IE 2 Engineering Physics

EE204	Engineering Physics (Electrical)	1

CE 102 Physics (EE204)--Civil

ME 101	Applied Mathematics (Mechanical)
ME 103	Engineering Mechanics (Mechanical)

Part 1 Lesson

Electrical Fundamental I

EE107	Electrical Equipments

EE114	Electrical Power Principle

E029+G006

Page 51 to 57 of http://www.filefactory.com/file/cf9bf8f/n/Video_Lessons.pdf

Electro-technical Problems+ Materials Science

http://www.filefactory.com/file/cf9a3a6/n/E029.zip

The links contain the following lessons

E029 Lesson 1 Electric motor drive 1
http://youtu.be/IfJVYgfBWlw
E029 Lesson 2 Electric motor drive 2
http://youtu.be/ZSmWel8QZlU
E029 Lesson 3 Induction motor starting
http://youtu.be/9f3RB0vctNk
E029 Lesson 4 Density+Friction
http://youtu.be/T0W1axM9BPw
E029 Lesson 5 Linear motion
http://youtu.be/9g3FiTq782Q
E029 Lesson 6 Force+mass+acceleration
http://youtu.be/4YotFs_Ikqo
E029 Lesson 7 Acceleration against resistance
http://youtu.be/9kkEdKPlXcA
E029 Lesson 8 Torque+work+energy
http://youtu.be/UdZBeq2BKp0
E029 Lesson 9 Momentum+Impulse
http://youtu.be/WdzlLCHjgMU
http://youtu.be/yWyXUZ6LooQ
E029 Lesson 10 The law of machine
http://youtu.be/ntKMZ04wl3E
E029 Lesson 11 Stress and strain
http://youtu.be/u1LyoKSxOfQ

Engineering Physics

EE204	Engineering Physics

E046/ E082
Page 58 to 86 of http://www.filefactory.com/file/cf9bf8f/n/Video_Lessons.pdf

