

Unit 8 - Week 6

Course outline

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Assignment 6

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

Due on 2019-09-11, 23:59 IST.

1) **A strain gauge is a passive transducer and is employed for converting** 1 point

- a) Mechanical displacement into a change of resistance
- b) Pressure into a change of resistance
- c) Force into a displacement
- d) Pressure into displacement

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

2) **While measuring the draft of a mounted type implement using electric strain gauges, the axial force on the lower link is computed with the help of** 1 point

- a) 8 active gauges
- b) 8 dummy gauges
- c) 6 active and 2 dummy gauges
- d) 4 active and 4 dummy gauges

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

d.

3) **As per the ASAE standards the rearward displacement of the implement for Category II and III, three point hitch should not be greater than** 1 point

- a) 103 mm
- b) 105 mm
- c) 127 mm
- d) 137 mm

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

4) **Gauge factor of the strain gauge is defined by** 1 point

- a) $G = 1 - 2v + \frac{\Delta\rho/\rho}{\Delta L/L}$
- b) $G = 1 + 2v + \frac{\Delta\rho/\rho}{\Delta L/L}$
- c) $G = 2v + \frac{\Delta\rho/\rho}{\Delta L/L}$
- d) $G = 2v - \frac{\Delta\rho/\rho}{\Delta L/L}$

Where:

- G = Gauge factor
- R = Initial Resistance of a conductor
- ΔR = Change in resistance
- L = Initial length of conductor
- ΔL = Change in length of conductor
- ρ = Initial resistivity of conductor
- $\Delta\rho$ = change in resistivity of conductor
- v = Poisson's ratio

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

5) **During a test, the strain gauge with resistance of 200 ohm undergoes a change of 0.120 ohm and the strain of the gauge is 1.2×10^{-4} . Then the gauge factor will be equal to** 1 point

- a) 0.45
- b) 5.00
- c) 0.55
- d) 6.00

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

6) **As per the ASAE standards, the total weight of the three point linkage dynamometer with complete assembly should not be greater than** 1 point

- a) 240 kg
- b) 250 kg
- c) 260 kg
- d) 270 kg

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

7) **Full form of SSI is** 1 point

- a) Sustainable Sugarcane Initiative
- b) Sub-ordinates Sugarcane Initiative
- c) Sustainable Sugarcane Innovation
- d) Sub-ordinate Sugarcane Innovation

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

8) **To measure the torque of a rotating shaft, the strain gauges are fixed to the shear planes on the opposite sides of the shaft at an angle of** 1 point

- a) 40°
- b) 45°
- c) 50°
- d) 55°

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

9) **In the ASABE draft equation as given below $Draft (D) = T_f \cos\theta \cos\phi + B_f \cos\phi \sin\theta - C_f \cos\beta \cos\gamma$, Then the angle θ represents:** 1 point

- a) Angle of lower link in horizontal plane
- b) Angle of lower link in vertical plane
- c) Angle of top link in vertical plane
- d) Angle of top link in horizontal plane

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

10) **A 2WD tractor with a traction wheel of 750 mm diameter was tested in the field at a forward speed of 0.41 m/s. If the angular speed of the wheel is 12 rev/min, then the value of wheel slip is equal to:** 0 points

- a) 15.63 %
- b) 16.48 %
- c) 17.19 %
- d) 18.67 %

- a.
- b.
- c.
- d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.