

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie
MINISTRE DES ENSEIGNEMENTS SECONDAIRES
CELLULE D'APPUI A L'ACTION PEDAGOGIQUE
ANTENNE REGIONALE DU NORD OUEST

BP : 2183 MANKON BAMENDA
TEL : 233 362 209
Email : trubamenda@yahoo.co.uk
Web Site : www.trunorthwest.net



REPUBLIC OF CAMEROON
Peace-Work-Fatherland
MINISTRY OF SECONDARY EDUCATION
TEACHERS' RESOURCE UNIT
REGIONAL BRANCH FOR THE NORTH WEST
P.O. BOX : 2183 MANKON BAMENDA
TEL : 233 362 209
Email : trubamenda@yahoo.co.uk
Web Site : www.trunorthwest.net

MARCH 2025

The Teachers' Resource Unit and the Regional Inspectorate of Pedagogy, in collaboration with NWAPT	SUBJECT CODE NUMBER 0580	PAPER NUMBER 1
GENERAL CERTIFICATE OF EDUCATION REGIONAL MOCK EXAMINATION		
CANDIDATE NAME: CANDIDATE NUMBER: CENTRE NUMBER:	SUBJECT TITLE PHYSICS	
ORDINARY LEVEL		

Time Allowed: One and a half hours
INSTRUCTIONS TO CANDIDATES:

Mobile phones are NOT ALLOWED in the examination room.

1. USE A SOFT HB PENCIL THROUGHOUT THIS EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the Examination begins:

3. Check that this question booklet is headed "Ordinary Level 0580 and PHYSICS -Paper 1".
4. Insert the information required in the spaces above.
5. Without opening the booklet, pull out the answer sheet carefully from inside the front cover of this booklet. Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.
6. Insert the information required in the spaces provided on the answer sheet using your HB pencil:

Candidate Name, Centre Number, Candidate Number, Subject Code Number, and Paper Number

How to answer questions in this examination:

7. Answer ALL the 50 questions in this examination. All questions carry equal marks.
8. Non-programmable calculators are allowed.
9. For each question there are four suggested answers, A, B, C and D. Decide which answer is correct. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen. For example, if C is your correct answer, mark C as shown below:
[A] [B] [C] [D]
10. Mark only one answer for each question. If you mark more than one answer, you will score zero for that question. If you change your mind about an answer, erase the first mark carefully, and then mark your new answer.
11. Avoid spending much time on any question. If you find a question difficult, move to the next. You can come back to the question later.
12. Do all rough work in this booklet using, where necessary, the blank spaces in the question booklet.
13. You must not take this booklet and answer sheet out of the examination room. All question booklets and answer sheets will be collected at the end of the examination.

Section 1 (Forty Questions)

Directives: Each of the questions or incomplete statements in this section is followed by four suggested answers. Select the best answer for each question.

- A measurable property of an object is a:
 - vector quantity
 - scalar quantity
 - physical quantity
 - a derived quantity
- Which of the following is NOT a base quantity?
 - Force
 - Mass
 - Time
 - Luminous intensity
- A physical quantity that is defined by its magnitude and direction is:
 - a scalar quantity
 - a base quantity
 - a derived quantity
 - a vector quantity
- The kind of energy stored in a stretched spring is:
 - gravitational potential energy
 - chemical energy
 - elastic potential energy
 - renewable energy
- The mass per unit volume of an object defines its:
 - Weight
 - Size
 - Pressure
 - density
- A thermometric property is a physical property which varies uniformly or linearly with temperature. Which of the following thermometers works on the change in length of a liquid with temperature?
 - bi-metallic thermometer
 - an alcohol thermometer
 - thermocouple thermometer
 - platinum thermometer
- Which of the following pairs are both methods of charging a body?
 - transfer and conduction
 - friction and convection
 - induction and radiation
 - contact and induction
- The main difference between iron and steel as magnetic materials is:

	Iron	Steel
A	Temporary magnet	Permanent magnet
B	Soft magnetic material	Hard magnetic material
C	Permanent magnet	Temporary magnet
D	electromagnet	Permanent magnet
- The ionization current from a digital counter was noticed to drop from 4A to 1A in 16hrs. the half-life of the radioactive source is:
 - 16hrs
 - 4hrs
 - 8hrs
 - 32hrs

17. Electric current flowing through a metal wire substitutes the flow of:
- Electrons only
 - Electrons and holes

- electrons and ions
- ions only

- Heavy duty vehicles like trailers carrying building materials often have multiple tyres so as to:
 - increase the friction with the road
 - reduce the pressure exerted on the road
 - increase the stability of the truck and reduce chances of it falling
 - reduce the force acting on the road.
- Which of the graphs in figure 1 below is an approximation of how the weight (W) of an object varies with distance (x) as the object moves from the equator towards the pole of the earth?

