

NATIONAL DEVELOPMENT AGENCY, PROMOTED BY GOVERNMENT OF INDIA CENTRAL BOARD OF EXAMINATIONS

BSS NATIONAL VOCATIONAL EDUCATION MISSION

AHE016-BSS DIPLOMA IN OPTOMETRY

TWO YEARS (FIRST YEAR) EXAMINATION NOV-2015

AHE016-01 COMMUNICATIVE ENGLISH AND COMPUTER FUNDAMENTALS

TIME: 3 Hours	Marks: 100
 INSTRUCTIONS * 33 questions are there in total * Write answers to each question in proportion to the mark allotted * During the first 15 minutes read the questions carefully 	
I. FILL IN THE BLANKS	1 x 10 = 10
 I 50 kms everyday The tiger A deer The cat is the wall. 'WH' type word I read Indian express Hybrid computer is used for Mouse is an device She ran the road In Ms Excel individual file is known as	
 II. DEFINE THE FOLLOWING 1) Define interjection? 2) Define definite Article? 3) What is meant by plural number? Example:- 4) Windows 5) Explain any five options for the format 'menu' 6) Enter 7) Computer 8) Decimal 9) Insert column and insert chart 10) Explain any five options for the format 'menu' 	2 x 10 = 20

- 1) Explain few sentences using "behind, beneath"?
- 2) Write any two types of job application?
- 3) Windows 98
- 4) Explain Arithmetic logic unit
- 5) Edit
- 6) Print preview
- 7) Title bar
- 8) Substance abuse

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) Write a letter to your father asking permission join the N.C.C?
- 2) Write a letter to a sports company ordering some sports goods?
- 3) Briefly explain storage unit
- 4) Write all Internal Commands in dos and explain it.
- 5) Explain 'slide presentation creating' in MS Power Point

5 x 5 = 25



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AHE016-BSS DIPLOMA IN OPTOMETRY

TWO YEARS (FIRST YEAR) EXAMINATION NOV-2015

AHE016-02 ANATOMY & PHYSIOLOGY OF EYE

TIME: 3 Hours

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

- 1) Natural protective mechanisms of conjunctiva include _____
- 2) Vitreous chamber contains a transparent jelly like structure called
- 3) Normal intra ocular pressure varies from tomm of mercury
- 4) separates the corneal epithelium from the substantia propria
- 5) regulates the amount of light entering the eyes.
- 6) Lacrimal gland secretes
- 7) Choroid is
- 8) Night vision is by
- 9) Closure of the Eyelid is by the action of......
- 10)gland is the Tardal gland

II. DEFINE THE FOLLOWING

- 1) Nerve supply of conjunctiva
- 2) Anterior & posterior attachment of vitreous
- 3) Parts of ciliary body
- 4) Types of color blindness
- 5) Loss of accommodation leads to
- 6) Lateral rectus, Medial rectus muscle..... eye ball
- 7) Lagophthalmos , ptosis is
- 8) Retina is developed from Mesoderm, Surface ectoderm, Neural ectoderm
- 9) Action of Medial Rectus muscle is Adduction, Abduction, Elevation
- 10) Choroid is part of Choroid is part of

Marks: 100

- 1) The eye at birth
- 2) Structure of conjunctiva
- 3) Function of Cornea
- 4) Blood supply and nerve supply of the conjunctiva
- 5) Cornea
- 6) Accommodation
- 7) Lacrimal Drainage system
- 8) Intraocular muscles

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

5 x 5 = 25

- 1) Nerve supply of the eye
- 2) Structure & nutrition of the corne
- 3) Lacrimal apparatus and describe about lacrimal gland
- 4) Flow of aqueous with diagram
- 5) Cross sections of the eye with figure and function of the parts



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AHE016-BSS DIPLOMA IN OPTOMETRY

