نموذج اختبار شهر

الفصل الدراسى الثانى

2021-2020

الصف الأول الثانوى

اليوم الثالث

باللغة الانجليزية

Model - Test

First Year- Secondary

Day Three

No of questions	Subject
10	Chemistry
10	Physics
10	Biology
30	Total

Subject: Chemistry

Choose the correct Answer

Q 1. If the temperature of 0.5 mole of pure water rises by 2 ^{0}c , The quantity of heat in Calorie is

[Atomic mass O=16 , H=1]

A)	9
B)	18
C)	36
D)	12

Q 2. System contains two substances (A & B), The change in energy for both of them as shown in the following table

The substance	A	B
The change in energy (KJ)	-60	+ 40

So that the change in energy for the surrounding is

A)	+ 20 KJ
B)	- 20 KJ
C)	- 100 KJ
D)	+ 100 KJ

Q 3. The following table illustrates the specific heat of some elements in J/g^{0}c

Al	Cu	Fe	C
0.9	0.38	0.44	0.71

When equal masses of these elements are exposed to the same quantity of heat, The element whose temperature rises faster is ……..

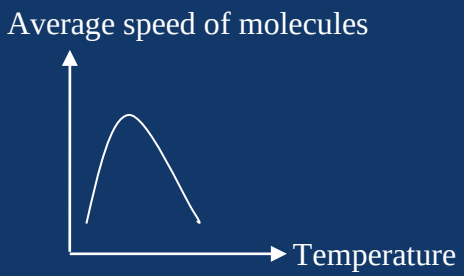
A)	Al
B)	Fe
C)	Cu
D)	C

Q 4.	A system containing 5 g of substance (A) dissolved in 30 g of water, In the end of experiment the temperature decreased by 3 ^{0}c and the mass of the solution was 35 g, For this system	
A)	**Both of mass and energy are change**	
B)	**Closed system**	
C)	**Open system**	
D)	**Both of mass and energy are not change**	

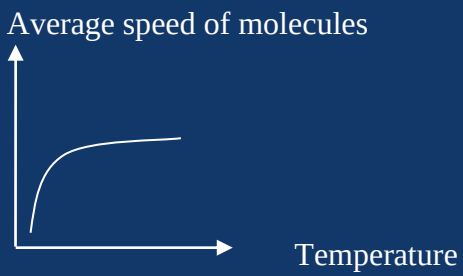
Q 5.	The temperature of 34 g of Platinum raised by 5 ^{0}c , If you know that the specific heat of Platinum is 0.133 J/g ^{0}c , The amount of gained heat is ……	
A)	**22.6 J**	
B)	**11.3 J**	
C)	**27.5 J**	
D)	**19.8 J**	

Q 6. Which of the following shapes expresses the right graphical relationship between the average of speed of molecules and the temperature

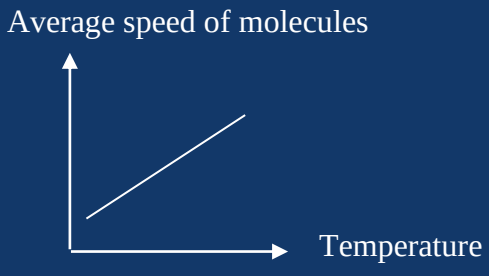
Shape (A)



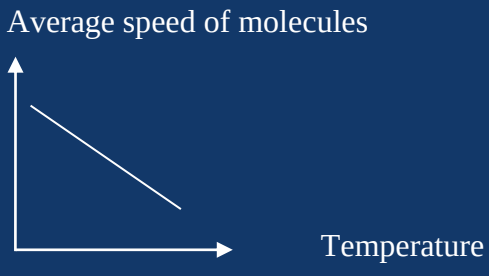
Shape (B)



Shape (C)



Shape (D)



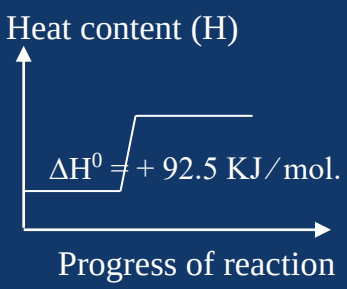
A)	**Shape (A)**	
B)	**Shape (B)**	
C)	**Shape (C)**	
D)	**Shape (D)**	