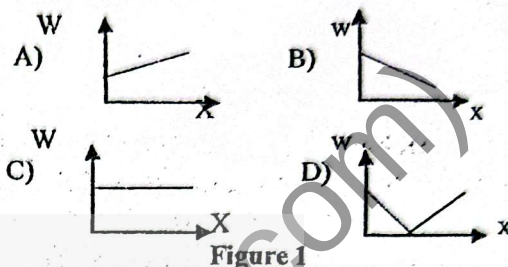


Figure 1

- Which of the following is a second class lever?
 - sugar tongs
 - crow bar
 - wheel barrow
 - scissors
- The temperature of pure boiling water at stp in kelvin is:
 - 100K
 - 173K
 - 273K
 - 373K

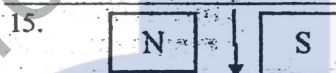


Figure 2

The diagram in figure 2 above shows a current carrying conductor between magnetic pole pieces. Which of the following actions would increase the force on the conductor?

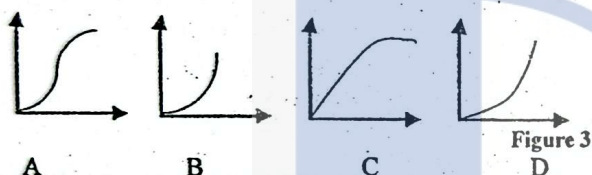
- increasing the size of the magnet
 - increasing the size of the conductor
 - increasing the current in the conductor
 - increasing the distance between the magnets
- A local fisherman noticed that a bamboo appeared bent each time he partially dipped it into water. This effect is caused by:
 - Refraction
 - Diffraction
 - Reflection
 - interference
 - The most massive of the following sub-atomic particles is:
 - the Nucleus
 - the Neutron
 - the Proton
 - the Electron
 - Which of the following is NOT a property of magnetic field lines?
 - they always move from the positive to the negative pole.
 - They never cross over each other.
 - They represent the path along which a free north pole would move if allowed to do so.
 - They always move from the north pole to the south pole.

19. Lightning can kill because:
- It makes loud noise which is dangerous to some people.
 - it flows through all living cells
 - it sets up a very high p.d. which is very dangerous
 - the high charge produces much heat which causes serious burns.

20. The transfer of chemical energy per unit charge to electrical energy is referred to as:
- the emf of a thermocouple
 - the emf of a mains
 - the emf of a dry cell
 - the p.d of a dry cell

21. The ice and steam points for a certain mercury thermometer measure 3.0cm and 73.0cm respectively. If the mercury thread measures 38.0cm when in a certain liquid, the temperature of the liquid in degree Celsius is:
- 200
 - 50
 - 53.9
 - 0.5

22. Select from figure 3 below which of the graphs is the best for force-extension graph for a piece of copper wire?



23. The rate of conversion of energy per unit time by a device is:

- the momentum of the device
- the power of the device
- the work done by the device
- the strength of the device

24. For a system of parallel forces to be in equilibrium:

- the sum of clockwise forces must be equal to the sum of anticlockwise forces.
- the sum of forces to the right must be equal to the sum of forces to the left
- the sum of upward forces must be equal to the sum of downward forces.
- the sum of upward moments must be equal to the sum of downward moments.

25. Which of the following uses of the substances is based on their specific heat capacity values?

- mercury used as a barometric liquid
- Mercury used as a thermometric liquid
- water used as a universal solvent
- water used in a barometer

26. An object is placed 50cm in front of a convex lens and an image is formed 75cm behind the lens. The linear magnification of the image is:

- 125
- 25
- 1.5
- 0.67

27. An n-type semi-conductor is one which:

- contains only negative charges
- has lost protons

- has more electrons than holes
- has no holes in its lattice structure

28. The loudness of a note depends on its:

- Wavelength
- Pitch
- Frequency
- amplitude

- 29.

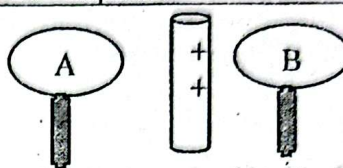


Figure 4

A positively charged rod is placed between two uncharged spheres standing on insulating stands as shown in figure 4. Which of the following gives the charge induced on the **near** sides of each of the spheres?

