Date & Time of Examination — 30/11/2021 , 9:30 AM

Examination Roll No. — 18312911011
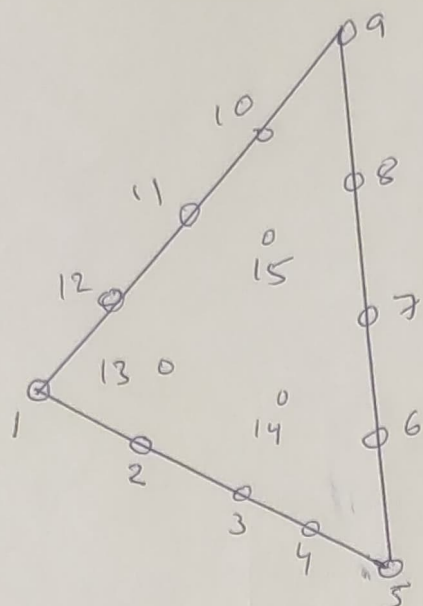
Name of the Program — B.tech (IT & MI)

Semester / Year — VII Semester / IV year

Unique Paper Code — 911710

Title of Paper — fluidity in Nature :
Computational Interpretations

9.6

$$\Psi_1 = \frac{(L_1-0)(L_1-1/4)(L_1-2/4)(L_1-3/4)}{1 \cdot 3/4 \cdot \frac{2}{4} \cdot 1/4}$$

$$= \frac{32}{3}(L_1-0)(L_1-1/4)(L_1-2/4)(L_1-3/4)$$

$$\Psi_2 = \frac{(L_2-0)(L_1-0)(L_1-1/4)(L_1-2/4)}{\frac{1}{4} \cdot \frac{3}{4} \cdot \frac{2}{4} \cdot \frac{1}{4}}$$

$$= \frac{128}{3}(L_1-0)(L_1-1/4)(L_1-2/4)(L_2-0)$$

$$\psi_3 = \frac{(L_1-0)(L_1-1/4)(L_2-0)(L_2-1/4)}{\frac{2}{4}\cdot\frac{1}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= 64(L_1-0)(L_1-1/4)(L_2-0)(L_2-1/4)$$

$$\psi_4 = \frac{(L_1-0)(L_2-0)(L_2-1/4)(L_2-2/4)}{\frac{1}{4}\cdot\frac{3}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= \frac{128}{3}(L_1-0)(L_2-0)(L_2-1/4)(L_2-2/4)$$

$$\psi_5 = \frac{(L_2-0)(L_2-1/4)(L_2-2/4)(L_2-3/4)}{1\cdot\frac{3}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= \frac{32}{3}(L_2-0)(L_2-1/4)(L_2-\frac{2}{4})(L_2-3/4)$$

$$\psi_6 = \frac{(L_3-0)(L_2-0)(L_2-1/4)(L_2-2/4)}{\frac{1}{4}\cdot\frac{3}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= \frac{128}{3}(L_3-0)(L_2-0)(L_2-1/4)(L_2-2/4)$$

$$\Psi_7 = \frac{(L_3-0)(L_3-1/4)(L_2-0)(L_2-1/4)}{\frac{2}{4}\cdot\frac{1}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= 64(L_2-0)(L_3-\tfrac{1}{4})(L_2-0)(L_3-\tfrac{1}{4})$$

$$\Psi_8 = \frac{(L_2-0)(L_3-0)(L_3-1/4)(L_3-2/4)}{\frac{1}{4}\cdot\frac{3}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= \frac{128}{3}(L_2-0)(L_3-0)(L_3-\tfrac{1}{4})(L_3-\tfrac{3}{4})$$

$$\Psi_9 = \frac{(L_3-0)(L_3-1/4)(L_3-\frac{2}{4})(L_3-3/4)}{1\cdot\frac{3}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= \frac{32}{3}(L_3-0)(L_3-\tfrac{1}{4})(L_3-\tfrac{2}{4})(L_3-\tfrac{3}{4})$$

$$\Psi_{10} = \frac{(L_1-0)(L_3-0)(L_3-1/4)(L_3-2/4)}{\frac{1}{4}\cdot\frac{3}{4}\cdot\frac{2}{4}\cdot\frac{1}{4}}$$

$$= \frac{128}{3}(L_1-0)(L_3-0)(L_3-\tfrac{1}{4})(L_3-\tfrac{2}{4})$$

$$\Psi_{11} = \frac{(L_1 - 0)(L_1 - 1/4)(L_3 - 0)(L_3 - 1/4)}{\frac{2}{4} \cdot \frac{1}{4} \cdot \frac{2}{4} \cdot \frac{1}{4}}$$

$$= 64(L_1 - 0)(L_1 - 1/4)(L_3 - 0)(L_3 - 1/4)$$

$$\Psi_{12} = \frac{(L_3 - 0)(L_1 - 0)(L_1 - 1/4)(L_1 - 3/4)}{\frac{1}{4} \cdot \frac{3}{4} \cdot \frac{2}{4} \cdot \frac{1}{4}}$$

$$= \frac{128}{3}(L_3 - 0)(L_1 - 0)(L_1 - 1/4)(L_1 - 3/4)$$

$$\Psi_{13} = \frac{(L_1 - 0)(L_1 - 1/4)(L_2 - 0)(L_3 - 0)}{\frac{2}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4}}$$

$$= 128(L_1 - 0)(L_1 - 1/4)(L_2 - 0)(L_3 - 0)$$

$$\Psi_{14} = \frac{(L_2 - 0)(L_2 - 1/4)(L_3 - 0)(L_1 - 0)}{\frac{2}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4}}$$

$$= 128(L_2 - 0)(L_2 - 1/4)(L_3 - 0)(L_1 - 0)$$

$$\Psi_{15} = \frac{(L_3 - 0)(L_3 - 1/4)(L_2 - 0)(L_1 - 0)}{\frac{2}{4} \cdot \frac{1}{4} \cdot \frac{1}{4} \cdot \frac{1}{4}}$$

$$= 128(L_3 - 0)(L_3 - 1/4)(L_3 - 0)(L_1 - 0)$$