

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2019
(Second Semester)**

Branch- **BIOTECHNOLOGY**

CLINICAL GENETICS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Write a difference between genotypic ratio and phenotypic ratio in Mendel's law.
- 2 Define genetic link.
- 3 What is down syndrome?
- 4 Define DNA repair disorder.
- 5 What are the symptoms for the Thalassemia?
- 6 What are the role of X and Y chromosome in sex determination?
- 7 What is the role of insulin in Diabetes Mellitus?
- 8 Define human genome complexity.
- 9 Write the advantage and disadvantage of mean.
- 10 Define correlation. Write its types.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Write a short notes on Maternal inheritance.
OR
b Give a note on mitochondrial gene.
- 12 a Explain type of Mutation.
OR
b Write a short note on chromosomal abnormal structure.
- 13 a Explain genomic imprinting.
OR
b Summarize the X linked dominant inheritance.
- 14 a Explain single gene inheritance in human.
OR
b Write a short note on CF,
- 15 a Calculate median for the following data

X:	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
f:	7	15	24	31	42	30	26	15	10

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- b Give a short note on Hardy Weinberg principle.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Discuss Garrod's in bom error in metabolism.
- 17 Explain in detail about abnormal number of chromosome.
- 18 Discuss sex determination in human.
- 19 Give a detailed note on twins for multifactor disease
- 20 Calculate correlation for the following data.
X: 65 66 67 67 68 69 71 73