Full Marks : 20.

Part - A

1) Answer the following questions:- (2×5=10 marks)

(a) Define bolt value.

(b) What are the advantages of butt joint over lap joint?

(c) What do you mean by parchial safety factor in the limit state method of design?

(d) For bolts of property class 4.6, what do the number 4 & 6 indicate.

(e) Define slenderness ratio?

Part B

2) Answer the following questions:- (5×2=10 marks)

(a) A tie member of a roof truss consists of 2 ISA 90 X 60 X 8 mm. The angles are connected on the either side of 10mm gusset plates and the member is subjected to a factored pull of 360 kN. Design the welded connection. Assume welding is to be made in the field.

(b) Write down the advantages of welded connections over bolted connections.

_____ x _____

~ All the Best ~

Full Marks: 20

Part - A

1) Answer the following questions in (2×5 = 10 marks)

(a) Define radius of gyration ?

(b) Define Web buckling ?

(c) Sketch the basic section and symbol for single v-butt weld.

(d) What is the minimum and maximum value of pitch of rivet in a rivet line for a tension member ?

(e) How are the connections classified ?

Part - B

2) Answer the following questions in (5×2 = 10 marks)

(a) Write the codal provision of design consideration for masonary walls under eccentricity loading.

(b) Determine the design axial load on the coloumn section ISMB 400, given the height of coloumn is 3.0 m and that the pin-ended. Also assume the following:

$$f_y = 250 \, N/mm^2, \quad f_u = 410 \, N/mm^2 \, \&$$

$$E = 2 \times 10^5 \, N/mm^2.$$

———×———