Q 7. 1 g of Hydrogen gas reacted as in the following reaction

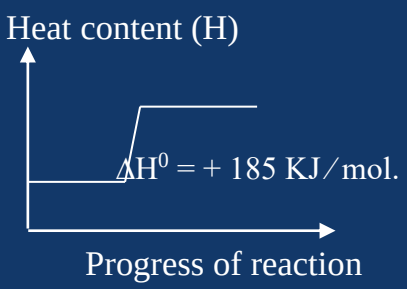
$$H_{2(g)} + Cl_{2(g)} \rightarrow 2HCl_{(g)} + 185\ KJ$$

The diagram that represents this reaction is

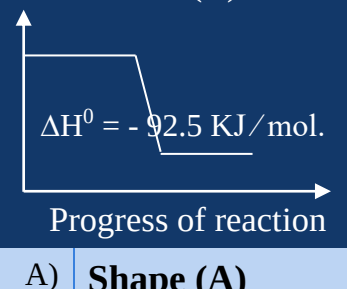
Shape (A)



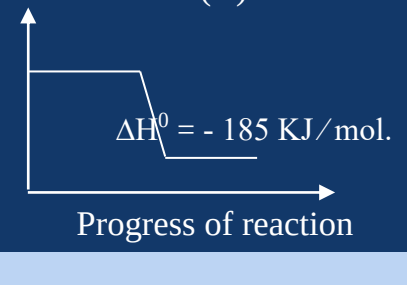
Shape (B)



Shape (C)

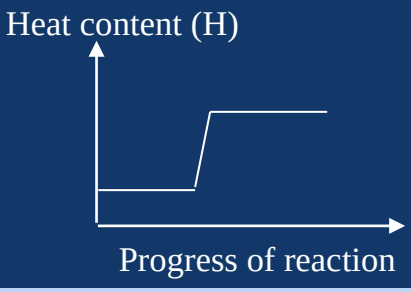


Shape (D)



		A)	**Shape (A)**
		B)	**Shape (B)**
		C)	**Shape (C)**
		D)	**Shape (D)**

Q 8. The energy chart in front of you expresses the following reaction



		A)	**A + B → C + 50 KJ**
		B)	**A + B + 50 KJ → C**
		C)	**A + B - 50 KJ → C**
		D)	**A + B → C ΔH = - 50 KJ**

Q 9. From the reaction

$\frac{1}{2} H_{2(g)} + \frac{1}{2} I_{2(g)} + 26\ KJ \rightarrow HI_{(g)}$

The value of ΔH of the following reaction is

$2HI_{(g)} \rightarrow H_{2(g)} + I_{2(g)}$

A)	- 52 KJ
B)	+ 52 KJ
C)	- 26 KJ
D)	+26 KJ

Q 10. In the following reaction

$H_{2(g)} + Br_{2(g)} \rightarrow 2HBr_{(g)}$

If the values of bond energies are as shown in the following table

The Bond	H - H	Br - Br	H – Br
The average of Bond energy KJ/mol.	436	190	362

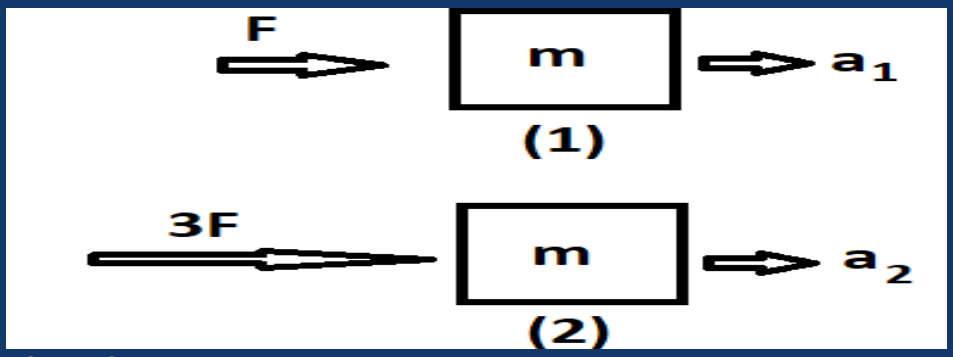
The change in Heat content for the reaction is

