

ورقة أسئلة Exam Paper

اليوم والتاريخ / Day and Date : الأربعاء 7 / 8 / 2024

Department: العلوم الأساسية العلمية	القسم:	Faculty: الآداب والعلوم التربوية	الكلية:
Semester: الصيفي	الفصل الدراسي:	Academic Year 2024 / 2023	العام الجامعي
Course Name & No.:		فيزياء عامة (1) (0181201)	اسم المادة ورقمها:
Room No.:	رقم القاعة:	Section No: 1	رقم الشعبة:
No. of Pages:	عدد الصفحات:	Exam time and Duration 12:30 – 13:30 , 60 min	وقت الامتحان ومدته
		<input type="checkbox"/> امتحان نهائي (Final Exam)	<input checked="" type="checkbox"/> اختبار (Mid Exam) ✓
Coordinator's Name	أ. حلا غنام	اسم المنسق (للمواد المشعبة):	
Instructor's signature:	توقيع مدرس المادة:	Instructor's Name : أ. حلا غنام	اسم مدرس المادة

Student's ID No.:	الرقم الجامعي:	Student's Name	اسم الطالب:
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PLO	CLO	علامة السؤال Question Mark	السؤال Question
			الأول Q1
			الثاني Q2
			الثالث Q3
			الرابع Q4
			الخامس Q5
			السادس Q6
			السابع Q7
			الثامن Q8
			التاسع Q9
			العاشر Q10
			المجموع الكلي

Q1. During a short interval of time the speed  $v$  in m/s of an automobile is given by  $v = at^2 + bt^3$ , where the time  $t$  is in seconds. The units of  $a$  and  $b$  are respectively:

- a.  $m \cdot s^2$  ,  $m \cdot s^4$
- b.  $s^3/m$  ,  $s^4/m$
- c.  $m/s^2$  ,  $m/s^4$
- d.  $m/s^3$  ,  $m/s^4$

Q2. A vector of magnitude 20 is added to a vector of magnitude 25. The magnitude of this sum might be:

- a. Zero
- b. 3
- c. 12
- d. 47

Q3. The vector  $(-A)$  is:

- a. greater than  $A$  in magnitude
- b. less than  $A$  in magnitude
- c. in the same direction as  $A$
- d. in the direction opposite to  $A$

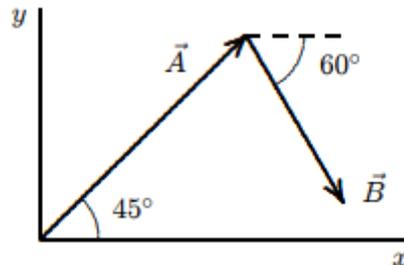
Q4. The angle between  $A = -25i + 45j$  and the positive x-axis is:

- a.  $29^\circ$
- b.  $61^\circ$
- c.  $151^\circ$
- d.  $209^\circ$

Q5. If  $A = 2i - 3j$  and  $B = 1i - 2j$ , then  $A - 2B =$

- a.  $1j$
- b.  $-1j$
- c.  $4i + 1j$
- d.  $4i - 7j$

Q6. In the diagram, **A** has magnitude 12m and **B** has magnitude 8m. the x component of **A + B** is about :



- a. 5.5 m
- b. 7.6 m
- c. 12 m
- d. 14 m

Q7. The value of  $k \cdot (k \times i)$  is:

- a. zero
- b. +1
- c. -1
- d. 3

Q8. The coordinate of a particle in meters is given by  $x(t) = 16t - 3t^3$ , where the time  $t$  is in seconds. The particle is momentarily at rest at  $t =$

- a. 0.75 s
- b. 1.3 s
- c. 5.3 s
- d. 7.3 s

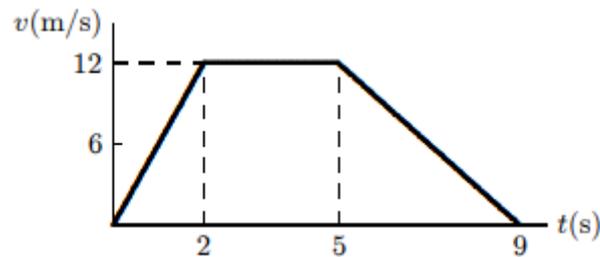
Q9. Of the following situations, which one is impossible?

- a. A body having velocity east and acceleration east
- b. A body having velocity east and acceleration west
- c. A body having constant acceleration and variable velocity
- d. A body having constant velocity and variable acceleration

Q10. A baseball is thrown vertically into the air. The acceleration of the ball at its highest point is:

- a. Zero
- b.  $g$ , down
- c.  $g$ , up
- d.  $2g$ , down

Q11. The graph represents the straight line motion of a car. How far does the car travel between  $t = 2\text{ s}$  and  $t = 5\text{ s}$  ?



- a. 4 m
- b. 12 m
- c. 24 m
- d. 36 m

Q12. A stone is thrown vertically upward with an initial speed of  $19.5\text{ m/s}$ . it will rise to a maximum height of:

- a. 4.9 m
- b. 9.8 m
- c. 19.4 m
- d. 38.8 m

Q13. A car rounds a  $20\text{ m}$  radius curve at  $10\text{ m/s}$ . the magnitude of its acceleration is:

- a. 0
- b.  $0.2\text{ m/s}^2$
- c.  $5\text{ m/s}^2$
- d.  $40\text{ m/s}^2$

Q14. A particle starts from the origin at  $t = 0$  with a velocity of  $(16i - 12j)$  m/s and moves in the  $xy$  plane with a constant acceleration of  $(3i - 6j)$  m/s<sup>2</sup>. What is the speed of the particle at  $t = 2$  s ?

- a. 52 m/s
- b. 39 m/s
- c. 46 m/s
- d. 33 m/s

Q15. A projectile is thrown from the top of a building with an initial velocity of 30 m/s in the horizontal direction. If the top of the building is 30 m above the ground, how fast will the projectile be moving just before it strikes the ground?

- a. 35 m/s
- b. 39 m/s
- c. 31 m/s
- d. 43 m/s