Term 1 (22-23) Copy of Mid - Theory of Structures

* Required

* This form will record your name, please fill your name.
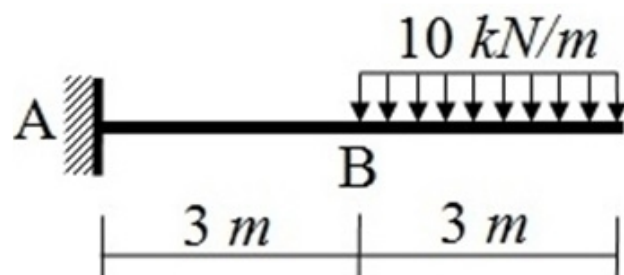
[   ]

1

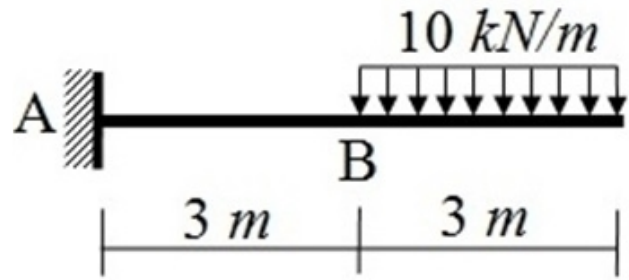The vertical reaction at the fixed support is * (1 Point)
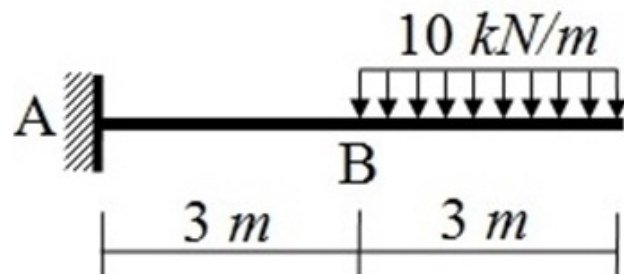
○ 30 kN Upward

2

The moment reaction at the fixed support is * (1 Point)
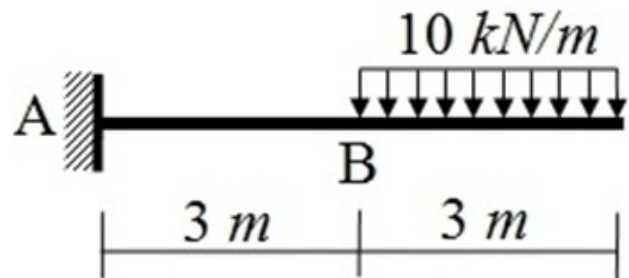

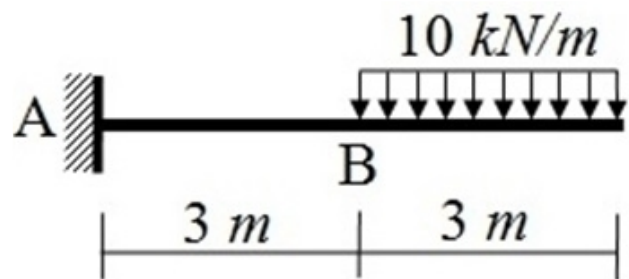○ 135 kN.m Anticlockwise

The normal force at B is *
(1 Point)

10 kN/m

A

B

3 m   3 m

○ Zero

The shear force at A is *
(1 Point)

10 kN/m

A

B

3 m   3 m

○ 30 kN

The shear force at B is *
(1 Point)

10 kN/m

A

B

3 m   3 m

○ 30 kN

6

The bending moment at B is
* (1 Point)

10 kN/m

A

B

3 m | 3 m
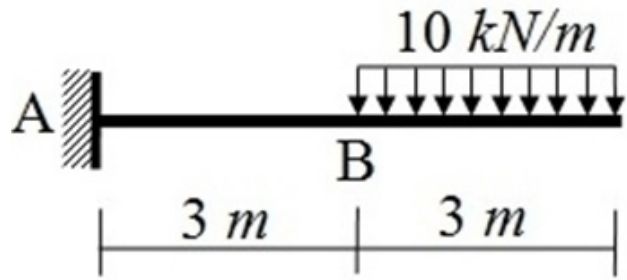
○ -45 kN.m

7

The shear force at C is *
(1 Point)

