E029+G012 Online Test

Ref40

3 voltages , phase to neutral are measured to be 220V, 215V and 210V on nominal 415V , 50Hz. The percentage voltage imbalance is

A	2.3%	B	6%
C	4.6%	D	10%
	Answer		

Ref41

The synchronous speed is

A	Ns = 120f / p	B	Ns = P / 120f
C	Ns=Pf / 120	D	Ns= 120f
	Answer		

Ref42

Torque is

A	Torque α Voltage	B	Torque α 1/ voltage
C	Torque α $Voltage^2$	D	Torque α Voltage x Current
	Answer		

Ref43

Permissible starting current for two motors (a) 15KW , 415V & (b) 15KW , 415V are

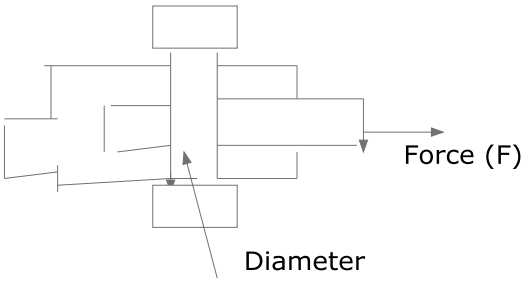
A	102.5A & 82.3A	B	200A & 60A
C	300A & 100A	D	50A & 40A
	Answer		

Ref45

The weight of a tabular steel column 120 mm outside diameter and 100 mm inside diameter and 3 m height is

A	1000N	B	500N
C	400N	D	793.3N
	Answer		

Ref47

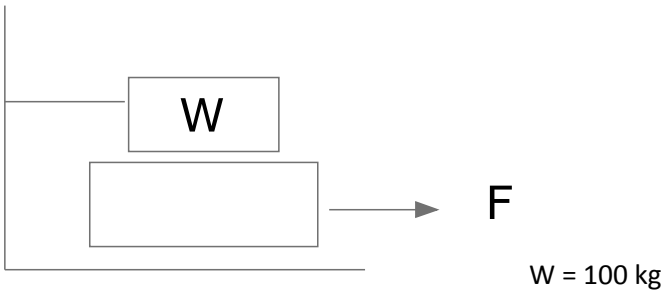


Diameter = 10 mm^2 Force (F) = 37 KN

The stress is

A	1200N/mm^2	B	471N/mm^2
C	1000N/mm^2	D	200N/mm^2
	Answer		

Ref50



W = 100 kg

A 100 kg block rests on a plate. The coefficient of friction between all surface is 0.2. The force required to pull the plate is

A	100 N	B	392.4 N
C	800 N	D	700 N
	Answer		

Ref52

A car starts from the rest at the rate of 1.2 m /s^2 for 15 sec. The velocity reached after 15 second is

A	36 m/ s	B	54 m/ s
C	9 m/s	D	18 m/s
	Answer		

Ref54

The work done for force 50N that moves a block to distance 3 m is

A	300J	B	450J
C	750J	D	150J
	Answer		

Ref57

A train of total mass 120 ton is travelling at 60 km/hr on level track. The tractive resistance is 80N/ton. Calculate the tractive effort required to accelerate the train to 100 km/hr in 35 second.

A	108 KN	B	37 KN
C	72 KN	D	54 KN
	Answer		

Ref60

Determine the torque required to accelerate a turbine rotor under going a dynamic balancing test from rest to a speed of 56000 rpm in 80sec. If the mass moment of inertia of rotor is 11.5 kg-m^2 .

A	225.8 N-m	B	112.5 N-m
C	300 N-m	D	400 N-m
	Answer		

Ref62

A train moving at 63 km/hr requires 40 KN of tractive effort at this speed . Determine the driving power.

A	700 KW	B	350 KW
C	900 KW	D	1000 KW
	Answer		

Ref64

A block of mass 2 kg is freely suspended on a string. A bullet of mass 75 g is fired horizontally into the block. If the velocity of the bullet before the impact is 415 m/s, calculate the velocity of block with the bullet embedded in it immediately after the impact.

A	30 m/s	C	45 m/s
C	60 m/s	D	15 m/s
	Answer	D	

Ref65

When a golf ball having a mass 50 g is struck by club. The ball and club are in intact for 0.001 sec immediately after the impact. The ball travels at 45 m/s. Determine the average force of collision.

A	6000 N	C	3000 N
C	1500 N	D	7500 N
	Answer		

Ref170

A motor consumes 10 KW power when connected to 259V. Calculate the current

A	46A	B	20A
C	80A	D	10A
	Answer		