TWO YEARS (FIRST YEAR) EXAMINATION NOV-2015

AHE016-03 BASIC MICROBIOLOGY & PHARMACOLOGY & CLINICAL PATHOLOGY

TIME: 3 Hours

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

- 1) The ______ injection diffuses throughout the entire orbit.
- 2) The most important factor in efficiency of the drug is its power to Penetrate in to ______
- 3) Mycobacterium is _____ bacilli
- 4) Candia is _____
- 5) When the infection causes disease in a particular organ or site
- 6) bacilli cause leprosy
- 7) causes botulism, a severe form of food poisoning
- 8) Bacteria are organism
- 9) Autoclave uses for sterilisation
- 10) Procedures used to free the surface of an article or medium is known as

II. DEFINE THE FOLLOWING

- 1) Intraocular injection
- 2) Amphotericin B?
- 3) DNA and RMA viruses
- 4) Toxoplasmosis
- 5) Infection
- 6) Fungi
- 7) are examples of virusus causing eye infection
- 8)are media used to grow bacteria for its identification
- 9) Paralysis of Ciliary muscle is caused by Mydriatics, Cycloplegics, Miotics
- 10) Dendritic Keratitis is typically caused by Herpes Zoster virus, Herpes simplex virus, Adenovirus

 $2 \times 10 = 20$

Marks: 100

- 1) Diamox (Aatazolamide)
- 2) Different routes of administration of medicine
- 3) Factors affecting growth of bacteria
- 4) Methods of transmission of injection
- 5) Types of drugs
- 6) Care of medicine cabinet and drugs
- 7) Midriatic and cycloplegic drugs
- 8) Atropine

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) Explain Routes of administration
- 2) Explain Anti-viral Drugs
- 3) Topical anesthesia
- 4) Anti glaucoma drugs
- 5) Uses of local anesthetic in Optholmic practice

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AHE016-BSS DIPLOMA IN OPTOMETRY

TWO YEARS (FIRST YEAR) EXAMINATION NOV-2015

AHE016-04 PHYSIOLOGICAL OPTICS & PRINCIPLES OF REFRACTION

TIME: 3 Hours	Marks: 100
 INSTRUCTIONS * 33 questions are there in total * Write answers to each question in proportion to the mark allotted * During the first 15 minutes read the questions carefully 	
I. FILL IN THE BLANKS	1 x 10 = 10
 Blurring of vision for near work occurs in Astigmatism is a type of Optical condition of the eye in which the refraction of the two eyes differs is Prisms are used in iphthalmology to measure and to treat Biconvex lens is used in all EXCEPT If axial length of a eye ball in 20mm the condition in called Velocity of light is Image formed by concave lenses are Trachoma is caused by Normal I.O.P is 	
II. DEFINE THE FOLLOWING	2 x 10 = 20
 Prism kept base to base and apex to apex forms If the object in at principal focus and infinity of a convex lens image will be at 	
 3) Myopic astigmatism types 4) Two types of convergence 5) Uses of prisms 	
 6) Iritis typically causes Ciliary congestion, Conjunctival congestion, Diffuse congestion 7) Proptosis is Retraction of the eyeball, Drooping of the upper eyelid Protrusion of the eyeball 8) Trichiasis is Rolling in of eyelid margin, Rolling out, of lid margin, Distortion of eyelashes 9) Keratoplasty is	

10) Corneal vascularisation is called.....

- 1) Pathway of pupillary light reflex
- 2) Anterior chamber depth and content
- 3) Blind Spot
- 4) The Normal field of vision
- 5) The Normal schematic eye
- 6) Optical condition or aphakia
- 7) Mydriatics in Refraction
- 8) Light theory

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

5 x 5 = 25

- 1) Objective Test (Retinoscopy)
- 2) Congenital Dacryocystitis
- 3) Fungal corneal ulcer
- 4) Infammatory conditions of glands of lid margin
- 5) Management of acute iridocyclitiS

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AHE016-BSS DIPLOMA IN OPTOMETRY

