



SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA  
SEMESTER END EXAMINATIONS (ADDITIONAL SUPPLEMENTARY)  
JULY – 2017

B. ARCH III YEAR V SEMESTER  
BUILDING SCIENCE AND SERVICES (BS-5)  
(LIGHTING AND ACOUSTICS)

Maximum Marks – 50

Time – 2.00 Hours

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- a) Answer any Two questions out of 1 to 4 questions.  
b) Question No.5 is compulsory and answer any four out of six sub-questions.  
c) Support your Answer with neat Sketches.
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- Q1. a) Define ‘Glare’? Explain in detail the tools and measures for reducing glare in buildings. Support the answer with Sketches. (10+5)  
b) Explain the Split-flux method concept in detail.
- Q2. a) Explain the Design Considerations for Day Lighting and Artificial Lighting in a Conference Hall with the help of Sketches. (10+5)  
b) Differentiate between photometry and Radiometry.
- Q3. a) Explain the Environmental noise and its control measures through Sketches. (5+10)  
b) Calculate the Reverberation time for a class room of size 12m x 8m x 4m with concrete flooring ( $\alpha=0.14$ ), Brick wall ( $\alpha=0.03$ ) and Gypsum board ceiling ( $\alpha=0.5$ ) at a frequency of 500HZ.
- Q4. Explain Noise reduction co-efficient and List different types of Sound absorbers. Explain the general design Principles of Acoustics for the design of a Conference Hall. (15M)

P.T.O

Q5. Write short notes on any FOUR of the following:

(4x5=  
20M)

- a) Luminous Efficacy
- b) Tools and measures for reducing Glare
- c) Munsell Colour System
- d) Hass Effect
- e) Sabine's Formula
- f) Sound Insulation Glass

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