A)	**+ 198 KJ/mol.**
B)	**- 198 KJ/mol.**
C)	**+ 98 KJ/mol.**
D)	**- 98 KJ/mol.**

Subject: Physics

Choose the correct Answer

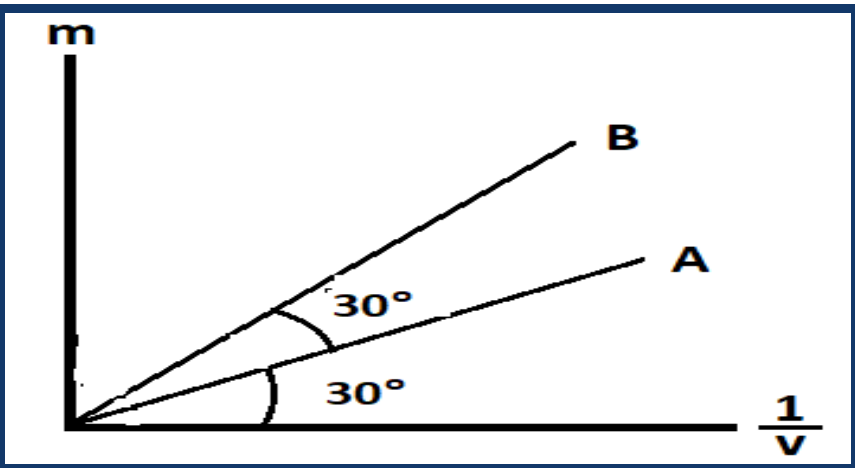
Q 11.



If the force acting on a body is tripled, the acceleration by which the body moves in the second case = …….

A)	$a_2 = 3\ a_1$
B)	$a_2 = 1/3\ a_1$
C)	$a_2 = 2\ a_1$
D)	$a_2 = 1/2\ a_1$

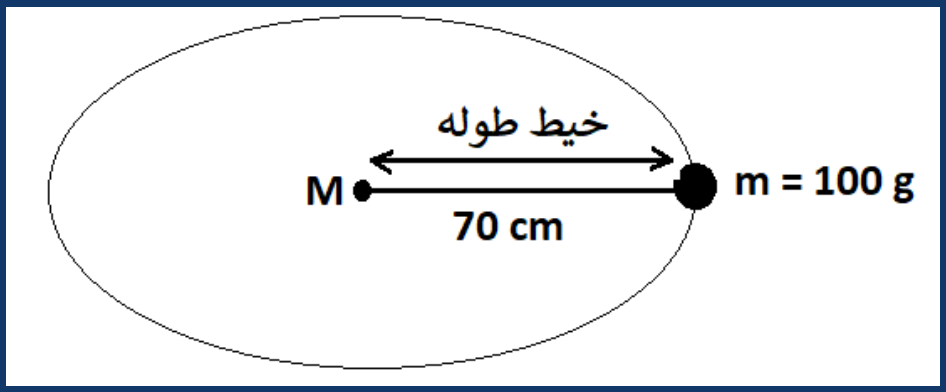
Q 12.



The graph illustrates the relation between the mass of the body and the reciprocal of its velocity $(\frac{1}{v})$. so, the ratio $\frac{\text{momentum of body (B)}}{\text{momentum of body (A)}}$ = ……