10 kN/m

A

B   C   D

3 m | 1.5 | 1.5
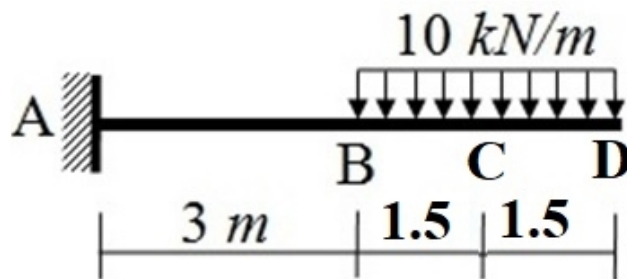
○ 15 kN

8

The shear force at D is *
(1 Point)
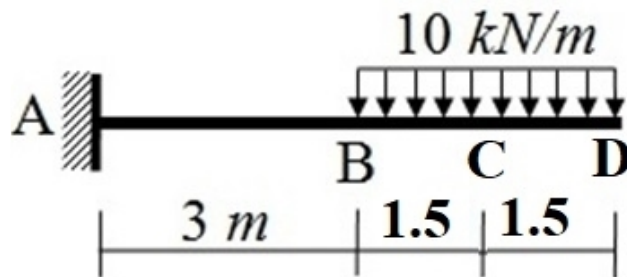
10 kN/m

A

B   C   D

3 m | 1.5 | 1.5

○ Zero

The bending moment at C is
* (1 Point)

10 kN/m

A

B   C   D

3 m |1.5 |1.5

○ -11.25 kN.m

The bending moment at D is
* (1 Point)

10 kN/m

A

B   C   D

3 m |1.5 |1.5
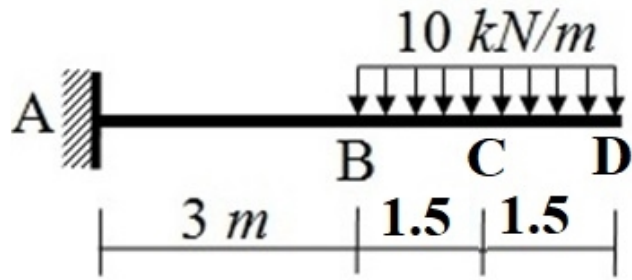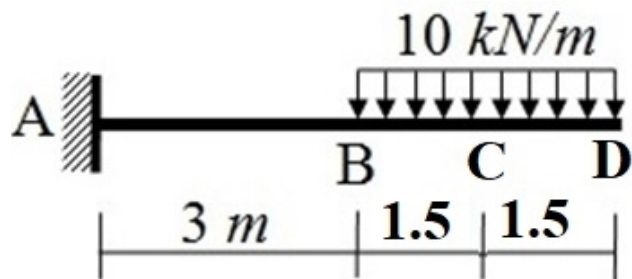
○ Zero

The horizontal reaction at the roller support is: *
(1 Point)

5 kN   5 kN

A   B

C   D

2 m   2 m   2 m
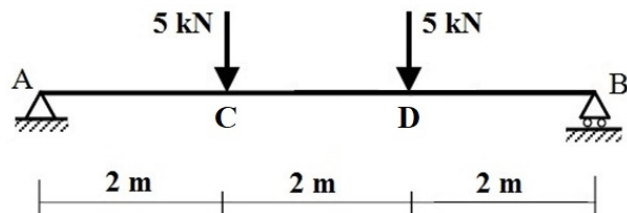
○ There is no horizontal reaction at roller support

The vertical reaction at the hinged support is: *
(1 Point)

5 kN   5 kN

A   B
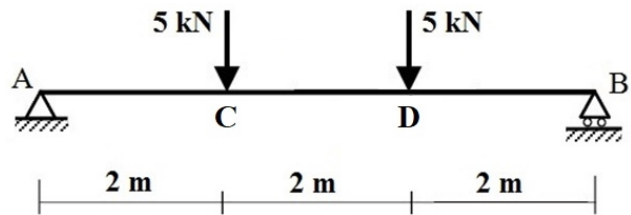
C   D

2 m   2 m   2 m
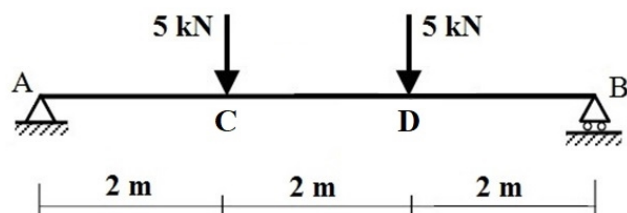
○ 5 kN Upward

13

The normal force at D is: *
(1 Point)