	Sphere A	Sphere B
A	Positive	Positive
B	Negative	Positive
C	Positive	negative
D	Negative	negative

30. Which of the following features makes a clinical thermometer different from an ordinary laboratory thermometer?

- its constriction and short range.
- its short range and thin wall.
- its constriction and narrow bore
- its short range and coloured liquid

31. A certain car battery does 12J of work per every coulomb charge it drives round a closed external circuit connected across its leads. How much current flows round the circuit if it has a resistance of 10Ω ?

- 0.83A
- 1.2A
- 120A
- 0.12A

32. Which of the following pairs of energy sources are renewable?

- coal and crude oil.
- petroleum and the sun.
- wind and the sea
- timber and nuclear plants.

33. A girl of mass 60kg runs up 10 stairs each of height 0.25m in 10s. The power she develops in the process is,

- 150W
- 15W
- 1500W
- 1.5W

34. Cooking at the top of mount Cameroon takes a longer time than cooking at the bottom with the same heat source because:

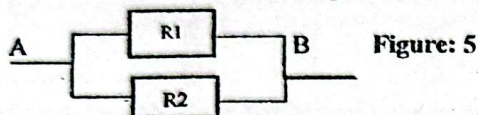
- water boils at a lower temperature than 100°C
- atmospheric pressure increases with height
- burning is more difficult at high altitudes
- it gets colder as you go higher.

35. A student constructs a transformer for a table fan with 400 turns in the primary coil and connected to a 240V mains. If the fan operates on 15V, then the secondary coil should have _____ turns.

- 1.6
- 25
- 6400
- 9

36. 0.5kg of a substance of specific heat capacity of 400J/kgK is heated at the rate of 500J/s for 10s. Its temperature will rise by:
- 25K
 - 0.04K
 - 625K
 - 4800K

37. Below is part of an electric circuit with two resistors R1 and R2 connected as shown in figure 5.



The total resistance between A and B can be obtained from:

- $R1 + R2$
 - $\frac{R1 + R2}{R1 \times R2}$
 - $\frac{R1 \times R2}{R1 + R2}$
 - $\frac{R1 \times R2}{R1 \times R2}$
38. The direction of induced current in a conductor in a magnetic field is given by:
- The right hand grip rule
 - Maxwell's cork screw rule
 - Fleming's left hand rule
 - Fleming's right hand rule
39. A charged object brought close to the cap of a negatively charged electroscope causes an increase in the divergence of the leave, the object must be:
- positively charged
 - neutral
 - negatively charged
 - either positively or negatively charged
40. Which of the following materials cannot be attracted by a magnet?
- Nickel
 - Sodium
 - Steel
 - Iron

Section 2: (Ten Questions)

Directions : These groups of questions deal with practical situations. Each situation is followed by a set of questions. Select the best answer for each question.

Questions 41 to 45.

Study the velocity/time graph below in figure 6 for a car running on a straight road and answer the questions that follow.

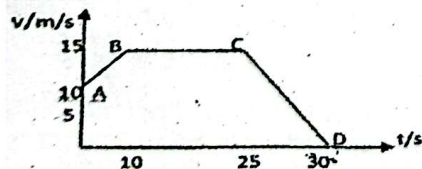


Figure 6

1. The initial velocity of the car is:
- 5m/s
 - 10m/s
 - 15m/s
 - 0m/s

42. The acceleration of the car between A and B is:
- 1.5m/s²
 - 0.5m/s²
 - 0.5m/s²
 - 5m/s²

43. The distance covered by the car between B and C is:
- 375m
 - 250m
 - 150m
 - 225m

44. The motion between C and D can be described as:
- constant motion
 - Uniform motion
 - Uniform deceleration
 - Decreasing motion

45. The distance covered between C and D is:
- 37.5m
 - 75m
 - 50m
 - 450m

Questions 46 to 48 depend on the extract below.

A certain wave covers 760m in 2s in air, and can pass through the 3 states of matter. The source of the wave makes 6000 complete oscillations every 3 seconds.

46. The wave can be classified as:
- Standing and longitudinal
 - Progressive and electromagnetic
 - Mechanical and transverse
 - Mechanical and longitudinal
47. The frequency of the wave is:
- 6000Hz
 - 1800Hz
 - 2000Hz
 - 0.0005Hz
48. The speed of the wave is:
- 380m/s
 - 1520m/s
 - 7.89m/s
 - 253.3m/s

Questions 49 and 50

Study the nuclear equation below and answer the questions that follow. A and B are not the usual symbols of the elements.



49. The type of reaction represented by the equation above is:
- Transmutation reaction
 - fission reaction
 - chain reaction
 - Bombardment reaction
50. The number 'x' of alpha particles emitted is:
- 3
 - 4
 - 2
 - 1