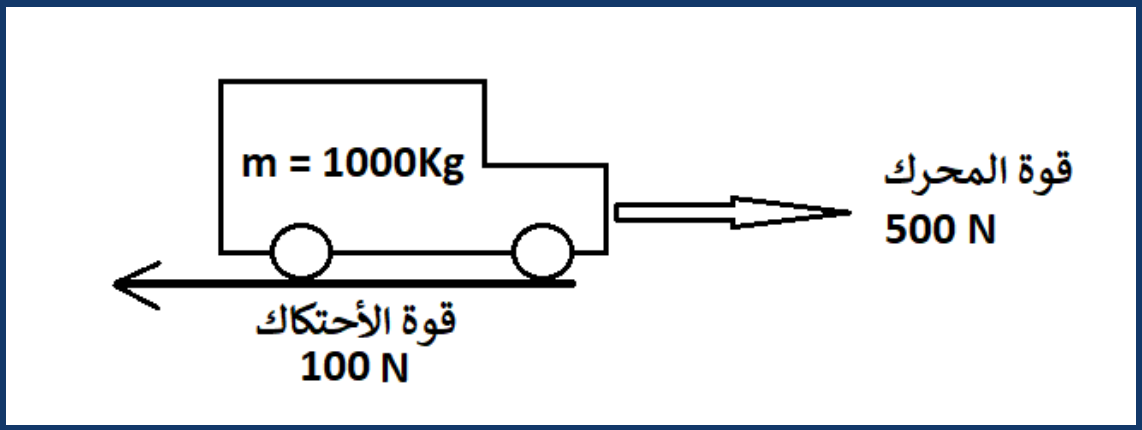
A)	**2**
B)	**3**
C)	$\sqrt{3}$
D)	**1**

Q 13. **A body of mass 100g is tied to a thread of 70 cm long, makes 4 complete rotations around point (M) in 10 seconds. So, its centripetal acceleration = …….**



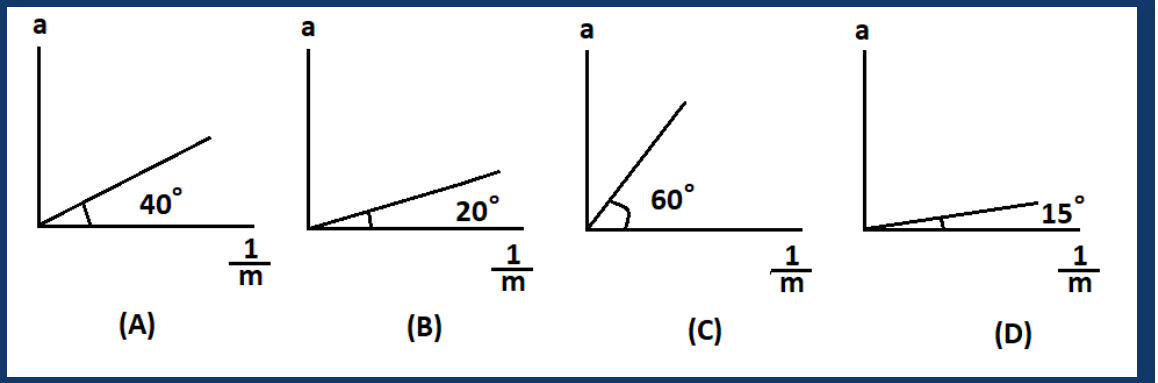
A)	**39.84 m/s^2**
B)	**398.4 m/s^2**
C)	**2.4 m/s^2**
D)	**4.4 m/s^2**

Q 14. **Using the data on the figure , so, the acceleration at which the car moves …….**



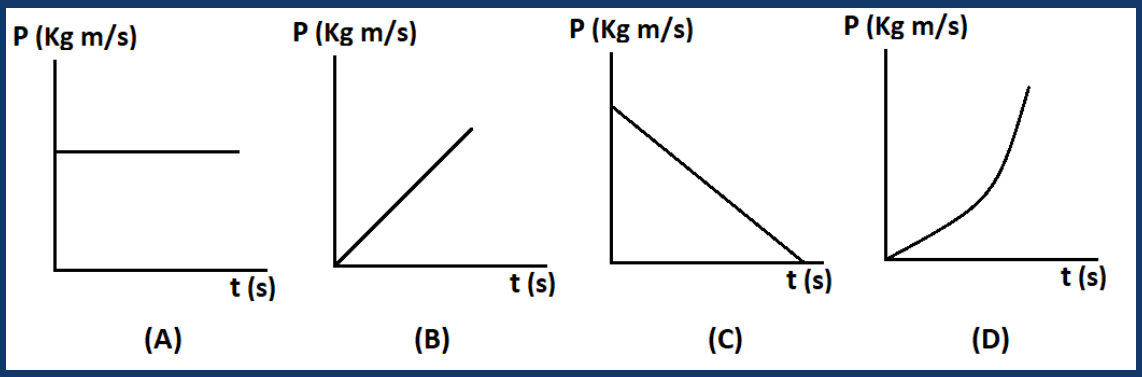
A)	**0.6 m/s^2 to the right**
B)	**0.4 m/s^2 to the left**
C)	**0.4 m/s^2 to the right**
D)	**0.6 m/s^2 to the left**

Q 15. The graphs illustrate how the acceleration changes as the reciprocal of the mass changes. Which one illustrates the greatest moving force .....



