

VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)

B.OPTOMETRY DEGREE EXAMINATION – August 2018
First Year

GENERAL PHYSIOLOGY AND OCULAR PHYSIOLOGY

Time: Three hours

Maximum: 80 marks

I Choose the best answer

(10 x 1 = 10)

1. Diploid chromosome number in human is
 - a) 48
 - b) 23
 - c) 46
 - d) 46
2. DNA with unequal nitrogen bases would most probably be
 - a) single stranded
 - b) double stranded
 - c) Triple stranded
 - d) Four stranded
3. Histamine secreting cells are round in
 - a) connective tissues
 - b) Lungs
 - c) muscular tissue
 - d) Nervous tissue
4. Fat digestion occurs in
 - a) Rectum
 - b) Stomach
 - c) Duodenum
 - d) Small intestine
5. Volume of air breathed in and out during normal breathing is called
 - a) Vital capacity
 - b) tidal volume
 - c) inspiratory tissue volume
 - d) residual volume
6. Mountain sickness is due to
 - a) low PO₂
 - b) low PCO₂
 - c) high PC₂
 - d) high PO₂
7. Which of the following are male sex hormones
 - a) insulin
 - b) aldosterones
 - c) androgen
 - d) pheromone
8. Pupil size if too small causes
 - a) Diffraction
 - b) interference
 - c) spherical aberration
 - d) None of the above
9. In the body, both blood sodium and potassium levels are regulated by _____
 - a) pheromones
 - b) Awosterone
 - c) cortisol
 - d) androgens
10. Cornea is supplied by _____ nerve
 - a) 3rd
 - b) 4th
 - c) 5th
 - d) all the above

(p.t.o)

II State whether the following statements are **TRUE** or **FALSE** (10 x 1 = 10)

1. Exchange of respiratory gases in the lung occur in bronchi
2. Secondary sex characteristics in man is maintained by androgen
3. Blood sodium and potassium levels are regulated by aldosterone
4. Lens is the major refractive element of eye
5. Desmosomes help to prevent the glow of substances between cells
6. Trabaculectomy causes increase in aqueous outflow
7. Normal corneal curvature is 43D
8. Reduced corneal thickness results in low readings of IOP
9. Lattice arrangement of corneal stroma is responsible for constructive interference of light
10. Superior oblique is called a cheaters muscle.

III Fill in the blanks: (10 x 1 = 10)

1. _____ maintains sexual organs and secondary sex characteristics in male
2. Power house of the cell is called _____
3. _____ is an a cellular layer of cornea
4. _____ of conjunctiva secretes mucin
5. Respiratory centers is located in _____
6. Metamorphopsia is seen in patients with _____
7. Oscillopsia is seen in patients with _____
8. Monocytes and polymorphs are examples of _____
9. Vitamin K deficiency can _____ the clotting time.
10. Vitamin A deficiency causes _____ of the eye.

IV Write any **FIVE** answers of the following: (5 x 6 = 30)

1. Give a brief account on connective tissue functions.
2. Give notes on functions and regulations of pancreatic digestion
3. Write notes on adrenal cortex
4. Give a brief account on menstrual cycle
5. Write note on presbyopia.
6. Draw and explain the functions of layers of retina.
7. Explain briefly about color blindness.

V Write any **TWO** essays of the following: (2 x 10 = 20)

1. Write a detailed account on urine formation
2. Write detailed note on cardiac cycle
3. Write notes on binocular vision and depth perception.

(Sl.No. M19241)