

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

Branch – VISUAL COMMUNICATION (ELECTRONIC MEDIA)

DIGITAL SOUND, IMAGE AND LIGHT PROCESSING/ BASICS OF SOUND OPTICS &
ILLUMINATION ENGINEERING

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 _____ is defined as the science that deals with the production, control, transmission, reception, and effects of sound.
(i) Aquatics (ii) Amenities
(iii) Acoustics (iv) Automatics
- 2 What is the hearing frequency range of Human ear?
(i) 20 – 2000Hz (ii) 65– 44000Hz
(iii) 70-6600 Hz (iv) 20-20,000Hz
- 3 Who believed that light was made up of waves vibrating up and down perpendicular to the direction of light?
(i) Huygens (ii) Michael Faraday
(iii) Marie Curie (iv) James Chadwick
- 4 Illumination is directly proportional to the luminous _____ of the source.
(i) Intensity (ii) Proportion
(iii) Direction (iv) Power
- 5 What technology called as an “emissive” technology?
(i) Tungsten (ii) OLED
(iii) Mercury (iv) CRT

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the digital audio information.
OR
b Describe the Psychoacoustics.
- 7 a Narrate the impacts of Noise hazards.
OR
b List and explain the Bluetooth sound technology.
- 8 a Summarize the light wave theory.
OR
b Explain the calculation method of focal length.

Cont...

- 9 a Explain the colour and colour temperature in lighting.
OR
b List out the professional light devices.
- 10 a Summarize the display resolution and display scanning.
OR
b Analyze the differences and adjusting features of brightness and contrast.

SECTION -C (30 Marks)

Answer ALL questions
ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Explain the characteristics of sound.
OR
b Compare analog audio technology and digital audio technology.
- 12 a Show the sound behavior in different spaces.
OR
b Summarize the sound metering, Musical notes, western scales and Indian ragas.
- 13 a Draw the anatomy of human eye and explain its light perception.
OR
b Explain about the CCD, CMOS technologies with diagram.
- 14 a Summarize the types of indoor lighting equipments and lighting techniques.
OR
b List out the uses and operational methods of light meter.
- 15 a Discuss the recent display technologies in India give examples.
OR
b Explain the various kinds of display technologies.

Z-Z-Z

END