Physics

E046Part 1.zip
http://www.filefactory.com/file/cf9bb96/n/E046Part_1.zip

E046Part 2.zip
http://www.filefactory.com/file/cf90d34/n/E046Part_2.zip

E046Part 3.zip
http://www.filefactory.com/file/cf90259/n/E046Part_3.zip

E046Part 1.zip
http://www.filefactory.com/file/cf9bb96/n/E046Part_1.zip

The links contain the following lessons

E046 Lesson 1-Motion along straight line

http://youtu.be/rDB2U1Mq-6Q

E046 Lesson 2-Constant acceleration

http://youtu.be/QPsYjstlzcI

http://youtu.be/pr4YL41j4Bc

http://youtu.be/1B7CBmldoVo

E046 Lesson 3-Vector

http://youtu.be/YHO0lTlJ5Tc

E046 Lesson 4-Vector + Force Mass Acceleration

http://youtu.be/hghrcG-9XVk

http://youtu.be/ENIO1SODOn0

E046 Lesson 5-Uniform circular motion

http://youtu.be/_YPXgG59UjE

http://youtu.be/XYl6Kz1kais

E046 Lesson 6-Energy

http://youtu.be/AG3P0UXrFBY

E046 Lesson 7-Centre of mass

http://youtu.be/EY8rM9MSE1k

E046 Lesson 8-Rotation

http://youtu.be/-V9f-2h0gNU

E046 Lesson 9-Kinetic Energy of rotation

http://youtu.be/D7ZsVZ44NnI

E046 Lesson 10-Equilibrium

http://youtu.be/YtJmMWJIZqI

E046 Lesson 11-Fluid

http://youtu.be/hQN2eyQfEeY

E046 Lesson 12-Thermal expansion

http://youtu.be/EM0DmVWSv8k

E046 Lesson 13-Gases

http://youtu.be/NAeTsvVWeJY

http://youtu.be/E7B8-lLfLB8

E046 Lesson 14-Heat temperature wave

http://youtu.be/Th84r-BkLZM

E046 Lesson 15-Harmonic motion

http://youtu.be/c6ku5HnqBsA

http://youtu.be/tbEm7vieTMA

E046 Lesson 16-Transverse wave

http://youtu.be/2O6P7AJ3Xqc

E046 Lesson 17-Wave and sound

http://youtu.be/7Xh9QvDwbiw

E046 Lesson 18-Light and photon

http://youtu.be/qm5tfHQaF8I

http://youtu.be/s5Q5XT-JihE

E046 Lesson 19-Electric field

http://youtu.be/WIePDh42cXE

E046 Lesson 20-Magnetic field

http://youtu.be/Hq1EhUpq85M

http://youtu.be/f7ZGb-FhWSo

E046 Lesson 21-Faraday law of induction

http://youtu.be/Rj7DeNg_GhA

http://youtu.be/HWZZURK40vI

http://youtu.be/S8kxTHkptU8

E046 Lesson 22-Magnetic deflection+Atom

http://youtu.be/sUdGmpv6pT4

http://youtu.be/rxalu9L0WHg

E046 Lesson 23-Nuclear physics principle

http://youtu.be/NHajZLl3Q-I

http://youtu.be/h2xG0E3v450

E046 Lesson 24-Nuclear spin+ Nuclear activity and decay

http://youtu.be/zsJLSWC_uTM

E046 Lesson 25-Nuclear model

http://youtu.be/e4NzxFCbrMM

E046 Lesson 26-Nuclear power generation

http://youtu.be/i2Bf9e9DBl0

E046 Lesson 27-Nuclear fusion

http://youtu.be/g-V6APCehOU

http://youtu.be/tfh6qfufguU

lectro-magnetics

EE111	Electromagnetism & Basic Electrical Machines

G001+G101

Page 137 to 142 of http://www.filefactory.com/file/cf9bf8f/n/Video_Lessons.pdf

Electro-magnetism

http://www.filefactory.com/file/cf9b277/n/G001.zip

The links contain the following lessons

G001 Lesson 1 Magnatism+Electro magnet

http://youtu.be/Lm166hHi3HA

G001 Lesson 2 Electric & Magnetic Circuit

http://youtu.be/Ny1JfhUVFAk

G001 Lesson 3 Electro magnetic induction

http://youtu.be/IYYQBeM8QgM

G001 Lesson 4 Inductor+Relay

http://youtu.be/brn-HHfKSXM

G001 Lesson 5 Magnetic problems

http://youtu.be/c85cSn6HTqg

AC Circuits

EE112	Alternating Current Principle

G002+G102

Page 143 to 148 of http://www.filefactory.com/file/cf9bf8f/n/Video_Lessons.pdf

Basic single phase and three phases circuits

G002 Lesson 1 Sine wave and it's values.zip

http://www.filefactory.com/file/c386ab9/n/G002_Lesson_1_Sine_wave_and_it_s_values.zip

http://youtu.be/cvwNfp_oOI8

G002_Lesson_2_AC_RL+RC_Series_circuits.zip
_http://www.filefactory.com/file/c0ad67c/n/G002_Lesson_2_AC_RL+RC_Series_circuits.zip

http://youtu.be/VZMR4_6OIF4

G002 Lesson 3 AC Series RLC circuits.zip

http://www.filefactory.com/file/c386ad8/n/G002_Lesson_3_AC_Series_RLC_circuits.zip

http://youtu.be/sfhmoYce2ug

G002 Lesson 4 AC Parallel circuits.zip

http://youtu.be/e-awv_8v5m8

http://www.filefactory.com/file/c0ad4f3/n/G002_Lesson_4_AC_Parallel_circuits.zip

G002 Lesson 5 Three phase circuit basics.zip
http://youtu.be/vRsHUF4vD5s
http://www.filefactory.com/file/c0ad468/n/G002_Lesson_5_Three_phase_circuit_basics.zip

G002 Lesson 6 Balanced three phase circuit.zip

http://youtu.be/irwVD59QV4s

http://www.filefactory.com/file/c0ad5d9/n/G002_Lesson_6_Balanced_three_phase_circuit.zip

The links contain the following lessons

G002 Lesson 1 Sine wave and it's values
G002 Lesson 2 AC RL+RC Series circuits
G002 Lesson 3 AC Series RLC circuits
G002 Lesson 4 AC Parallel circuits
G002 Lesson 5 Three phase circuit basics
G002 Lesson 6 Balanced three phase circuit

http://youtu.be/m0dN0Wp6LCI
http://youtu.be/gTjcE8ssuII
http://youtu.be/LqRybJxm0tE
http://youtu.be/brn-HHfKSXM
http://youtu.be/brn-HHfKSXM
http://youtu.be/7SPxjr1DSFE
http://youtu.be/e-awv_8v5m8
http://youtu.be/vRsHUF4vD5s
http://youtu.be/irwVD59QV4s