A)	**(B)**
B)	**(C)**
C)	**(A)**
D)	**(D)**

Q 16. The graphs illustrate the relation between the momentum of a body and time. Which graph illustrates a force which is opposite to the motion direction? .....

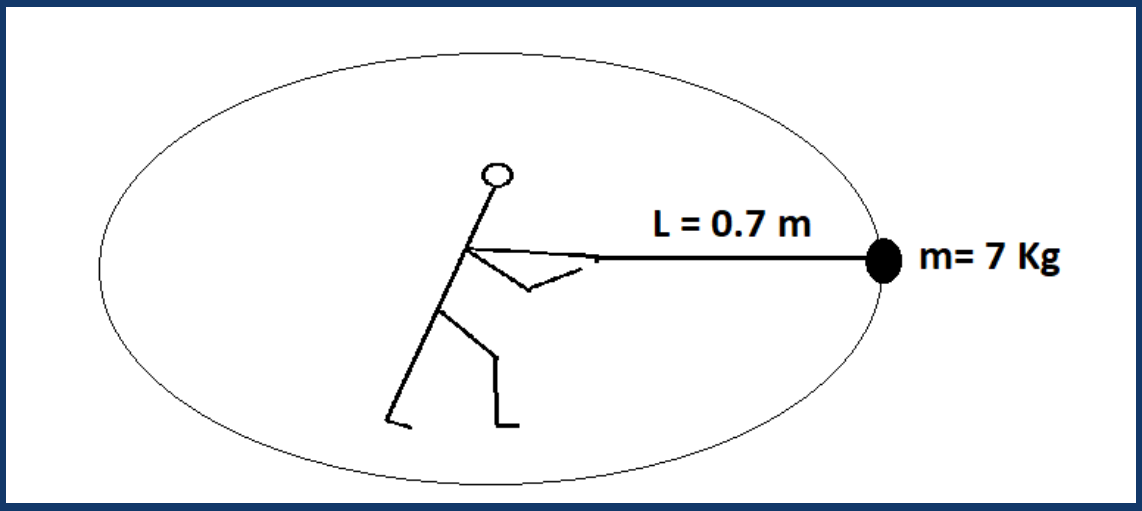


A)	**(C)**
B)	**(A)**
C)	**(D)**
D)	**(B)**

Q 17. A car of mass 1000 Kg moves in a curved road of diameter (50 m) at (10 m/s) speed. So, the friction force needed to keep the car from sliding out of the curve = ...

A)	**400 N**
B)	**2000 N**
C)	**4000 N**
D)	**200 N**

Q 18. In the hammer throw sport, knowing that the player makes (10) complete rotations in (8) seconds. Using the data on the figure. So, the tension affecting the player's arm = ……



A)	**302.5 N**
B)	**203.5 N**
C)	**305.2 N**
D)	**503.2 N**

Q 19. If the speed by which the body rotates in a circular path is doubled. So, the centripetal acceleration of the body ……

A)	**Remains constant**
B)	**Decreases to half**
C)	**Increases to double**
D)	**Increases four times**

Q 20. As a body rotates in a circular path, which of the choices is correct ……

	The linear acceleration	**The centripetal acceleration**
A)	Has a value	Has a value
B)	zero	zero
C)	Has a value	zero
D)	**zero**	Has a value

Subject: Biology

Choose the correct Answer:

Q 21. What is the genotype for a flowering pea plant with white flowers that carries the largest number of dominant genes?

A) **aaBb**

B) **AABb**

C) **AABB**

D) AAbb

Q 22. Which of the following chromosomal structure represents a gamete that can be produced by a normal male or female in human?

