

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)**

Branch- VISUAL COMMUNICATION(ELECTRONIC MEDIA)

DIGITAL SOUND, IMAGE AND LIGHT PROCESSING

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	What can be expressed as distance travelled in one second? a) Phase b) Velocity c) Period d) Wavelength	K1	CO1
	2	Which of the following has all the characteristics of a wave like amplitude, frequency, wavelength, phase and velocity? a) Sound b) Intensity c) Air d) Energy	K2	CO1
2	3	Who can detect a difference in frequency between two separate sounds that is as little as 2 Hz? a) Young b) Old c) Musically trained d) Infants	K1	CO2
	4	What is the complete audible range for a human ear? a) 20 to 25,000 HZ b) 30 to 30,000 HZ c) 20 to 20,000 HZ d) 60 to 60,000 HZ	K2	CO2
3	5	Which color model is used for most computer model and video systems? a) RGB b) RYB c) CMY d) HSV	K1	CO3
	6	The speed of light is maximum in which of the following mediums a)air b) Vacuum c)water d)glass	K2	CO3
4	7	The term that describes the difference between the lightest and the darkest areas of the photograph a) Hue b) Saturation c)Contrast d)Focus	K1	CO4
	8	Which one among the following bulbs consumes less power for light of the same intensity? a) incandescent bulb b) CFL tube bulb c) Light Emitting Diode (LED) bulb d) Fluorescent tube bulb	K2	CO4
5	9	MP3 is an extension of a _____ file a)Video file b)graphics image c)Audio file d)Text file	K1	CO5
	10	What is defined as the width-to-height ratio of a picture frame? a)aspect ratio b)scanning c)flicker d)skimming	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks $(5 \times 7 = 35)$

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the human auditory system with the help of a diagram. (OR)	K2	CO1
	11.b.	Explain why psychoacoustics is important for music production.		
	12.a.	Explain the use of sound level meter in audio production. (OR)		
2	12.b.	Distinguish between pink noise and white noise.	K2	CO2
	13.a.	Explain the CCD and CMOS sensor advantages and disadvantages. (OR)		
3	13.b.	Evaluate the data rates for streaming video.	K5	CO3
	14.a.	List out the different ways to control light in indoor and outdoor shoots. (OR)		
4	14.b.	Explain three-point lighting.	K4	CO4
	15.a.	Explain lumen, candela and lux. (OR)		
	15.b.	Explain the various video formats and their purpose.		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks $(3 \times 10 = 30)$

Module No.	Question No.	Question	K Level	CO
1	16	Explain how the following features of sound affects the audio recording : timbre, harmonics, rhythm & fundamentals.	K2	CO1
2	17	Detail the classification of musical instruments with reference to Indian & western music.	K3	CO2
3	18	Elaborate the need for proper lighting in a shooting spot with examples.	K5	CO3
4	19	Examine the role of reflectors and cutters in the shooting spot where you can't carry high-voltage lights with an electrical supply.	K4	CO4
5	20	Discuss the key aspects that need to be considered to get a high-quality film output.	K5	CO5