lectrical Fundamental I

EE107	Electrical Equipments

EE114	Electrical Power Principle

E029+G006

Page 51 to 57 of http://www.filefactory.com/file/cf9bf8f/n/Video_Lessons.pdf

Electro-technical Problems+ Materials Science

http://www.filefactory.com/file/cf9a3a6/n/E029.zip

The links contain the following lessons

E029 Lesson 1 Electric motor drive 1
http://youtu.be/IfJVYgfBWlw

E029 Lesson 2 Electric motor drive 2
http://youtu.be/ZSmWeI8QZIU

E029 Lesson 3 Induction motor starting
http://youtu.be/9f3RB0vctNk

E029 Lesson 4 Density+Friction
http://youtu.be/T0W1axM9BPw

E029 Lesson 5 Linear motion
http://youtu.be/9g3FiTq782Q

E029 Lesson 6 Force+mass+acceleration
http://youtu.be/4YotFs_Ikqo

E029 Lesson 7 Acceleration against resistance
http://youtu.be/9kkEdKPlXcA

E029 Lesson 8 Torque+work+energy
http://youtu.be/UdZBeq2BKp0

E029 Lesson 9 Momentum+Impulse

http://youtu.be/WdzILCHjgMU

http://youtu.be/yWyXUZ6LooQ

E029 Lesson 10 The law of machine

http://youtu.be/ntKMZ04wl3E

E029 Lesson 11 Stress and strain

http://youtu.be/u1LyoKSxOfQ

Physics-E046 Part 1.zip

http://www.filefactory.com/file/c0b68a1/n/Physics-E046_Part_1.zip

Exercise

Do the exercises under E046

http://www.filefactory.com/file/cf882da/n/G037+38+39+E046_Video_Lesson_Exercises.pdf

Part 2 References

RE008	ENEMP101A Introduction to Engineering Mathematics and Physics http://www.filefactory.com/file/dcgiofs8edf/RE008_pdf
RE008a	ENEMP102A Foundation Engineering Mathematics and _Physics http://www.filefactory.com/file/6t9f04fdnbe7/RE008a_pdf
RE009	ENEMP201A Intermediate Engineering Mathematics and _Physics http://www.filefactory.com/file/6y8bzb27cmtt/RE009_pdf

G002.zip (5.82MB)
http://www.filefactory.com/file/4olc1xjifjap/n/G002.zip

G001_Part_2.zip (12.33MB)
http://www.filefactory.com/file/4ct5lyyua85j/n/G001_Part_2.zip

G001_Part_1.zip (6.44MB)
http://www.filefactory.com/file/6muoey9cof1f/n/G001_Part_1.zip

E047Mech.zip (5.21MB)
http://www.filefactory.com/file/2mfdtk8v7lo9/n/E047Mech.zip

E047Mech.pdf (8.26MB)
http://www.filefactory.com/file/4uu8as091h1n/n/E047Mech.pdf

E029Tutorial.doc (7.16MB)
http://www.filefactory.com/file/678qxivssuix/n/E029Tutorial.doc

TUTORING LESSONS

EE204 Part 1 EE204 Part 2 EE204 Part 3 EE204 Part 4 EE204 Part 5

EE204 Part 6

Test & Assessment

http://www.filefactory.com/file/13o82qnudgr3/n/E046_Online_Test_1_Question_pdf

http://www.filefactory.com/file/6o2lsbtge7tt/n/E046_Online_Test_1_Answer_doc

SUBMIT THE SCANNED COPY OF ANSWER to

Dr Kyaw Naing
PO BOX 227
Marrickville, NSW 1475, Sydney, Australia

Password- **iqytechnicalcollege**

Then do the following test. Download from the given link

E046 Online Test

Ref66

The car is driven along a straight road for 8.4 Km at 70 Km/ hr. At which point the truck runs off the gasoline & stops. The next 30 minutes, the driver walks along the road for another 3 Km.

(a) What is over all displacement?

(b)What is time interval from the beginning of the drive to arrival at the station?

(c)What is average velocity?

A	20 km, 1 HR, 20 km/hr	B	30 km, 2 HR, 30 km /hr
C	10.4 km, 0.62 HR, 16.8 km/hr	D	50 km, 5 HR, 70 km/hr
	Answer		

Ref70

On a hot day in Las Vegas, an oil tanker loaded 37000 L of diesel fuel. It encounters cold weather on Utah where temperature was 23 Degree K lower than in Las Vegas. How many litres did it deliver? Volume expansion for diesel fuel is 9.5×10^{-4} / Deg C coefficient of linear expansion is 11×10^{-6} /deg c

A	18380 L	B	36190 L
C	20000 L	D	10000 L
	Answer		

Ref73

A cylinder contains 12 L of oxygen at 20 deg C and 15 atm. The temperature is raised to 35 deg C and the volume is reduced to 8.5L . What is the final pressure of the gas in atmosphere.?

A	22 atm	B	33 atm
C	11 atm	D	44 atm
	Answer		

Ref76

Three Carnot engines operate between reservoir temperatures of (a) 400 deg K and 500 deg K (b) 600 and 800 deg K (c) 400 and 600 deg K. rank the engineers according to thermal efficiencies. Greatest first.

A	c, b, a	B	a, b, c
C	b, c, a	D	Equal
	Answer		

Ref79

At t= 0, the displacement X(0) of the block is – 8.5 cm. The block's velocity V(0) is -0.92 m/ s and it's acceleration a (0) is 47 $m/s^{2.}$

(a) What is the angular velocity w of this system?