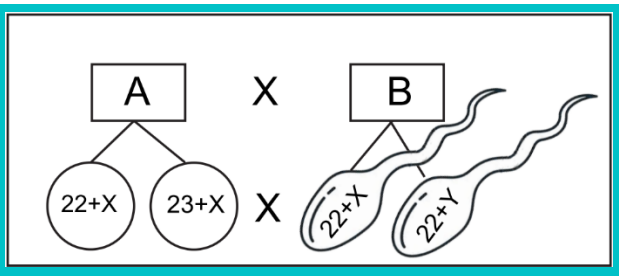
A) (22 + X)

B) (22 + Y)

C) (22 + XX)

D) (22 + XY)

Q 23.



What is the percentage of normal females resulting from this fertilization?

A) 25 %

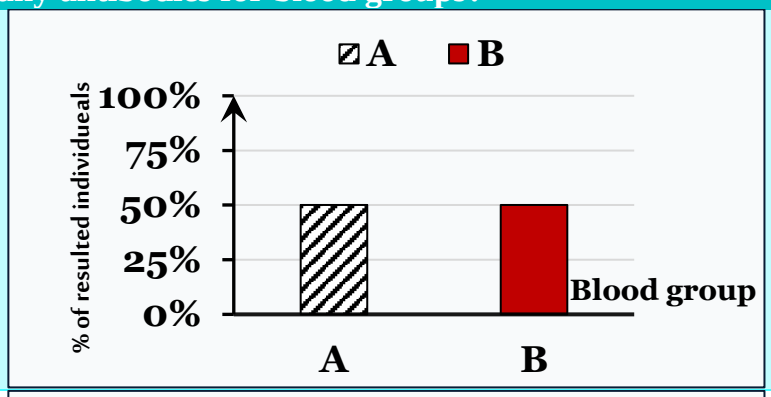
B) 50 %

C) 75 %

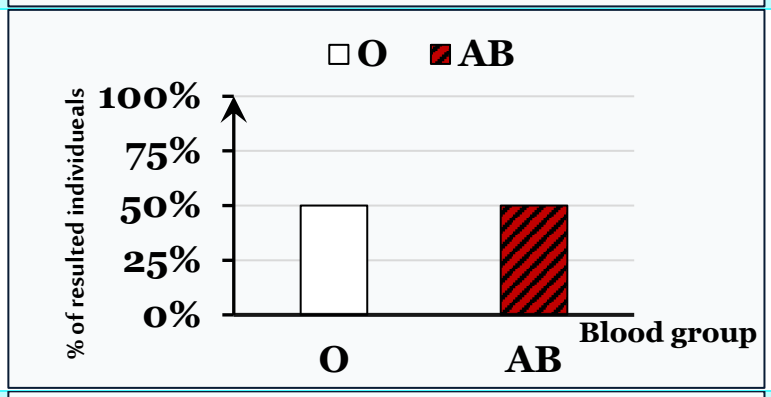
D) 100 %

Q 24. Which of the following diagrams represents the result of mating of a father who is a universal donor for blood groups and a mother her blood doesn't have any antibodies for blood groups?

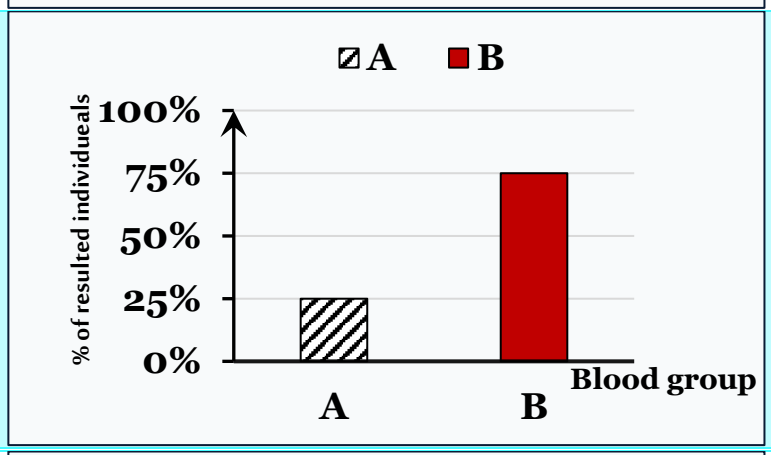
A)



