

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI
SCHOOL OF HEALTH TECHNOLOGY
DEPARTMENT OF OPTOMETRY

RAIN SEMESTER EXAMINATION 2014/2015 ACADEMIC SESSION

COURSE CODE: OPT 510

CREDIT: 3 units

COURSE TITLE: VISUAL ANALYSIS

TIME ALLOWED: 3 hrs

Instruction: Answer 5 questions in total. At least two questions from each section on a separate answer booklet.

SECTION A

Use the patient data below to answer questions 1 and 2a and 2b

No. 3: 2 eso; No. 8: 5 exo; No. 13a: 2 exo; No. 13b: 7 exo; No. 9&10: 10, 21/13;

No. 11: X/9/6; No. 16a & b: 6/13/8; No. 17 a & b: 5/12/7; No. 19: 4.00 D; IPD: 66/62

No. 4: +1.25DS/-0.75DC \times 180°; No. 7: +1.25DS/-0.50DC \times 180°

1. a) Represent these findings in a graph (10 marks)
- b) Show the zone of single binocular vision (3 marks)
- c) Show the zone of single clear binocular vision (3 marks)
- d) Obtain the AC/A ratio from the graph (4 marks)
2. a) Calculate the prism correction needed to satisfy Sheard's criterion at 40 cm (5 marks)
- b) If the gradient AC/A ratio is 3/1, how much spherical alteration is needed according to Sheard's criterion and what will be the new prescription (5 marks)
- c) Differentiate
 - (i) Ill-sustained accommodation vs Insufficiency of accommodation (5 marks)
 - (ii) Inertia of accommodation vs Infacility of accommodation (5 marks)
3. Discuss the possible lateral imbalances for a patient who is:
 - a) Orthophoric at far (10 marks)
 - b) Esophoric at far (10 marks)

SECTION B

4. Give 5 possibilities in each of the following instances, with explanations:
 - a) A patient with near normal entry visual acuity at both far and near (10 marks)
 - b) A patient with reduced entry visual acuity at both far and near (10 marks)
5. Discuss the possibilities where there is:
 - a) Improvement in visual acuity through pinhole (10 marks)
 - b) No improvement or reduction in visual acuity through pinhole (10 marks)

6. Use your own specific examples to;
- a) Explain how you would use range of accommodation to adjust the fused cross cylinder or Add of your presbyopic patient (10 marks)
 - b) i) What would be the response of your patient when presented with the duochrome chart at near (based on the example you have given) (5 marks)
 - ii) Explain the response given by the patient (5 marks)

7. A presbyopic patient has the following findings:

Subjective refraction: -3.00DS
 Fused Cross cylinder: -1.00DS
 PRA: -1.50D
 NRA: +2.00D

- a) Write out the initial bifocal prescription (5 marks)
- b) Establish the phoropter readings that produced the PRA and NRA result (5 marks)
- c) What would be the response of the patient when presented with the duochrome chart at near? Explain the response (5 marks)
- d) Adjust the patient's prescription and write out the adjusted bifocal prescription (5 marks)

GOOD LUCK

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 1.50
 2.50
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5)
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