

BENGAL ENGINEERING AND SCIENCE UNIVERSITY, SHIBPUR
B. Arch. Part – I First Semester Final Examination, 2011
DESIGN FUNDAMENTALS (AR-101)

Time: 3 Hours

Full Marks: 70

Answer to Group – A is compulsory.
Answer any other five questions taking at least two from each of the Groups – B & C.
Neat appropriate sketches will be given due credit.

GROUP – A

1. Fill in the following gaps with appropriate word / words: — 1 x 9
- i) _____ in a visual composition means control of opposing attractions through a felt equality between the parts of the field.
 - ii) _____ is achieved by the organic knitting together of functional, visual and expressive aspects of design.
 - iii) Amplitude of light waves is its _____ dimension.
 - iv) Balance is to be considered as an _____ of opposition.
 - v) Dynamic shapes have more _____ value than static shapes.
 - vi) If all our basic colour sensitiveness are stimulated equally, instead of colour we see _____.
 - vii) Natural forms are _____ diagram of internal and external forces.
 - viii) The first commandment of composition could be written simply as: _____.
 - ix) We see through the eyes, but we perceive with the _____.
2. Write short notes on the following: 8 x 2
- i) Closure;
 - ii) Constancy phenomenon.

GROUP – B

3. How do the concepts "attraction" and "attention" help one to perceive the forms that he/she observes in the visual field? 4½ x 2
4. How does "rhythm" differ with "simple repetition"? Explain how do visual rhythms of shape and size ratios occur in the "Parthenon"? 2 + 7
5. In the context of graphic design, explain the terms "space", "shape" and "format". What do you mean by "figure-ground relationship"? 2 x 3 + 3
6. 'Shading is the way to make objects appear three-dimensional on a two-dimensional surface.' — Illustrate. 9

GROUP – C

7. What do you mean by the terms "brightness" and "intensity" in relation to tonal qualities of visual perception? Explain how does mixing of pigments differ with that of coloured light? 2 + 2 + 5
8. What do you understand by the term "simultaneous contrast" with respect to colour relationship? What is the effect of "hue contrast" and "intensity contrast"? 2 + 3 + 4
9. What form will "streams of sand" take, if they are allowed to fall from one's hand? How will it be different if the material is "pieces of wood" instead of "streams of sand"? What is the reason of this difference? How do the problems of working with a homogeneous material differ from that of assembled materials? 1 + 1 + 3 + 4
10. While undertaking a design assignment, what is your preference regarding the "form" and the "function" of the object to design? Justify your answer with illustrations. 9