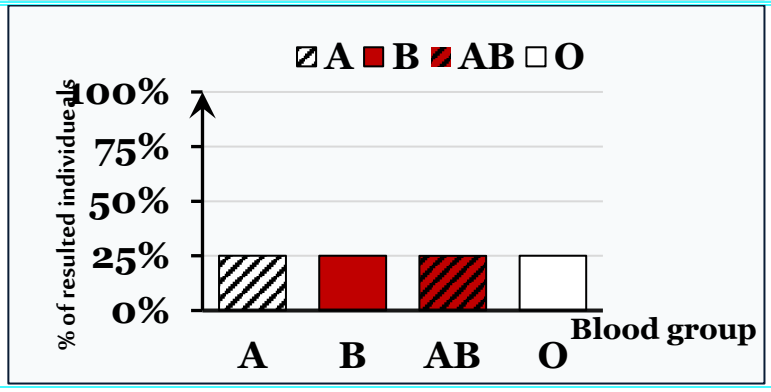
B)



C)



D)



Q 25. What is the number of different gametes that are produced from an individual whose structure Aabb?

A) 1
B) 2
C) 3
D) 4

Q 26. The mutation (a)in human is a recessive, sex linked and lethal for the pure embryos before birth. What is the percentage of dead babies that resulted from the marriage of a healthy man and carrier woman for this gene?

A) 100% females
B) 100% males
C) 50% of females
D) 50% of males

Q 27. In Antirrhinum plant, which of the following crossing produces more than two different phenotypes of flowers colour?

A) Pink X White
B) Pink X Red
C) White X White
D) Pink X Pink

Q 28. The albinism in human is a recessive trait that represented by (aa).
What is the result of mating a man and a woman both of them are a normal hybrid for this trait?

A) 25% Albino
B) 100% normal
C) 50% Albino
D) 50% normal

Q 29. Which of the following cases it isn't necessary to inject a (Rh-) mother with the antiserum for (Rh) factor?

A) The 1st baby is (Rh^+)
B) The father is pure (Rh^+)
C) The father is (Rh^-)
D) The 2nd baby is (Rh^+)

Q 30. Which of the following chromosomes has the largest size in the human karyotype?

A) Chromosome (22)
B) Chromosome (Y)
C) Chromosome (9)
D) Chromosome (X)

Model Answer

Subject: Chemistry

Question No	Symbol	Answer
1.	B	18
2.	A	+20 KJ
3.	C	Cu
4.	B	Closed system
5.	A	22.6 J
6.	C	Shape C
7.	C	Shape C
8.	B	A + B + 50 KJ → C
9.	A	-52 KJ
10.	D	-98 KJ