5 kN

5 kN

A

B

C

D

2 m

2 m

2 m
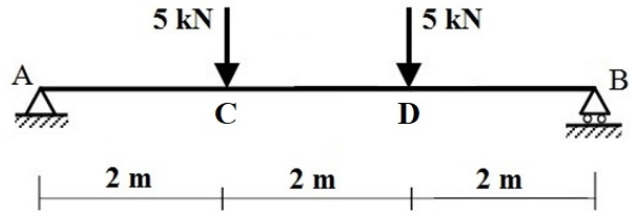
○ Zero

14

The shear force at A is: *
(1 Point)

5 kN

5 kN

A

B

C

D

2 m

2 m

2 m

○ 5 kN

15

The bending moment at C is:
* (1 Point)

5 kN

5 kN

A

B

C

D

2 m

2 m

2 m
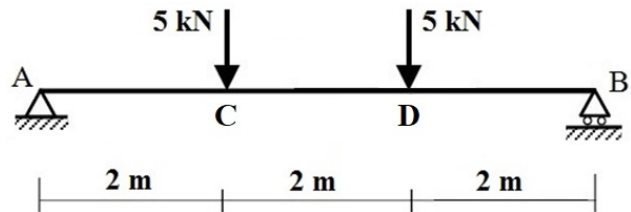
○ 10 kN.m

16

The bending moment at D is:
* (1 Point)

5 kN

5 kN

A

B

C

D

2 m

2 m

2 m
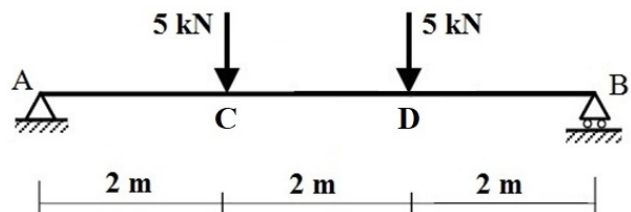
○ 10 kN.m

17

The vertical reaction at the roller support is: * (1 Point)
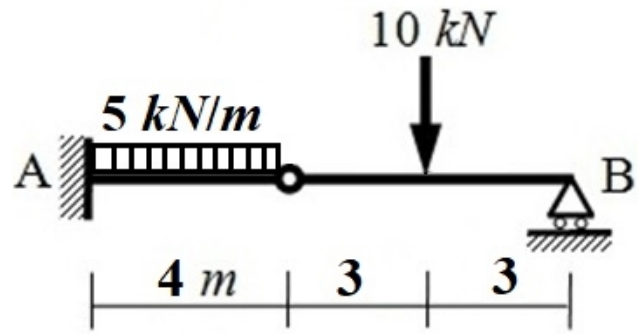
○ 5 kN Upward

18

The vertical reaction at the fixed support is: * (1 Point)

○ 25 kN Upward

19

The shear force at A is: * (1 Point)

