

SECOND YEAR B.Arch. DEGREE EXAMINATION, APRIL / MAY 2005**BUILDING MATERIALS AND CONSTRUCTION-II****(1998 Scheme)**

Time : Four Hours

Maximum : 100 Marks

*One drawing paper to be supplied.**Answer all questions.*

I. Write brief note on any five of the following —

- (i) Specifications for pozzolana cement.
- (ii) Energy and environment aspect of P.V.C. as building material.
- (iii) Fineness of sand.
- (iv) Well foundation.
- (v) Merits and demerits of aluminium doors.
- (vi) King-post truss.
- (vii) Flat roof.
- (viii) Essentials of water supply schemes.

(5 × 5 = 25 marks)

2. a) Draw the front elevation of an aluminium window for an opening 150cm × 150cm adopting suitable sections. Give detailed drawings for frame, hinges, leaf, fittings and locking arrangements.

Or

- b) Draw the elevation of a tubular steel truss for a clear span of 12m. Give detailed drawings showing:
- (i) Connection between truss, Purlin and cleat.
 - (ii) Connection between truss and roof covering.
 - (iii) Fixing steel truss to concrete column 30cm × 20cm.

(30 marks)

3. a) List any five modern building material and explain the tests to determine their quality as per B.I.S.

Or

- b) Explain importance of soil Properties and behaviour of soil banks to bearing capacity. How to improve the bearing capacity of soils ?

(15 marks)

Turn over

4. a) Sketch and explain the details of column footing for a R.C.C column 20cm × 20cm for a waiting shed. Depth of footing-75cm.

Or

- b) Discuss the problems of excavation in steep sloping grounds with laterite soils.

(15 marks)

- 5 a) Explain with neat sketches the working of any three of the following water distribution components and give its I.S specifications.

(i) Water pipe connections.

(iii) Flush tank.

(ii) Steel overhead tank.

(iv) Bathroom shower.

Or

- b) Explain the applications of steel and asbestos as roof covering materials. Discuss their merits and demerits.

(15 marks)