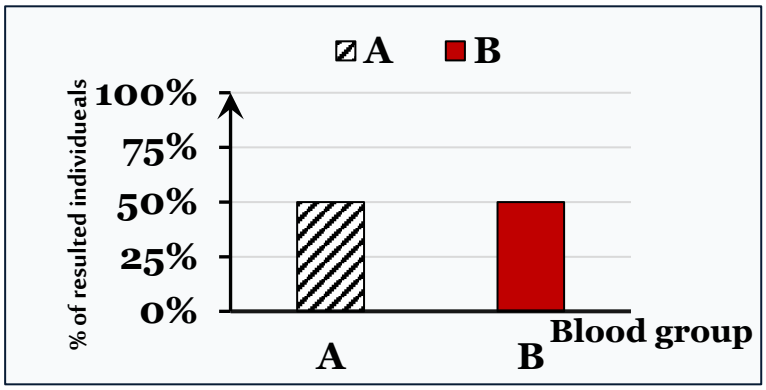
Subject: Physics

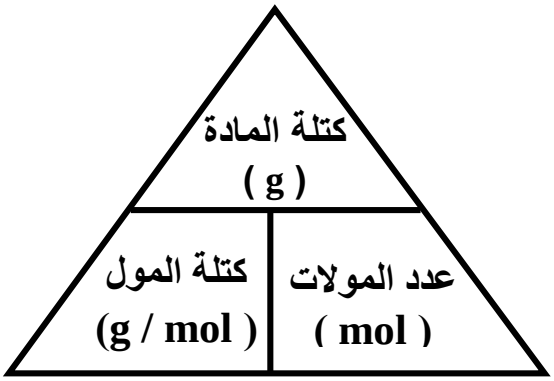
Answers

Question No	Symbol	Answer	
11.	**A**	$a_2 = 3\ a_1$	
12.	**B**	3	
13.	**D**	$4.4\ m/s^2$	
14.	**C**	$0.4\ m/s^2$ to the right	
15.	**B**	**(C)**	
16.	**A**	**(C)**	
17.	**C**	4000N	
18.	**A**	302.5 N	
19.	**D**	**Increases four times**	
20.	**D**	**zero**	**Has a value**

Subject: Biology

Answers

Question No	Symbol	Answer
21.	D	AAbb
22.	C	(22 + X)
23.	B	50 %
24.	A	
25.	B	2
26.	D	50 % of males
27.	D	Pink x Pink
28.	A	25% Albino
29.	C	The father is (Rh^-)
30.	D	Chromosome (X)



$$\triangle E \text{ (للنظام)} = - \triangle E \text{ (للوسط المحيط)}$$

$$q_p = m \cdot c \cdot \triangle T$$

دليل الطالب بالصف الاول الثانوي في مادة الفيزياء

لاختبار شهر مارس ٢٠٢١م

القوانين والعلاقات الرياضية التي يحتاج اليها الطالب:

١. كمية التحرك (P)

$\mathbf{P = m \, . \, v}$ **Kg.m/s**	حيث (m) هى كتلة الجسم و (v) هى سرعته

٢. القوة (F)

$\mathbf{F = \frac{\Delta P}{\Delta t}}$ $\mathbf{F = m \, . \frac{\Delta v}{\Delta t}}$ $\mathbf{F = m \, . a}$ **N**	حيث (m) هى كتلة الجسم و (a) هى العجلة التى يتحرك بها الجسم

٣. الوزن (F_g)

$\mathbf{F_g = m \, . g}$ **N**	حيث (m) هى كتلة الجسم و (g) هى عجلة الجاذبية الأرضية

٤. العجلة المركزية(a_c)

$\mathbf{a_c = \frac{v^2}{r}}$	حيث (v) هى السرعة المماسية للجسم و (r) نصف قطر المسار الدائرى

٥. السرعة المماسية لجسم يتحرك فى مسار دائرى (v)

$\mathbf{v = \frac{2 \pi r}{T}}$	حيث (r) نصف قطر المسار الدائرى و (T) الزمن الدورى

٦. القوة الجاذبة المركزية التى تؤثر على جسم يتحرك فى مسار دائرى (F_c)

$\mathbf{F_c = m \, . a_c}$ $\mathbf{F_c = m \, . \frac{v^2}{r}}$	حيث (m) هى كتلة الجسم و (v) هى السرعة المماسية للجسم و (r) نصف قطر المسار الدائرى

Laws and mathematical relations

1. Momentum of a body (P)

$\mathbf{P = m \, . \, v}$ **Kg.m/s**	Where (m) its mass and (v) its velocity

2. Force (F)

$\mathbf{F = \frac{\Delta P}{\Delta t}}$ $\mathbf{F = m \, . \frac{\Delta v}{\Delta t}}$ $\mathbf{F = m \, . a}$ **N**	Where (m) is the mass of the body and (a) is the acceleration by which the body moves.

3. Weight of the body (F_g)

$\mathbf{F_g = m \, . g}$ **N**	Where (m) is the mass of the body and (g) is the acceleration due to gravity.

4. Centripetal acceleration (a_c)

$\mathbf{a_c = \frac{v^2}{r}}$	Where (v) is the tangential velocity and (r) is the radius of the circular path.

5. The tangential velocity of a body moves in a circular path (v)

$\mathbf{v = \frac{2 \pi r}{T}}$	Where (r) is the radius of the circular path and (T) is the periodic time.

6. The centripetal force acting on a body moves in a circular path (F_c)

$\mathbf{F_c = m \, . a_c}$ $\mathbf{F_c = m \, . \frac{v^2}{r}}$	Where (m) is the mass of the body, (v) is the tangential velocity and (r) is the radius of the circular path.