

Midterm Exam - Practice**Time allowed: 50 minutes****Open book, open notes****No cell phones****All answers and should be on these pages. Use the backs of pages if necessary, but clearly identify which question your work is associated with.****GRADING SHEET – MIDTERM****NAME:** _____

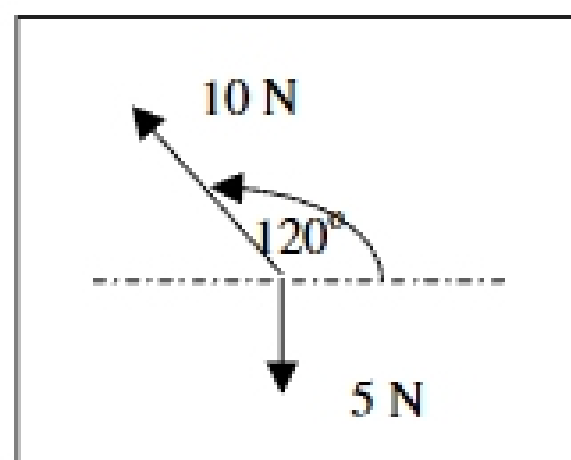
		Points awarded	Max points
Question 1. (20 points)	a) b) c) d)		4 4 6 6
Question 2. (20 points)	a) b) c) Magnitude Direction		5 5 5 5
Question 3. (25 points)	a) Free body diagram b) Equilibrium Equations c) Forces		5 10 10
Question 4. (20 points)	Response Rationale Relationship to code of ethics		5 5 10
Question 5. (15 points total)	Factor 1 Factor 2 Factor 3		5 5 5
TOTAL			100

QUESTION 1. (Short Answer Questions)

- a. What does ASCE stand for?
- b. What is ASCE?
- c. What qualifications does a Engineer-in-Training (EIT) have?
- d. Describe in one or two sentences a sub-discipline of civil engineering?

QUESTION 2.

A 10 N force is applied at 120° to the horizontal. A 5 N weight hangs vertically from the same point. The following free body diagram represents the two forces.

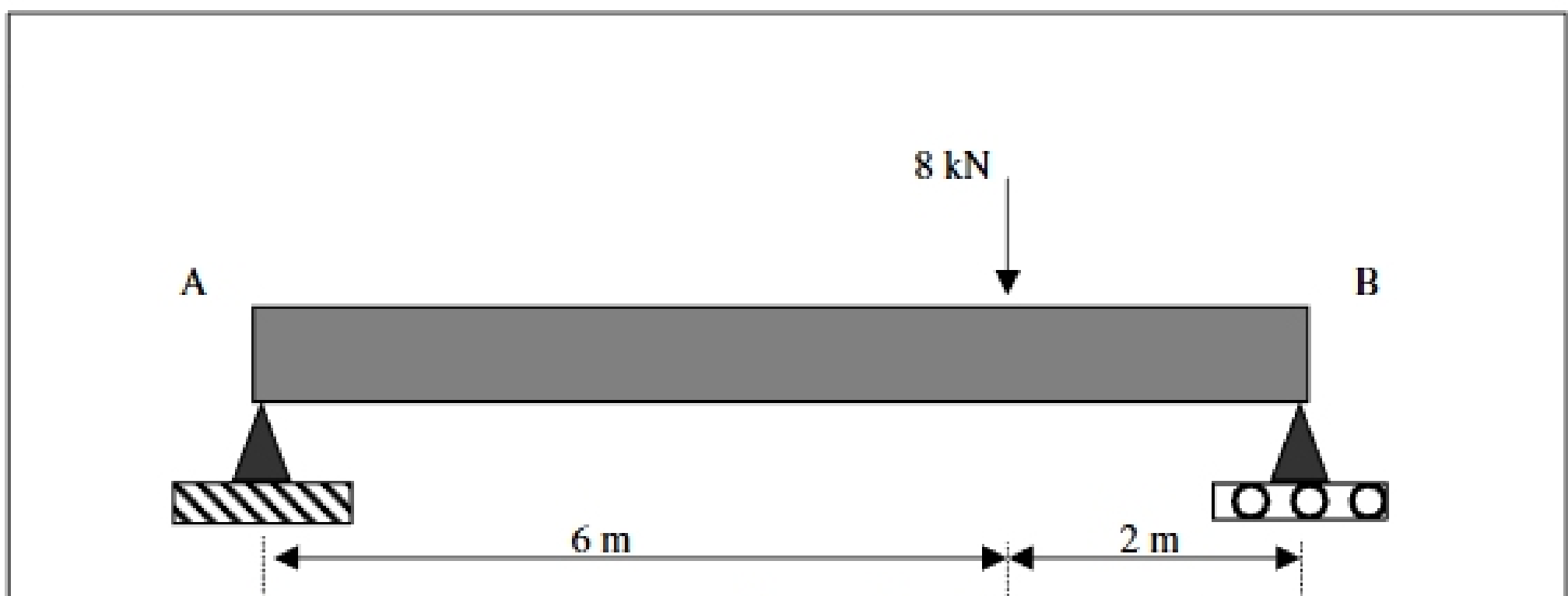


- a. Compute the horizontal and vertical components of the 10 N force.

b. Compute the total force in the horizontal and vertical directions for both the 10 N and 5 N forces.

c. Determine the magnitude and direction of the resultant force.

QUESTION 3.



Assume the beam in the above diagram is weightless.

a. Draw the free body diagram for the beam