THE UNITED REPUBLIC OF TANZANIA

TUNDUMA TOWN COUNCIL

FORM TWO JOINT EXAMINATION

CODE: 031 PHYSICS

Time: 2:30 Hours Year: MAY 2025

Instructions

- 1. This paper consists of section A, B and C with a total of ten (10) questions.
- 2. Answer **all** the questions in each section.
- 3. All answers must be written in the spaces provided.
- 4. All writings must be in **blue** or **black** ink, **except** drawings which must be in pencil.
- 5. Communication devices and unauthorized materials are **not** allowed in examination room.
- 6. Write your **name** at the right corner of every page.
- 7. Where necessary the following constants may be used.
 - (i) Acceleration due to gravity, $g = 10 \text{ m/s}^2$
 - (ii) $\pi = 3.14$

FOR TEACHER'S USE ONLY				
QUESTION NUMBER	SCORE	TEACHER'S INITIALS		
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
TOTAL				
CHEKER'S INITIAL				

SECTION A (15 Marks)

Answer all questions from this section.

1.			the item $(i) - (x)$, choose the correct answer from the given altered the letter in the box provided.	ernatives
	(i)	Why	physics, chemistry and biology are natural science subjects?	
		A	They need practical and theory work for leaning	
		В	They need only theory for learning	
		C	They need practical work only	
		D	They need observation and theory work for leaning.	
	(ii)	Whic	ch of the following is a safety precaution in the physics laborar	tory?
		A	Doing experiment in the laboratory	
		В	Handling apparatus in the laboratory	
		C	Use equipment with care in the laboratory	
		D	Use equipment with help in the laboratory	
	(iii)	A cui	rrent of 0.2 A flow through a resistor of 4 Ω . The potential difacross a resistor is.	ference
		A	20 V	
		В	0.8 V	
		C	0.05 V	
		D	8 V	
	(iv)	Whic	ch of the following statement is correct about mass?	
		A	it is measured by beam balance	
		В	it is measured by spring balance	
		C	it varies with place	
		D	It can be zero	
	(v)	A hy	drometer is an instrument used to measure	
		A	The volume of the liquid	
		В	The density of the liquid C The density of the solid D	
			The volume of the solid	

When a body of mass m. is lifted through a height h, it possesses the energy

known as

(vi)

B C D	che pote f the angle ima 4 5 1 The present	ce of charge in a material can be demonstrated by	number of A 2			
(vii) If B C C (viii) T A B	pote f the angle ima 3 4 5 5 7 3 The present A electrical elec	ential energy between two plane mirror is 60°, what will be the ges?				
(vii) If B C C C (viii) T A B	f the angle ima 3 4 5 5 O 3 The present	between two plane mirror is 60°, what will be the ges?				
B C C (viii) T A B	ima 3 4 5 5 O 3 The present electrons are the control of the c	ges? ce of charge in a material can be demonstrated by				
C (viii) T A B	3 4 5 5 3 The present A electrical states and the states are states as a second state of the states are states are states as a second state of the states are states are states as a second state of the states are states as a second state of the states are states are states as a second state of the states are states as a second state of the states are states as a second state of the states are states as a second state of the states are states as a second state of the states are states as a second state of the states are states are states as a second state of the states are states	ce of charge in a material can be demonstrated by	A 2			
C (viii) T A B	5 O 3 The present					
(viii) T A B) 3 The present electrons are selected as a selectron are selected as a selectron are					
(viii) T A B	The presen					
A B	A elec					
В		41				
	2 201	etrophorus				
C	s goi	d leaf				
C	elec	etroscope				
Б	eart eart	h wire				
(ix) T	The proces	s of removing magnetism from the material is know	n as			
A	A pola	arization				
В	3 maş	gnetizing				
C	C mag	gnetization				
Б) den	nagnetization				
(x) V	Why an atom is electrically neutral?					
A	A It co	onsists of equal number of electrons				
В	3 It co	onsists of equal number of protons and electrons				
C	C It co	onsists of equal number of electrons and neutrons				
Г) It c	onsists of equal number of protons and neutrons				

2.

(i)			neasures volume	A	Measur	ing cylinde	r
	of liqu	ids		В	Pipette		
				C	Vernier	calipers	
ii)		strument that me	easures body	D	Glass to	ımbler	
	tempe		0 0	E Spring balance			
iii)		strument that me	easure force of	F	Clinical thermometer		
iv)	pull			G	Beam b	alance	
v)	amour to ano An ins depth, extern	strument that tra nt of liquid from ther. strument that me internal al diameters.	n one container				
Answei							1
List	: A	i	ii		iii	iv	V
List	В						

SECTION B (70 Marks)

Answer all questions from this section.

3.	(a)	Briefly explain the relationship between physics and biology. Give three points.
	(b)	Explain two application of physics in your daily life at school.
	(i)	
	(ii)	
4.	(a)	What do you understand by the following terms?
(i)Wor	k	
(ii)	Energy	······································

vertical height of 6 m in 10 seconds.	(111)1 0		
5. (a) Light is the form of energy. State any two characteristics of it which can distinguished from other sources of energy. (i)		(b)	Calculate the power of a pump which can lift 200 kg of water through a vertical height of 6 m in 10 seconds.
5. (a) Light is the form of energy. State any two characteristics of it which can distinguished from other sources of energy. (i)			
distinguished from other sources of energy. (i) (ii)			
(ii)	5.	(a)	Light is the form of energy. State any two characteristics of it which can distinguished from other sources of energy.
			(i)
		(b)	

	(b)	Briefly explain any three contact forces
	(i)	
	(ii)	
	(iii)	
7.	(a)	State Archimedes principle and the law of floatation
	(b)	Your physics teacher has assigned you to verify Archimedes principle
	(i)	Name the materials which should be used in the task given
	(-)	- · · · · · · · · · · · · · · · · · · ·
		(ii) With the aid of diagram, explain how you will verify Archimedes principle.

8.	(a)	(i)	State kinetic theory of matter
	(4)	(1)	
	(4)	(1)	
		(ii)	Briefly explain three classes of matter

	(ii)	Briefly explain three application of elasticity in your daily life various fields.
(a)	With t	he aid of diagram describe the structure of gold leaf electroscope.
(#)	***************************************	and of diagram deserves the structure of gold fear electroscope.
the capa	(b)	An electric circuit has three capacitors arranged in parallel to a cell. potential difference, V across each plate is the same, calculate the to
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	•••••	

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SECTION C (15 Marks)

Answer question ten (10)

10.	(a)	What	are the uses of the following devices
		(i)	Manometer
		(ii)	Hare's apparatus (inverted U-tube)
		(iii)	U-tube
		(iv)	Barometer
(b)			g elephant manages to walk comfortably in muddy soil without sinking uman being may sink easily?
		•••••	
(c)	Dra	aw a w	ell labelled diagram which demonstrate that liquid pressure depends on depth
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