B.Sc. DEGREE EXAMINATION, May 2015

(INTERIOR DESIGN)

(SECOND YEAR)

203: PRINCIPLES AND CONCEPTS OF STRUCTURES

(Old Regulation)

Time: Three hours   Maximum: 60 marks

SECTION-A   **(10×1=10)**
Answer ALL questions

1. A Structure is in_____ when all forces or moments acting up on in are balanced.

2. Tension is opposite to _____

3. Unit of force is measured in_____

4. _____- is a structural principle based on the use of isolated components in compression inside a net.

5. _____ is defined as the component of stress coplanar with a material cross section.

6. _____ is a measure of the bending effect due to forces acting on a bean.

7. _____beam supported on the ends which are free to rotate and have non moment resistance.

8. The initial setting time for cement concrete requires _____min.

9. _____is a beam anchored at only one end.

10. A material when subjected to an external load system undergoes a_____

SECTION-B   **(4×5=20)**
Answer any FOUR questions

11. Write in brief about stress.

12. Write short notes on volumetric strain.

13. Write short notes on preservation of timber.

14. Explain theory of simple bending.

15. Write short notes on continuous beam.

16. Explain the uses of stone.

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SECTION-C   **(3×10=30)**
Answer any THREE questions

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17. Explain with sketches English Bond and Flemish Bond.

18. Explain the theory of simple bending.

19. Draw the shear force and bending moment diagram for the cantilever beam of length carrying a concentrated load at the free end.

20. Write short notes on a) Force an d loads
                     b) Resultant force.

21. Explain stability and strength in structural requirements.

22. Write in detail about post and beam structures with sketches.

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