

PHYSICS Paper: II سیکٹری سکول پابٹ II ، کلاس دوم
Time: 1:45 Hours Group: I SUBJECTIVE انشائی
Marks: 48

Note: Section I is compulsory. Attempt any TWO (2) questions from Section II.

Section - I حصہ اول

2 - کوئی سے پانچ (5) سوالات کے مختصر جوابات تحریر کیجئے۔ (2 x 5 = 10)

- How damping progressively reduces the amplitude of oscillation? Explain.
- Define elastic restoring force.
- What is meant by mechanical waves? Give one example.
- What is meant by electric field and electric intensity?
- If a high-voltage power line falls across your car while you are in the car, why should you not come out of the car?
- Which form of energy is stored in a capacitor?
- State Ohm's law. Write its formula.
- What is the difference between a cell and a battery?

3 - کوئی سے پانچ (5) سوالات کے مختصر جوابات تحریر کیجئے۔ (2 x 5 = 10)

- How can some whales communicate hundreds kilometers away.
- Why the voice of women is more shrill than that of men?
- What do you know about the term intensity level of the sound. Write down its unit.
- What is meant by Super Computer?
- What is difference between RAM and ROM memories?
- What is fax machine?
- Find the number of protons and neutrons in nuclide, defined by $^{13}_6X$?
- Write down any two characteristics of gamma (γ) rays.

4 - کوئی سے پانچ (5) سوالات کے مختصر جوابات تحریر کیجئے۔ (2 x 5 = 10)

- Define concave mirror by drawing its diagram.
- How light pipe is useful in our daily life?
- What is refractive index? Write down its formula.
- Define mutual induction by drawing its diagram.
- Name any two devices in which relay is used.
- Define NOR gate. Make its truth table.
- What is analogue electronics? Give one example.
- NAND gate is the reciprocal of AND gate. Explain.

(ورق اٹھئے)

Section - II حصہ دوم

Note: Attempt any TWO (2) questions.

- Prove that motion of a simple pendulum is simple harmonic motion.
- Two charges repel each other with a force of 0.1N when they are 5cm apart. Find the force between the same charges when they are 2cm apart.
- What is meant by half-life of radioactive element? Explain with the help of graph.
- A doctor counts 72 heart beats in 1 minute. Calculate the frequency and period of heart beats.
- What is simple microscope and derive the formula of magnifying power with diagram.
- A transformer is needed to convert a mains 240V supply into a 12V supply. If there are 2000 turns on the primary coil, then find the number of turns on the secondary coil.

115-1st A 224-85000

PHYSICS

Paper: II

سیکنڈری سکول پارٹ II ، کلاس دہم (1st A 224 - I)

پرچہ II

فزکس

Time: 15 Minutes

Group: II

OBJECTIVE

معرّضی

دوسرا گروپ

وقت: 15 منٹ

Marks: 12

Code: 7472

مارکس: 12

نوٹ: ہر سوال کے چار ممکنہ جوابات A ، B ، C اور D دیئے گئے ہیں۔ جوابی کاپی پر ہر سوال کے سامنے دیئے گئے دائروں میں سے درست جواب کے مطابق متعلقہ دائرہ کو مارکر یا پین سے بھر دیجئے۔ ایک سے زیادہ دائروں کو پُر کرنے یا کاٹ کر پُر کرنے کی صورت میں مذکورہ جواب غلط تصور ہو گا۔

1. 1 - The relation between v , f and λ of a wave is
 $v = \lambda/f$ (D) $v\lambda = f$ (C) $f\lambda = v$ (B) $vf = \lambda$ (A)
- 2 - For a normal person, audible frequency range for sound wave lies between
 30 Hz – 30 kHz (D) 25 Hz – 25 kHz (C) 20 Hz – 20 kHz (B) 10 Hz – 10 kHz (A)
- 3 - Which is an example of longitudinal wave?
 water wave (D) radio wave (C) light wave (B) sound wave (A)
- 4 - If a ray of light in glass is incident on an air surface at an angle greater than the critical angle, the ray will
 reflect only (B) refract only (A) diffract only (D) partially refract and partially reflect (C)
- 5 - Capacitance is defined as
 V/Q (D) QV (C) Q/V (B) VC (A)
- 6 - The combined resistance of two identical resistors, connected in series is 8Ω . Their combined resistance in a parallel arrangement will be
 12Ω (D) 8Ω (C) 4Ω (B) 2Ω (A)
- 7 - Which device is practical application of mutual induction?
 transformer (B) electric motor (A) solenoid (D) ammeter (C)
- 8 - The logical operation performed by this gate is

