PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Fourth Semester)

Branch - VISUAL COMMUNICATION

BASICS OF SOUND, OPTICS & ILLUMINATION ENGINEERING

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (1 0 x 2 = 20)

1   Define Crest.
2   Define Amplitude.
3   What is Musical Interval?
4   Define Pink noise.
5   Define Energy resonance.
6   What is Natural Vibration?
7   Give the expression for dispersive power.
8   Define Optics.
9   What are the four Secondary colors?
10   Define Lightening.

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a   Explain any three properties of Sound.
                          OR
   b Distinguish between longitudinal and transverse waves? with example.

12 a What is Music Interval? Discuss any two important intervals.
                          OR
   b Differentiate Rhythm and Tempo.

13 a Discuss any three factors that depends on loudness.
                          OR
   b Explain any one method of pitch determination.

14 a Explain Optic theory.
                          OR
   b Derive Cauchy's Dispersion formula.

15 a Calculate the efficiency of light through different medium.
                          OR
   b Explain about color temperature.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16   (a) Define Wavelength and Frequency.

        (b) Define Intensity, Pitch and Quality:

17   Define Noise. Differentiate Pink noise and White noise.

18   Explain Resonance and calculate energy Resonance.

19   Derive expression for focal length Concave and Convex lens.

20   Explain the Convergence of Light.