TWO YEARS (FIRST YEAR) EXAMINATION NOV-2015

AHE016-05 OPTOMETRIC INSTRUMENTS

TIME: 3 Hours

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

- 1) Von Graefe's knife is used for making ______ surgery.
- 2) Paracentesis needle is used pre cases of non healing corneal ulcer of _____&hypopyon associated with raise IOP.
- 3) Eduncleation scissors used to cut ______ during enucleation surgery.
- 4) Chalazion scoop –scoop out the material inside the _____
- 5) ______ used to support lid and protect eye ball.
- 6) Lensometer is used to find
- 7) Visual acuity is tested by
- 8) Maddox rod is used to find
- 9) Friend test is to find for distant vision
- 10) To remove foreign body is used

II. DEFINE THE FOLLOWING

- 1) Snellen's Principal
- 2) Gonioscope is used to find
- 3) Prisms are used in
- 4) Two types of Retinoscopy.....
- 5) Example of simple HM astigmatism and compound H.M astigmatism
- 6) Two types of Tonometer
- 7) Synoptophore is used
- 8) Cataract can occur as a complication of Conjunctivitis, Uveitis, Blepharitis
- 9) Morgagnian cataract is.....
- 10) Dislocation of lens occurs in.....



9

 $1 \times 10 = 10$

Marks: 100

- 1) Trial Frames
- 2) Synaptophore
- 3) A-Scan
- 4) B-Scan
- 5) Hess Screen
- 6) Lensometer
- 7) Perimeter
- 8) Bjerrums screen

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) Explain various types of retinoscope (51, 52)
- 2) Kerato meter
- 3) Retinoscopy procedure
- 4) Construction snellens chart
- 5) Low vision aids

5 x 5 = 25



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TWO YEARS (FINAL YEAR) EXAMINATION NOV-2015

AHE016-11 CLINICAL OPTHALMOLOGY

TIME: 3 Hours Marks: 100 INSTRUCTIONS * 33 questions are there in total * Write answers to each question in proportion to the mark allotted * During the first 15 minutes read the questions carefully **I. FILL IN THE BLANKS** $1 \times 10 = 10$ The earliest feature of anterior uveitis includes ______ 2) Black spots floating in front of eyes is a symptom of ____ 3) Acute dacryoadenitis is an acute inflammation of the gland 4) Chronic inflammatory condition of the margin of the lids is known as 5) Formation of the opacities in the crystalline lens of the eye is known as 6) Cornes is mainly affected by viruses 7) Conjunctivitis associated with subconjunctival haemorrhages known as 8) Vitreous haemorrhage is the haemorrhage in the 9) Abnormal protrusion of the eye ball is known as 10) Colour vision is tested by......chart **II. DEFINE THE FOLLOWING** $2 \times 10 = 20$ 1) What is Photoretinitis 2) What is Patnogenesis of central Retinal artery occlusion 3) Treatment of toxemia of Pregnancy 4) Cataract 5) Exophthalmos 6) Retinal vasculitis 7) Outermost layer of Cornea is Bowman's Membrane, Decemet's Membrane, Epithelium 8) Choroid is part of Retina, Uvea, Sclera 9) KF ring is seen on..... 10) Iridodoness is

- 1) Etiology and treatment of scleritis
- 2) Glaucoma
- 3) Cortical cataract
- 4) Retinitis
- 5) Ophthalmia neonatorum
- 6) Stye
- 7) Surgical management of Pterygium
- 8) Anaesthesia for ocular surgery

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

5 x 5 = 25

- 1) All about Tobacco Amblyopia
- 2) Comparative study of intra and extracapsular cataract extractions
- 3) Common Topical anti-glaucoma Drugs
- 4) Squint
- 5) Trachoma



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TWO YEARS (FINAL YEAR) EXAMINATION NOV-2015