 OR (D) NAND (C) NOR (B) AND (A)
- 9 - If $X = A \cdot B$, then X is '1' when,
 $A=1, B=1$ (D) $A=0, B=1$ (C) $A=0, B=0$ (B) $A=1, B=0$ (A)
- 10 - What does the term e-mail stand for?
 electronic mail (B) emergency mail (A) external mail (D) extra mail (C)
- 11 - What happens to the atomic number of an element which emits one alpha particle?
 stays the same (B) increases by 1 (A) decreases by 1 (D) decreases by 2 (C)
- 12 - What is the S.I unit of radio activity?
 Bq (D) W (C) V (B) rem (A)

PHYSICS Paper: II
Time: 1:45 Hours Group:II
Marks: 48

نقشہ: 1:45 گھنٹے
پرچہ II
دوسرا گروپ
سبجیکٹو

نقشہ: 1:45 گھنٹے
پرچہ II
دوسرا گروپ
سبجیکٹو

نوٹ: حصہ اول لازمی ہے۔ حصہ دوم میں سے کوئی سے دو (2)

نوٹ: Section I is compulsory. Attempt any TWO (2) questions from Section II.

- Section - I حصہ اول
- 2 - Write short answers to any FIVE (5) questions. (2 x 5 = 10)
- Define restoring force and write down its formula.
 - What is the difference between amplitude and displacement.
 - Prove that $v = f\lambda$.
 - What is the function of electroscope?
 - If the distance between the two charges is doubled, what will be the effect on Coulomb's force?
 - Write down two properties of electric field lines of force.
 - Does a fuse in a circuit, control the potential difference or the current. Explain.
 - Explain Ohm's law.
- 3 - Write short answers to any FIVE (5) questions. (2 x 5 = 10)
- Define pitch of sound. Give one example.
 - What is the effect of amplitude of vibrating body on loudness of sound?
 - Calculate the frequency of sound waves of speed 340ms^{-1} and wavelength 0.5m .
 - Write down any two advantages of Internet in our life.
 - How softwares are helpful in computers?
 - How photophone is better than a common phone?
 - Define atomic number and give one example.
 - What is the difference between natural and artificial radioactivity?
- 4 - Write short answers to any FIVE (5) questions. (2 x 5 = 10)
- Explain the refractive index of a material.
 - What do you know about light pipe?
 - Explain the conditions for total internal reflection.
 - Can a transformer operate on direct current? Write down its principle.
 - State Lenz's law.
 - Explain two universal logic gates.
 - How electrons are deflected to specific position on a television screen?
 - What is NAND gate? Draw its truth table and symbol.

Section - II حصہ دوم

Note: Attempt any TWO (2) questions.

- نوٹ: کوئی سے دو (2) سوالات کے جوابات لکھیے۔
- 5 - (الف) سہل ہارمونک موشن کی تعریف کیجیے۔ ڈائنامک بنا کر واضح کیجیے کہ سادہ ہندولم کی موشن سہل ہارمونک موشن ہے۔
- (ب) ایک کنڈکٹر کے اطراف پھیلتی دفریض 10V ہے۔ اگر اس کنڈکٹر میں سے 1.5A کرنٹ بہ رہا ہو تو اس کرنٹ سے 2 منٹ میں کتنی اذری حاصل ہو گی؟
- 6 - (الف) علم اور انفرمیشن پہنچانے کا موثر ذریعہ انٹرنیٹ ہے۔ وضاحت کیجیے۔
- (ب) ایک سائڈ ویج کی فریکوئنسی اور ویلنٹھ ہارٹیب 2kHz اور 35cm ہیں اسے 1.5Km کا فاصلہ طے کرنے کے لئے کتنا وقت درکار ہو گا؟
- 7 - (الف) سادہ مائکروسکوپ کی وضاحت نقل کی مد سے کیجیے۔ آپ اس کی بنیادی فائلنگ یاد کیسے معلوم کر سکتے ہیں؟
- (ب) ایک مشیپ ڈائن ٹرانسمیٹر 240V کو 12V اے۔سی میں تبدیل کر دیتا ہے۔ اگر اس کی پرائمری کوئل میں پکڑوں کی تعداد 2000 ہو تو اس کی سیکنڈری کوئل میں پکڑوں کی تعداد معلوم کیجیے۔

116-1st A 224-76000