



SSC-(P-II)-A/2023

Paper Code

5

4

7

1

Roll No (13449) to be filled in by the candidate

(For All Sessions)

فزکس (معروضی)

Rwp-1-23

Physics (Objective)

(GROUP-I)

Time: 15 Minutes Marks : 12

نوٹ: تمام سوالات کے جوابات دی گئی معروضی جوابی کاپی پر لکھیں ہر سوال کے چار ممکنہ جوابات A، B، C اور D دیئے گئے ہیں، جس کو آپ درست سمجھیں، جوابی کاپی پر اس سوال نمبر کے سامنے جڑو C، B یا D کے دائروں میں سے متعلقہ دائرے کو مار کر یا پین کی سیاہی سے بھر دیں۔

Note: Write Answers to the Questions on the objective answer sheet provided. Four possible answers A, B, C and D to each question are given. Which answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or Pen ink on the answer sheet provided.

- 1.1 The unit of spring constant is: 1.1 سپرنگ کونسٹنٹ کا یونٹ ہے:

(A) Nm (B) Nm⁻¹ (C) Nm⁻² (D) N
2. Waves transfer: 2. ویو منتقل کرتی ہیں:

(A) Energy انرجی (B) Frequency فریکوئنسی (C) Wave length ویو لنتھ (D) Velocity ولائی
3. The unit of intensity of sound is: 3. انٹینسٹی آف ساؤنڈ کا یونٹ ہے:

(A) Wm (B) Wm⁻¹ (C) Wm⁻² (D) Wm⁻²
4. At 25°C speed of sound in wood is: 4. 25°C پر لکڑی میں سبڈ آف ساؤنڈ ہوتی ہے:

(A) 2500 ms⁻¹ (B) 2000 ms⁻¹ (C) 3000 ms⁻¹ (D) 4000 ms⁻¹
5. The radius of curvature of a converging mirror is 20cm; Its focal length will be: 5. ایک کنورجنگ مرر کا ریڈی آف آف 20cm ہے۔ اس کی فوکل لنتھ ہوگی:

(A) 10 cm (B) -10cm (C) 20cm (D) -20cm
6. The electric field lines are: 6. الیکٹرک فیلڈ لائنز ہمیشہ:

(A) Always cross each other ایک دوسرے کو عبور کر سکتی ہیں (B) Never cross each other ایک دوسرے کو عبور نہیں کر سکتی ہیں

(C) Cross each other in the region of strong field زیادہ فیلڈ والے علاقے میں ایک دوسرے کو عبور کرتی ہیں (D) Cross each other in the region of weak field کم فیلڈ والے علاقے میں ایک دوسرے کو عبور کرتی ہیں
7. The leaf of electroscope are made of: 7. الیکٹروسکوپ کے پتے بنے ہوتے ہیں:

(A) Silver سولر (B) Iron لوہا (C) Gold گولڈ (D) Aluminium ایلومینیم
8. The unit of specific resistance is: 8. سپیسفک رزسٹنس کا یونٹ ہے:

(A) Ω m² (B) Ω . m⁻¹ (C) Ω m⁻² (D) Ω . m
9. The turn ratios of a transformer is 10 it means: 9. اگر ٹرانسفارمر کے چکروں کی نسبت 10 ہو تو:

(A) Is = 10 Ip (B) Is = $\frac{Np}{10}$ (C) Is = 10Np (D) Vs = $\frac{Vp}{10}$
10. The out put of Nand gate is "0" when: 10. نینڈ گیٹ کی آؤٹ پٹ "0" ہوگی اگر:

(A) A = 0 & B = 0 (B) A = 1 & B = 1 (C) A = 0 or B = 0 (D) A = 1 or B = 1
11. Which of the following is not processing: 11. کون سا عمل پروسیسنگ نہیں ہے:

(A) Arranging ترتیب دینا (B) Manipulating جوڑ توڑ کرنا (C) Calculating حساب کتاب کرنا (D) Gathering اکٹھا کرنا
12. The safe limit of radiation absorbs in a year is: 12. ایک سال میں ریڈی ایشن کی محفوظ حد ہے:

(A) 1 rem (B) 2 rem (C) 3 rem (D) 5 rem

SECTION-I

2. Write short answers of any five parts from the following: (2x5=10)
- Define frequency and write its unit.
 - Write down two laws of reflection of light.
 - Explain OR operation with the help of truth table.
 - What is wave motion?
 - What is refractive index? Write down its formula.
 - Find the time period and frequency of a simple pendulum 1.0 m long at a location where $g=10.0 \text{ ms}^{-2}$
 - State Snell's law, write its formula.
 - What do you mean by restoring force?
3. Write short answers of any five parts from the following: (2x5=10)
- What is difference between the loudness and the intensity of sound?
 - Write any two uses of ultrasound.
 - Describe the two factors on which a safe level of noise depends.
 - Define the electric field lines.
 - Draw the electric field lines for an isolated positive point charge.
 - What is the impact of ICT in education?
 - What is the difference between data and processed data?
 - Why optical fiber is more useful tool for the communication process?
4. Write short answers of any five parts from the following: (2x5=10)
- Define e.m.f and write its formula.
 - Draw symbol diagram of variable resistor and ohm meter.
 - How many watt-hours are there in 1000 joules?
 - State Lenz's law.
 - Write two factors affecting induced e.m.f.
 - What is the activity of 1g of radium in Bq and MBq ?
 - What is meant by radioactive elements?
 - Find the number of protons and neutrons in the nuclide defined by $^{13}_{6}\text{C}$.

Note: Answer any two questions from the following: (9x2=18)

5. (a) What is meant by total internal reflection? Draw its diagram. Give its two conditions also.
- (b) What is wavelength of the radio waves transmitted by an FM station at 90MHz? Where $1\text{M}=10^6$, and speed of radio wave is $3 \times 10^8 \text{ ms}^{-1}$.
6. (a) What is flow of informations? Explain with the help of diagram.
- (b) If at Anarkali Bazaar Lahore, intensity level of sound is 80 dB, what will be the intensity of sound there?
7. (a) What is electric motor? Explain the working principle of D.C motor.
- (b) Cobalt-60 is a radioactive element with half-life of 5.25 years. What fraction of the original sample will be left after 26 years?