

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2018  
(Fourth Semester)

Branch - VISUAL COMMUNICATION (ELECTRONIC MEDIA)

BASICS OF SOUND OPTICS & ILLUMINATION ENGINEERING

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10x2 = 20)

- 1 What is sound energy?
- 2 Write about the sensitivity of the sound for human ear,
- 3 Define decibel.
- 4 What is musical note?
- 5 Define sound intensity.
- 6 What are standing waves?
- 7 Define the principle of lens.
- 8 Define the term optics.
- 9 Explain color index.
- 10 Define hot spots.

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Discuss speed of sound in air.  
OR  
b Explain the sound production and propagation.
- 12 a Write a short note on (1) Rhythm (2) Tempo (3) Meter.  
OR  
b Explain the theory of power.
- 13 a Discuss about resonance.  
OR  
b Explain distortion in sound.
- 14 a Discuss the basic properties of optics.  
OR  
b Distinguish the properties of concave and convex lens.
- 15 a Explain light wave theory.  
OR  
b Write a short note on international standard colors.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 Briefly explain the measurement of sound.
- 17 What is noise? Explain the pink noise and white noise.
- 18 Discuss the following (1) Loudness (2) Vibration.
- 19 Calculate the value of focal length of the lens.
- 20 Explain the propagation of light through different medium.