(b) What are the phase constant ϕ and amplitude Xm ?

A	22.5 rad/ s, 155 deg, 9.4 cm	B	50 rad/ s, 30 deg, 18 cm
C	100 rad/ s, 45 deg, 10 m	D	15 rad/ s, 75 deg, 4cm
	Answer		

Ref82

The following equations give the position X (t) of a particle in four situations

(a) X = 8t-4 (b) $x= -6t^3+9t^2+6$ (c) $X = 3 / t^2 - 9/ t$ (d) $X = 7 t^2 -4$ To which of these situations? Do the constant acceleration formulae apply?

A	a	B	b
C	c	D	d
	Answer		

Ref85

a = 3 I – 8 j b = -2 I + 4 j c = - 4 j

Find the resultant vector for a+b+c

A	10i+2j	B	7i+5j

C	2.5i – 2.3 j	D	0
	Answer		

Ref88

2 kg Tin is accelerated at 3m /s^2 in the direction shown by a over a frictionless horizontal surface. The acceleration is caused by three forces . What is the third force?

A	20N	B	10N
C	1N	D	12.5N
	Answer		

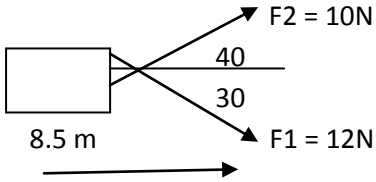
Ref91

Suppose that the coefficient of static friction μ between the rider's clothing and the canvas is 0.4 and the cylinder radius " R" is 2.1 m.

(a) What minimum speed (V) must the cylinder and the rider have if the rider is not to fall when the floor drops? (b) If the rider's mass is 49 Kg, what is the magnitude of centrifugal force on rider?

A	7.2 m/s, 1200N	B	3.6 m/s, 600N
C	21 m/s, 2000N	D	30 m/s, 3000N
	Answer		

Ref94

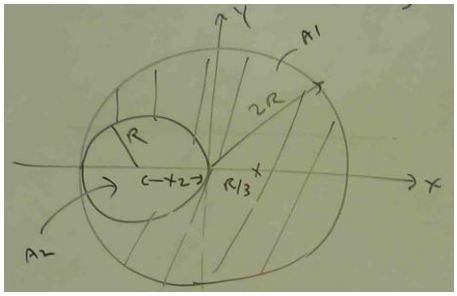


Find total work done of the forces.

A	306J	B	153J
C	469J	D	73J
	Answer		

Ref97

The figure shows a uniform metal plate " P " of radius " 2 R " from which a disk of radius "R" has been stamped out. Using the X-Y co-ordinate system shown, locate the centre of mass of the plate.



A	Xt = R / 4, Yt = R	B	Xt = R, Yt = R
C	Xt = R / 2, Y t = R/ 2	D	Xt = R / 3, Y t= 0

	Answer		

Ref100

A coach roach rides the rim of a rotating merry go around. If the angular speed is constant, does the coach roach have (a) Radial acceleration ? (b) Tangential acceleration ? What angle Θ_p should the arc subtend so that a 15. 4 kg at the point "P".

A	50 Deg	B	30 Deg
C	111 Deg	D	200 Deg
	Answer		

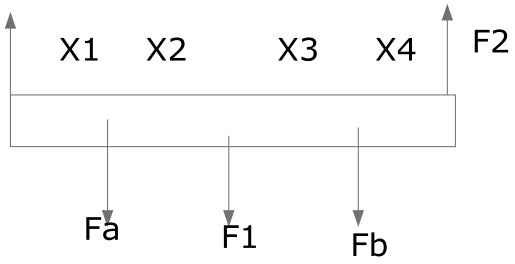
Ref67

A rolling object has linear velocity 342.5 m/s radius =3 m mass =170 kg Calculate total kinetic energy.

A	1.5×10^7 J	B	3×10^7 J
C	4.5×10^7 J	D	6×10^7 J
	Answer		

Ref68

The figure gives over view at a uniform rod in static equilibrium , the magnitude of the forces F1 & F2 are



X1= 4m, X2= 2m, X3=1m, X4 = 1m, Fa = 10 N ,Fb = 30N

A	90 N, 130 N	B	22.5 N, 32.5 N
C	45 N, 65 N	D	100 N, 200 N
	Answer		

Ref 69

A living room has the floor dimension and height of 3.5 m x 4.2 m. A height of 2.4 m (a) What does the air in the room weigh when the air pressure is 1 atm? (b) What is the magnitude of the atmosphere downward force on the top of your head which we take to have an area of $0.04 m^2$

A	420 N, 4×10^3 N	B	840 N, 8×10^3 N
C	210 N, 2×10^3 N	D	1640 N, 6×10^3 N
	Answer		