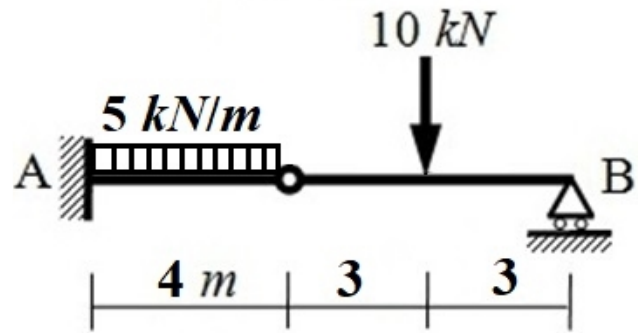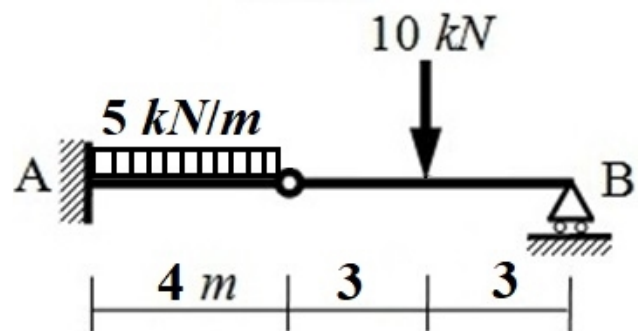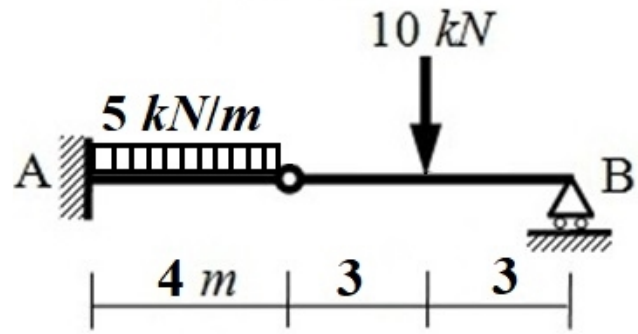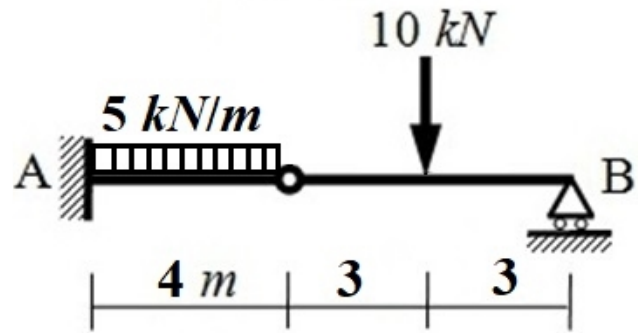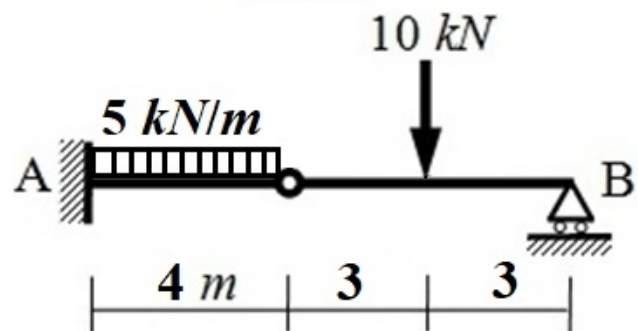○ 25 kN

20

The shear force at B is: *
(1 Point)

○ -5 kN

21

The moment reaction at the
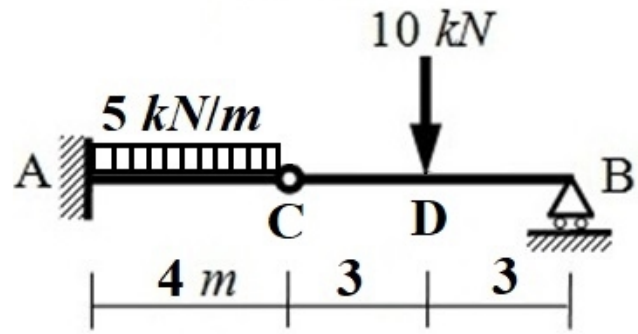fixed support is: * (1 Point)

○ 60 kN.m Anticlockwise

22

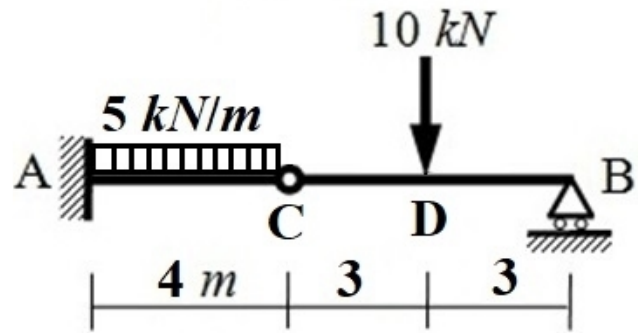The bending moment at A is:
* (1 Point)

