

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

2014/2015 RAIN SEMESTER EXAMINATION

Date: 25/08/2015

Course Title: DISPENSING OPTICS 11 Course Code: OPT 506 (2 units) Time: 2hrs

INSTRUCTION: i. Answer in all four questions in Section A and B, at least two questions from each section on a separate answer booklet; ii. SECTION C is compulsory and to be submitted after 25 minutes; also in a separate booklet.

SECTION A

1. Describe

- (i) The principle behind Progressive Addition lenses (9 Marks)
- (ii) The two major types of Progressive Addition Design (9 Marks)
- (iii) How a Patient will be able to carry out his daily activities using a Varifocal (7 Marks)

2. (i) Calculate the vertical imbalance for a patient with the prescription -

OD + 6.00/ -1.00 x 180

OS - 5.00/ -1.00 x 090 Add + 2.00

if he reads 2cm below the optical centre of his lenses (6 Marks)

(ii) What is the image jump of a +4.00D Kryptok Addition lens which is 55mm in diameter? (5 Marks)

(iii) Explain these terms and how these problems can be eliminated
a. Vertical imbalance (9 Marks)
b. Prismatic imbalance at the reading center. (5 Marks)

3. Explain

- (i) The optical cross method of centering
(a) A spherical lens. (5 Marks)
- (ii) The centering procedure of a cylindrical lens using a lensometer (7 Marks)
- (iii) The procedure for decentering
(a) A spherical lens (8 Marks)
(b) A prism. (5 Marks)

SECTION B

- 1.
- a. With aid of a diagram, describe the various parts of a frame - (5marks)
 - b. Describe how frame dimensions can be measured - (10marks)
 - c. What are the advantages and disadvantages of Titanium and zyl (zylonite) frames? - (10marks)

- 2.
- a. Describe different methods used to place a frame in standard alignment (10marks)
 - b. How would you handle a patient who is unhappy with his vision through his newly dispensed pair of glasses? - (10 marks)
 - c. How would you guide a patient in frame selection? - (10marks)

3. Describe the following:
- a. Dispensing and individual adjustment of a frame
 - b. Temple Bends
 - c. Nose-pad adjustments
 - d. Leveling a frame
 - e. Secondary individual adjustments

(5 marks each)

500 level Rain Semester 2015

OPT 506. Lab Practical

Answer all questions.

25 Mins

Total 10pts

SECTION C

1. Give the two most outstanding benefits of the AR Lenses.
2. Which of the following uncoated lenses will transmit the least light?
 - (a) CR-39
 - (b) Polycarbonate
 - (c) High index 1.60
 - (d) High index 1.66
3. Which is the primary reason for which AR coatings are usually recommended for aspheric lenses.
 - (a) Some Aspheric lenses are made in high index.
 - (b) Aspheric lenses are more expensive.
 - (c) Aspheric flatter back curves reflect more light into the wearer's eyes.
 - (d) Aspheric patients are more vain.
4. The "A" measurement of a frame plus the bridge size is referred to as what?
5. What is the name of the instrument used for measuring vertex distance?
6. Draw and label a progressive lens.
7. Give the name of the equipment that offers greater accuracy in PD measurement through corneal reflection.
8. Write about 3 types of bifocals saying the advantages and disadvantages.
9. Write all you know about the polarized lens.
10. Write all you know about the photochromic lens.

(1 Mark Each)