



ABU DHABI POLYTECHNIC
Answer's Sheet cover page



Final Exam

Semester 1
Nov 23 rd 2017

Instructor

Students answer on the question paper
Calculators, drawing kits and dictionaries are allowed
No additional materials are required

STUDENT NAME

STUDENT NUMBER

CRN

DEPARTMENT

READ THESE INSTRUCTIONS CAREFULLY

Write your *name*, *number*, *CRN* and department **clearly** in the boxes above.

Answer **all** questions.

Show **all** your working and use appropriate **units**. Otherwise, you may lose marks.

You may use a pencil for all your work.

Answers that are not **clearly readable**, if any, will not be marked.

Total	30
Marks obtained	

Total	/100
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All mobile devices are not allowed during examination.

Abu Dhabi Polytechnic considers cheating or attempting to cheat a serious offense that will result in disciplinary action taken against involved individuals.

Final Exam Physics 111P

ID: _____

Name: _____

Question 1 (1 point)

Objects stick together in _____ types of collision.

- Both
- In elastic
- elastic

Question 2 (1 point)

The sensor shown in the figure is _____.



- Motion sensor
- Force sensor
- acceleration sensor

Question 3 (1 point)

An example of rotatory motion is _____.

- Pendulum motion
- Motion of Earth around its own axis
- Mass attached to spring

Question 4 (1 point)

μ_k , the coefficient of dynamic friction will change with _____.

- with the change of surface material
- with surface area

- with hanging masses

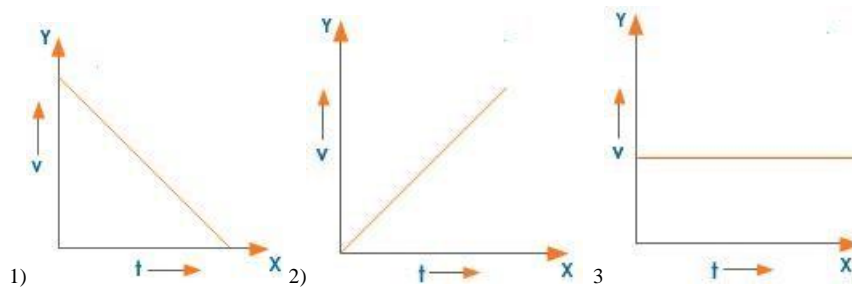
Question 5 (1 point)

According to hook's Law, extension in the spring is directly proportional to the applied _____.

- Force
 spring constant
 mass

Question 6 (1 point)

Identify the graph showing uniform velocity.



- 2
 3
 1

Question 7 (1 point)

$$\text{work done} = \frac{1}{2}m(v_f)^2 - \frac{1}{2}m(v_i)^2$$

the above equation represents _____.

- work Momentum Principle
 Work done Principle
 work Energy Principle

Question 8 (1 point)

What does the term RPM mean in rotational motion?

- Radians per minute
 Revolutions per minute
 Right angles per minute

Question 9 (1 point)

The graph between L and T^2 is _____.

- not direct
- Linear
- Inverse

Question 10 (1 point)

The sum of total momentum of the two objects moving in the opposite direction with the same speed is _____.

- decreasing
- increasing
- zero

Question 11 (1 point)

The motion graph for the linear motion looks like _____ as their rotational analog.

- none
- opposite
- same

Question 12 (1 point)

What is the SI unit of Force?

- N/m
- Dynes
- N

Question 13 (1 point)

The unit of spring constant is _____.

- N m
- N/cm
- N/m

Question 14 (1 point)

Time Period of a simple pendulum is independent of _____.

- frequency
- Length of thread
- amplitude of vibration

Question 15 (1 point)

A 10 kg object accelerates from rest to 10 m/s in 10 seconds. How much force is required?

- 1 N
- 0.1 N
- 10 N

Question 16 (1 point)

According to Newton's 2nd Law of motion if $F = \text{constant}$, 'a' is _____ proportional to mass.

- none
- directly
- inversely

Question 17 (1 point)

What is the name for energy due to height above the Earth's surface?

- Total energy
- Kinetic energy
- Potential energy

Question 18 (1 point)

Angular displacement has _____ SI units.

- Revolutions
- degree
- radian

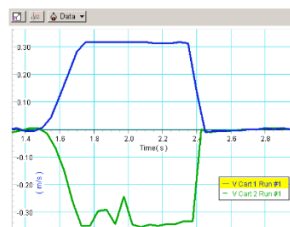
Question 19 (1 point)

The tool to find mean or average is _____.

- smart tool
- Linear Fit tool
- statistical tool

Question 20 (1 point)

The below fig shows _____ collision.



- Elastic
- None
- In elastic

Question 21 (1 point)

Energy connected to motion is called ?

- Potential energy
- Kinetic energy
- Mechanical energy

Question 22 (1 point)

The sensor in the figure is _____.



- rotatory motion sensor
- acceleration sensor
- motion sensor

Question 23 (1 point)

Force divided by mass equals

- time
- acceleration
- velocity

Question 24 (1 point)

Distance has _____ only .

- direction
- magnitude
- both magnitude and direction

Question 25 (1 point)

Momentum remains conserved in _____ types of collision.

- Both types of collision
- elastic collision

- In elastic collision

Question 26 (1 point)

The tool used for finding the coordinate of a point is called_____.

- smart tool
 smart fit tool
 statistical tool

Question 27 (1 point)

What is a vehicle doing if it decelerates?

- Moves backwards
 Speeds up
 Slows down

Question 28 (1 point)

The formula to find the slope from graph is _____.

- run/Rise
 rise * run
 Rise /run

Question 29 (1 point)

Kinetic Energy is not conserved in _____ types of collision.

- In elastic collision
 Elastic collision
 both

Question 30 (1 point)

Which of these is NOT a unit for work

- Joule
 Nm
 N
-