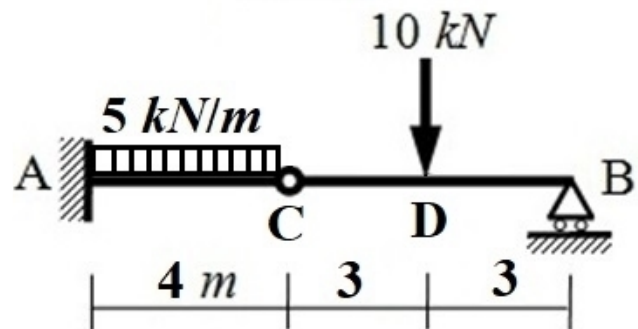○ -60 kN.m

23

The shear force at C is: *
(1 Point)

10 *kN*

5 *kN/m*

A | C | D | B

4 m | 3 | 3

○ 5 kN

24

The shear force at just left of D is: * (1 Point)

10 *kN*

5 *kN/m*

A | C | D | B

4 m | 3 | 3

○ 5 kN

25

The bending moment at C is: * (1 Point)

10 *kN*

5 *kN/m*

A | C | D | B

4 m | 3 | 3

○ Zero

26

The shear force just at the left of D is: * (1 Point)

10 kN

5 kN/m

A ▨▨▨▨▨▨
C   D   B

4 m | 3 | 3
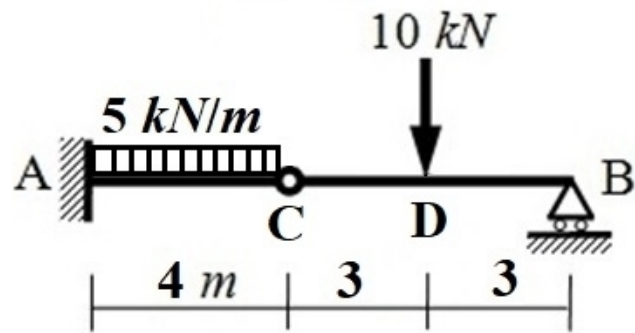
○ 5 kN

27

The shear force just at the right of D is: * (1 Point)

10 kN

5 kN/m

A ▨▨▨▨▨▨
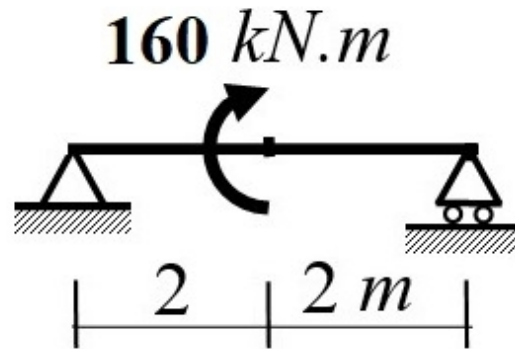C   D   B

4 m | 3 | 3
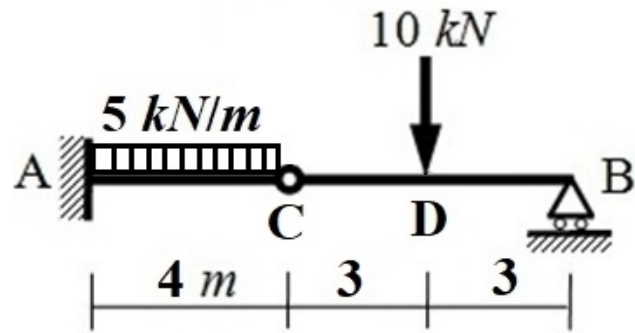
○ -5 kN

28

The vertical reaction at the hinged support is: *
(1 Point)

160 kN.m

2 | 2 m
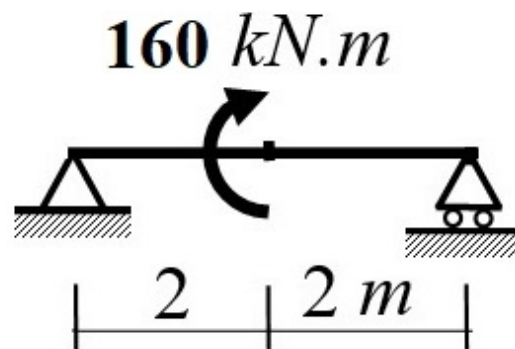
○ 40 kN Downward

29

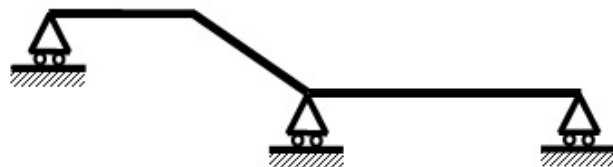The shear force at the middle of the beam is: * (1 Point)