AHE016-12 PRACTICE OF REFRACTION

TIME: 3 Hours

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

- 1) Retinoscopy is done in a dark room at a distance of ______
- 2) Drug of choice for papillary dilatation in children is _____
- 3) Incident parallel rays come to a focus posterior to the light sensitive layer of retina in _____

- 4) The type of lens used for correction of regular astigmatism includes ______
- 5) Diplopia is a characteristic feature of _____
- 6) In Worth's four dot test the patient has diplopia if he sees ____
- 7) Total ophthalmoplegia is a condition in which there is paralysisw of ______
- 8) In concomitant squint _____
- 9) Treatment of esophoria includes _____
- 10) Alternating divergent squint is a form of ______

II. DEFINE THE FOLLOWING

- 1) Prism
- 2) Postmyariatic Test (PMT)
- 3) Objective Methods to determination of Refraction
- 4) Symptoms & Treatment of Prregular Astigmatism
- 5) Congenital (Developmental) myopia
- 6) Clear Lens extraction & PC IOL
- 7) Etiology of Bilateral amblyopia
- 8) Pupillary reactions (reflexes) direct & indirect
- 9) Principle & Method of radial keratotomy
- 10) Adtantages of PRK

 $2 \times 10 = 20$

Marks: 100

- 1) Cylindrical Lens
- 2) Presbyopia
- 3) Advantage & Disadvantages of Spectacles for treatment of Aphakia
- 4) Astigmatism
- 5) Etiology of Ametropia
- 6) Lasik
- 7) Mixed astigmatism
- 8) Cycloplegic refraction

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) Principal, Types, Indications, disadvantages & complications of contact lenses
- 2) Retinoscopy
- 3) Hypermetropia etiology, type, symptoms, signs & treatment
- 4) Sturm's conoid
- 5) Investigations History& Examination for concomitant Squint

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AHE016-13 OPTOMETRY WORKSHOP

TIME: 3 Hours

INSTRUCTIONS

2) ____

- * 33 questions are there in total
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- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

- 1) ______ lenses are those that visibly darkness and fade indefinitely under bright and dull light respectively
 - _____ lenses are used to protect the eyes from glare and harmful radiation.
- 3) ______ is an elctroic instrument to measure the lens power.
- 4) The most commonly used material for soft lens is ______
- 5) When the lens is thicker at its centre than its edge is called ______. lenses
- 6) A substance or any portion of space through which light can pass is called ______
- 7) When the rays of light passes from one medium to another, some of light is reflected orbent back to the original medium. The phenomenon is known as ______
- 8) A beam of light may be of three different types parallel, Divergent & _____
- 9) While doing the front fitting, attention has to be given to three important things. a) Front inclination, b) Front Alignments, c) Apical curve
- 10) Temple width or the facial width is the distance between the two temporal bones of ______ at a level approximately 25 to 30 mm behind the spactacle plane.

II. DEFINE THE FOLLOWING

- 1) Crown glass
- 2) Flint glass
- 3) Plastic lens
- 4) Causes of headache with new glasses
- 5) Causes and solution patient complaining of Double vision with the new spectacles
- 6) Causes and suggestions for Bifocal user complaining poor field of vision while Reading
- 7) UV rays
- 8) Refractive media of the Eyeball
- 9) Spherical lenses
- 10) Classification of lenses





$2 \times 10 = 20$

 $1 \times 10 = 10$

Marks: 100

- 1) Lensometer
- 2) Lenticular lens grinding
- 3) Spectacle Frame Fittings
- 4) Optical Centre
- 5) Hi-index Glass
- 6) Contact lens manufacturing Techniques

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) Final fitting of spectacle
- 2) Explain 5 steps of lens Grinding
- 3) Photochromatic lenses and their features

5 x 5 = 25



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AHE016-14 COMMUNITY OPTOMETRY

