles of team management
- C19 Principles of conflict resolution
- C20 Basic concepts related to claims/billing
- C21 Human resource management
- C22 Labor relations and the law