$$160 \ kN.m$$

| 2 | 2 m |

○ -40 kN

30

The vertical reaction at the roller support is: * (1 Point)

$$160 \ kN.m$$

| 2 | 2 m |
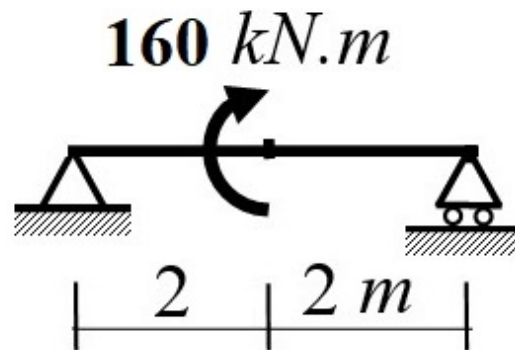
○ 40 kN Upward

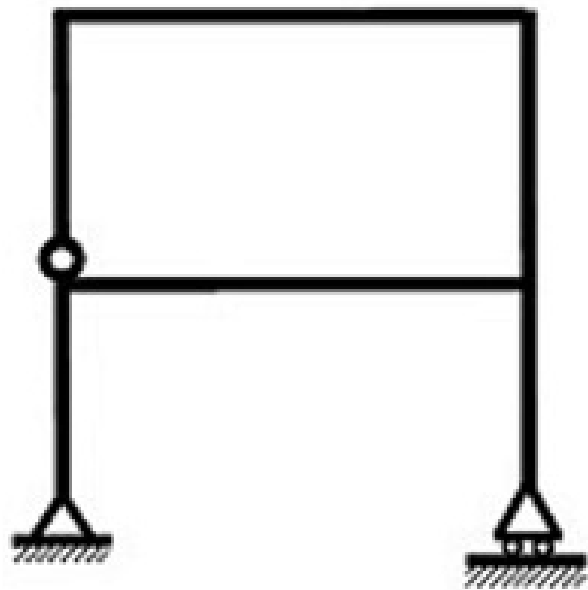31

The shown structure is: * (1 Point)

○ Unstable

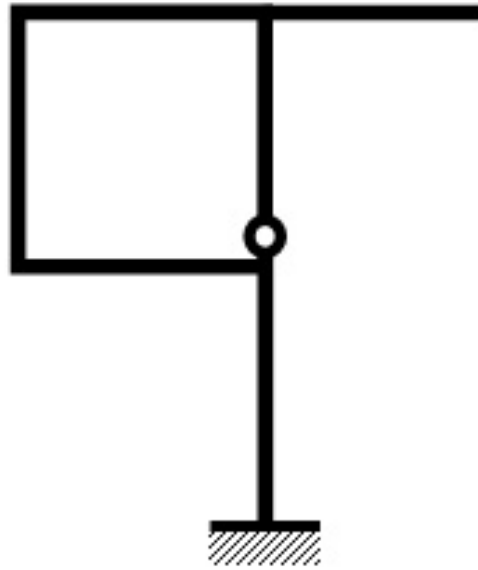The shown structure is: *
(1 Point)

○ Unstable

The shown structure is: *
(1 Point)

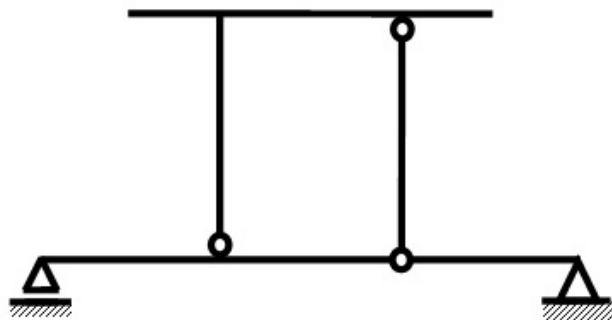○ Statically Indeterminate to the second degree

34

The shown structure is: * (1 Point)

