[LJ 0816] AUGUST 2016 **Sub. Code: 1511**

DIPLOMA IN OPTOMETRY TECHNOLOGY
FIRST YEAR
PAPER I – OPTOMETRIC OPTICS, CONTACT LENSES, LOW VISION AIDS

Q.P. Code: 841511

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on: (3 x 10 = 30)

1. A patient has a spectacle Rx: OD: -4.00DS /-2.50DC x 90, OS: -4.50DS. K readings are: OD K1: 47.00D @ 180 (7.18mm), K2: 44.00D @ 90 (7.67mm) & OS K1: 46.00D @ 180 (7.34mm), K2: 44.50D @ 90(7.58mm). HVID is 11.5mm. Answer the following:
    a) What contact lens options would you give for each eye? Why?
    b) As per your lens choice above, calculate the trial contact lens base curve, total diameter and power for right eye, considering a vertex distance of 12mm.
2. Non-optical low vision devices.
3. What is IPD? Explain the procedure for measuring distance, near and monocular PDs.

II. Write notes on: (10 x 5 = 50)

1. Discuss about the various spectacle lens materials.
2. Boxing system.
3. Principle of Anti-reflection coatings & uses.
4. Bifocal lens segment types.
5. Explain about the uses, advantages and disadvantages of various types of Magnifiers.
6. Types of telescopes and their uses as low vision aids.
7. Categories of visual impairment.
8. Types of contact lens deposits. Name few ocular complications resulting from deposits.
9. Draw diagram and explain about contact lens design parameters.
10. Contraindications for contact lens wear.

III. Short answers on: (10 x 2 = 20)

1. Advantages & disadvantages of progressive lenses.
2. Aspherical lenses.
3. Spectacle lenses and frames for children.
4. Define extended wear contact lens. Give examples of lens materials suitable as EW.
5. Name the contact lens options available for keratoconus patients.
6. HEMA.
7. CLARE.
8. Effect of low vision on an individual.
9. Angular magnification.
10. Define blindness.

****