

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

**B.OPTOMETRY DEGREE EXAMINATION – March 2019
Second Year**

STATISTICS AND OCCUPATIONAL OPTOMETRY

Time: Three hours

Maximum: 80 marks

**Use Separate answer books for Part A and Part B
PART – A - STATISTICS**

Time: One and half an hour

Maximum: 40 marks

SECTION – A

I. Answer ALL Questions: (5 x 1 = 5)

1. Correlation values are not greater than_____.
2. For a normal curve distribution the mean, median and mode are_____.
3. _____ ratio is the ratio of incidence in exposed divided by incidence in non exposed.
4. A _____ type of study is also referred as longitudinal or prospective study.
5. A _____ chart is a circular statistical graphic.

II. Match the following: (5 x 1 = 5)

1. A disease vector is a - breach of a duty care which results in damage.
2. Regression – estimating the relationships among variables.
3. Bias – Measure of association.
4. Negligence – systematic error.
5. Chi square – organism that transmits disease.

SECTION – B

III. Write short notes on any TWO of the following: (2 x 5 = 10)

1. Write on the natural history of disease.
2. The exam grades of 7 students are given below:
70, 66, 72, 96, 46, 90, 50
 - a. The mean
 - b. The mode
 - c. The median
 - d. The sample standard deviation
3. Write on measures of dispersion.
4. What is ANOVA?

SECTION – C

IV. Write an essay on any TWO of the following: (2 x 10 = 20)

5. Differentiate between cross sectional, cohort and case control studies.
6. Write on types of
 - a. Sampling
 - b. Survival analysis
7. Write on
 - a. Screening
 - b. Levels of prevention
8. Write a note on parametric tests.

PART – B – OCCUPATIONAL OPTOMETRY

Time: One and half an hour

Maximum: 40 marks

SECTION - A

I. Multiple Choice questions: (5 x 1 = 5)

1. What is the expected visual acuity legally for a person to be eligible to drive on Indian roads?
 - a. 6/12
 - b. 6/18
 - c. 6/9
 - d. 6/6
2. FM radio is a man made source of
 - a. Infra red radiation
 - b. Ultra violet radiation
 - c. Gamma rays
 - d. Microwave radiation
3. Ideal illuminance lux for consulting room of an optometrist:
 - a. 200
 - b. 300
 - c. 400
 - d. 100
4. Accidents are due to variety of events (antecedents). They could be the following EXCEPT
 - a. Person
 - b. Fate
 - c. Material
 - d. Environment
5. Following are the 4P's in the definition of occupation health EXCEPT
 - a. Promotion
 - b. Projection
 - c. Prevention
 - d. Protection

(p.t.o)

(Sl.No.M21129)

II. State whether the following statements are TRUE or FALSE: (5 x 1 = 5)

1. Face shields can fog up if used in a poorly ventilated area.
2. Hazard is directly proportional to (Toxicity + Exposure).
3. DBCP if inhaled or ingested leads to chronic poisoning.
4. 10. Blink Reflex: 0.16 – 0.18 seconds.
5. Mushroom cause Malt worker's lung.

III. Fill in the blanks: (5 x 1 = 5)

1. Dot matrix characters have blurred edges hence a stimulus_____.
2. _____ rays originate from hot bodies.
3. Main motto of _____ is 'Making World Safer'.
4. Inhalation of iron (as hazard) results in _____.
5. Visual performance = _____ + speed.

SECTION - B

IV. Answer any THREE of the following: (3 x 5 = 15)

1. "Different jobs demand different types of eye protection". Justify the statement with 3 jobs and their corresponding different PPE.
2. What is the principle of the following color vision testing devices
 - a. Ishihara
 - b. D 15
 - c. FM 100
 - d. Nagel Anamaloscope
3. What are the ergonomics for a proper computer use?
4. List the methods of light control.
5. Write on occupational hygiene and occupational safety.

SECTION - C

V. Discuss in detail on any ONE of the following questions: (1 x 10 = 10)

1. Personal protective equipment.
2. Enumerate the checklist for visual task analysis.

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