

Unit 12 - Week 10

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Assignment 10

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-10-09, 23:59 IST.

1) The fineness of a cutting knife of a reciprocating blade type mower is defined by an angle known as

1 point

- a) Edge angle
b) Bevel angle
c) Rack angle
d) Oblique angle

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

2) The moment of inertia (I) for a hollow and thin wall section of stem of alfalfa grass may be represented by

1 point

a) $I = \frac{3\pi \times d^3 \times t}{32}$

b) $I = \frac{2\pi \times d^3 \times t}{32}$

c) $I = \frac{3\pi \times d^3 \times t}{64}$

d) $I = \frac{2\pi \times d^3 \times t}{64}$

(Where: d = diameter of stem, t = stem wall thickness)

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

3) To allow for the rearward deflection of the outer end of a cutter bar during operation, it is customary to adjust the mower such that, when not operating, the outer end of the cutter bar has a lead of about

1 point

- a) 25 mm/m length of cutter bar
b) 30 mm/m length of cutter bar
c) 10 mm/m length of cutter bar
d) 20 mm/m length of cutter bar

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

d.

4) A living alfalfa stem of 3 mm diameter is loaded horizontally at a distance 25 mm above the soil surface (as a cantilever beam). If the ultimate tensile strength is 35 N/mm² then the horizontal force that would cause bending failure is given as

1 point

- a) 2.67 N
b) 3.70 N
c) 1.20 N
d) 4.36 N

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

5) For proper cutting of crop, the ratio of peripheral speed of the reel to the forward speed of combine harvester should generally lie between

1 point

- a) 0.5 to 1
b) 1 to 1.25
c) 1.25 to 1.5
d) 1.5 to 1.75

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

6) As per the BIS regulations, the maximum combine losses for soybean harvesting should not be more than

1 point

- a) 2.5 %
b) 3 %
c) 4 %
d) 5%

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

7) For proper operation of a combine, the position of its reel should be slightly ahead and above the cutter bar at a distance varying between

1 point

- a) 50 and 150 mm
b) 150 and 250 mm
c) 250 and 300 mm
d) 350 and 450 mm

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

8) The relationship between the rake angle (ϕ_{rk}), bevel angle (ϕ_{bk}) and the clearance angle (ϕ_{ck}) is given by

1 point

- a) $\phi_{rk} + \phi_{bk} + \phi_{ck} = 90^\circ$
b) $\phi_{rk} + \phi_{bk} + \phi_{ck} = 180^\circ$
c) $\phi_{rk} + \phi_{bk} + \phi_{ck} = 45^\circ$
d) $\phi_{rk} + \phi_{bk} + \phi_{ck} = 90^\circ$

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

d.

9) The header loss, shoe loss, rack loss and secondary blower losses occurring in a combine harvester are known as

1 point

- a) Collectable loss
b) Non-collectable loss
c) Pre-harvest loss
d) Processing loss

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

10) An 8-row self-propelled combine is operating in corn field with a row to row spacing of 750 mm. The field travel speed of the machine is 4 km/h. If the loss of time proportional to the area equals to 8 min/ha then the actual field capacity of the machine on an area basis is given as

1 point

- a) 0.77 ha/h
b) 1.82 ha/h
c) 2.14 ha/h
d) 2.24 ha/h

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.