TIME: 3 Hours Marks: 100 INSTRUCTIONS * 33 questions are there in total * Write answers to each question in proportion to the mark allotted * During the first 15 minutes read the questions carefully **I. FILL IN THE BLANKS** $1 \times 10 = 10$ 1) Cornea is thinned in 2) Which of the following chemicals is not used for tattooing of corneal opacity ______ 3) In case of central dense leucoma (5mm) treatment of choice ______ 4) Blurring of vision for near work occurs in _____ Cylindrical lenses are prescribed in ______ 6) Optical condition of the eye in which the refraction of the two eyes differs is _____ 7) Retinoscopy is done in a dark room at a distance of _____ B) Drug of choice for papillary dilatation in children is ______ 9) The type of lens used for correction of regular astigmatism includes ______ 10) Prisms are used in ophthalmology to measure and to treat **II. DEFINE THE FOLLOWING** $2 \times 10 = 20$ 1) Common causes Of blindness 2) Conjunctival xeroxis and Bitot's spot 3) Sources of vitamin A 4) Indication for cataract extractions 5) Anterior capsular cataract and posterior capsular cataract 6) Latent squint (Heterophoria) types 7) Types of cataract lenses

- 8) Types of hypermetropia
- 9) Contraindications for keratoplasty
- 10) Evalution or Donor Tissue

1) Preservation of Donor Eye

- 2) Objective of Eye Bank
- 3) Classification and etiology symptoms of squint
- 4) Binocular single vision
- 5) Classification of blindness in India
- 6) Treatment schedule for xerophthalmia
- 7) Low vision aids

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) National programme for the control of blindness (NPCB)
- 2) Enucleation and contraindications for collection of Donor Eyes
- 3) Etiology, Types, symptoms and Treatment of myopia
- 4) History and examination for Alternating concomitant squint
- 5) All about keratoconus

5 x 5 = 25



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TWO YEARS (FINAL YEAR) EXAMINATION NOV-2015

AHE016-15 OPTOMETRY NURSING

TIME: 3 Hours

INSTRUCTIONS

- * 33 questions are there in total
- * Write answers to each question in proportion to the mark allotted
- * During the first 15 minutes read the questions carefully

I. FILL IN THE BLANKS

- 1) The most serious danger to vision is _____
- 2) Most important complication of traumatic hyphaema is _____
- 3) Intraocular foreign body with the most fulminant inflammation would be of ______
- 4) Afer cataract is seen after following operations _____
- 5) Intraocular lenses are generally made of _____
- 6) YAG laser is use in the treatment of _____
- 7) Distant direct ophthalmoscopy is done at a distance of ______
- 8) In indirect ophthalmoscopy the image is _____
- 9) Distant vision is recorded at a distance of ______
- 10) Near vision is recorded at a distance of ______

II. DEFINE THE FOLLOWING

- 1) Grading of chemical injuries
- 2) Open globe injury
- 3) Biometry
- 4) Tono pen
- 5) Advantage of indirect opthalmoscope
- 6) Digital Tension & Schiotz Tonometer
- 7) Indication for cataract extraction
- 8) Principle of Automated Perimetry Static, Dynamic, Refractive
- 9) Principle of Automated Perimetry Static, Dynamic, Refractive
- 10) Retinal photocoagulation is done withLASER

 $2 \times 10 = 20$

Marks: 100

- 1) Effects of blunt injury on lens, iris, cillary body, choroids & Retina
- 2) Chalicosis
- 3) Phaco Incision
- 4) Anterior capsulotomy
- 5) Intraocular lens implantation
- 6) Advantages & Disadvantages or contact lens
- 7) Binocular loupe & slit lamp extramination
- 8) Eye donation

IV. WRITE LONG ANSWER FOR ANY 3 QUESTIONS

- 1) Technique of intracapsular cataract extraction (ICCE), Extracapsular cataract extraction (ECCE) & Phacoemulsification
- 2) Central Field (Campimetry)
- 3) Preoperative Preparation for cataract surgery
- 4) Preoperative Investigation for cataract surgery
- 5) Manual small incision cataract surgery

5 x 5 = 25