◯ Statically Indeterminate to the second degree

35

The shown structure is: *
(1 Point)
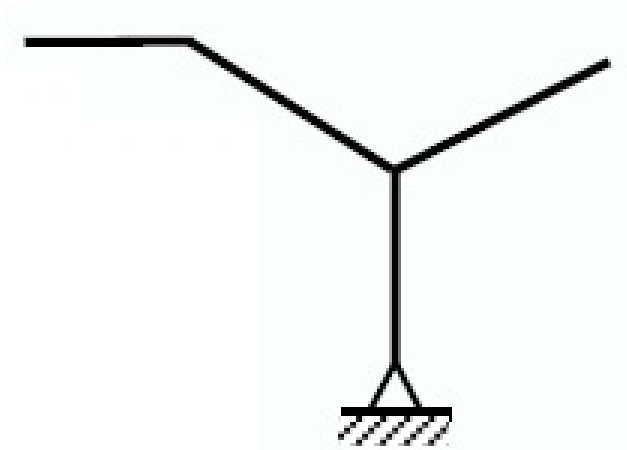

◯ Unstable

36

The shown structure is: *
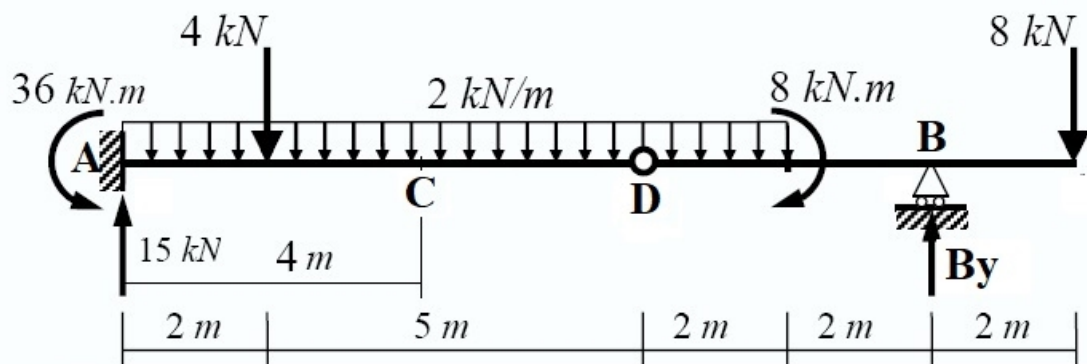(1 Point)

◯ Stable and Statically Determinate

37

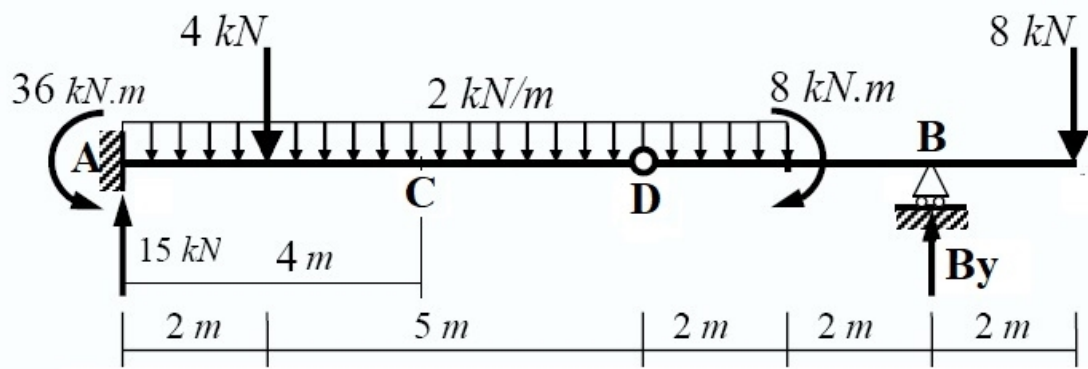The shown structure is: *
(1 Point)

○ Unstable

38

The shear force at C is: * (1 Point)

○ 3 kN

39

The bending moment at C is: * (1 Point)

○ zero

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اكتب اثبات الحضور * (1 Point)

[   ]

41

* (اكتب اسمك رباعى (مثال: محمد احمد محمود عبدالله

[   ]

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* (اكتب كودك بالارقام (مثال: 20210008