12

## OBJECTIVE حصہ معروضی

وقت = 15 منٹ
کل نمبر = 12

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Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, Fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

**Q.No.1** سوال نمبر1۔

(1) The relation between v, f and $\lambda$ of a wave is:

(A) $vf = \lambda$ (B) $f\lambda = v$ (C) $v = \lambda/f$ (D) $v\lambda = f$

(2) When did Christian Huygens invent the pendulum clock?

(A) 1656 AD (B) 1756 AD (C) 1856 AD (D) 1956 AD

(3) How does sound travel from its source to your ear?

(A) By changes in air pressure
(B) By vibrations in wires or strings
(C) By electromagnetic wave
(D) By infrared waves

(4) Speed of sound at room temperature is:

(A) $350\,ms^{-1}$ (B) $330\,ms^{-1}$ (C) $340\,ms^{-1}$ (D) $320\,ms^{-1}$

(5) The unit of intensity of sound is:

(A) $Wm^{-1}$ (B) $Wm^{-2}$ (C) $Wm$ (D) $Wm^{-3}$

(6) The turn ratio of transformer is 10, it means:

(A) $I_S = 10I_P$ (B) $N_S = N_P/10$ (C) $N_S = 10N_P$ (D) $V_S = V_P/10$

(7) The logical operation performed by this gate is:

(A) AND (B) NOT (C) NOR (D) OR

(8) What is the power rating of a lamp connected to 12V source when it carries 2.5A?

(A) 4.8 W (B) 14.5 W (C) 30 W (D) 60 W

(9) The correct relation between focal length(f) and Radius of curvature(R) is:

(A) $f = R/2$ (B) $f = R$ (C) $f = 2R$ (D) $f = R/3$

(10) What does the term E-mail stands for?

(A) Emergency mail (B) Electronic mail
(C) Extra mail (D) External mail

(11) Half life of Hydrogen is:

(A) 12.3 years (B) 5730 years (C) 30 years (D) 2.85 years

(12) How many components of a CBIS have?

(A) 02 (B) 03 (C) 05 (D) 06

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## SECTION-II حصہ دوم

**NOTE: Attempt any two questions.** $18 = 2 \times 9$

نوٹ: کوئی سے دو سوالات کے جوابات تحریر کیجئے۔

5.(A) Explain refraction of light through prism with diagram.

5۔(الف) پرزم کے ذریعے روشنی کی ریفریکشن ڈایاگرام بنا کر وضاحت کریں۔ $2 + 2 = 4$

(B) What is the wavelength of the radiowaves transmitted by an FM station at 90 MHz? Where $1M = 10^6$, and speed of radiowave is $3 \times 10^8 ms^{-1}$.

(ب) ایک ایف ایم ریڈیو سٹیشن 90 MHz کی ریڈیو ویو نشر کرتا ہے۔ ان ویوز کی ویولینگتھ کیا ہوگی؟ جبکہ $1M = 10^6$ اور ریڈیو ویوز کی سپیڈ $3 \times 10^8 ms^{-1}$ ہے۔ 5

6.(A) What is meant by Secondary Storage Memory? Describe the Magnetic disks and Hard disk.

6۔(الف) سیکنڈری سٹوریج میموری سے کیا مراد ہے؟ نیز میگنیٹک ڈسکس اور ہارڈ ڈسک کی وضاحت کریں۔ 4

(B) A sound wave has a frequency of 2 kHz and wavelength 35cm. How long will it take to travel 1.5 km? 5

(ب) ایک ساؤنڈ ویو کی فریکوئنسی اور ویولینگتھ بالترتیب 2kHz اور 35cm ہیں۔ اسے 1.5 km کا فاصلہ طے کرنے کے لیے کتنا وقت درکار ہوگا؟

7.(A) What is Solenoid? Explain the magnetic field of solenoid. How can we find the direction of magnetic field produced in the Solenoid? $1 + 2 + 1$

7۔(الف) سولینائڈ کیا ہے؟ سولینائڈ کے میگنیٹک فیلڈ کی وضاحت کریں۔ ہم سولینائڈ میں میگنیٹک فیلڈ کی سمت کیسے معلوم کر سکتے ہیں؟

(B) A 100 W lamp bulb and a 4kW water heater are connected to a 250V supply. Calculate:
(a) the current which flows in each appliance
(b) the resistance of each appliance when in use

$1 + 1 + 1 + 1 + 1$

(ب) ایک 100W کا بلب اور 4kW کے واٹر ہیٹر کو 250 V سپلائی کے ساتھ منسلک کیا گیا ہے۔ معلوم کریں:
(a) ہر اپلائنس میں سے بہنے والا کرنٹ (b) استعمال کے دوران ہر اپلائنس کی رزسٹنس

رول نمبر ____________

2023 (1st-A)
SSC PART-II (10th Class)

PHYSICS GROUP-I — فزکس (گروپ پہلا)
TIME ALLOWED: 1.45 Hours — وقت = 1.45 گھنٹے
MAXIMUM MARKS: 48 — کل نمبر = 48

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SUBJECTIVE — حصہ انشائیہ

NOTE: Write same question number and its parts number on answer book, as given in the question paper.

## SECTION-I — حصہ اول

**2. Attempt any five parts. 10 = 2 × 5**

(i) What is meant by Restoring Force?
(ii) Find the Time Period of a Simple Pendulum 1.0 m long.
(iii) How does the thickness of a lens affect its focal length?
(iv) Define Power of a lens and write its unit.
(v) What is meant by Nearsightedness?
(vi) Draw the symbol of OR gate and also write its Truth Table.
(vii) What is the difference between Analogue to digital converter and Digital to analogue converter?
(viii) Define Electronics.

**3. Attempt any five parts. 10 = 2 × 5**

(i) Define Sound and write the necessary conditions for the production of sound.
(ii) Define Intensity of Sound and write its unit.
(iii) Calculate the frequency of sound wave of speed 340 $ms^{-1}$ and wavelength 0.5 m.
(iv) Write down Coulomb's Law and its expression.
(v) In what direction will a positively charged particle move in an electric field?
(vi) Define Capacitance and its SI unit.
(vii) Write two advantages of e-mail.
(viii) Define cell phone.

**4. Attempt any five parts. 10 = 2 × 5**

(i) What is meant by Ohmic and non-Ohmic Conductors?
(ii) Calculate one month cost of using 50W energy saver for 8 hours daily in your study room. Assume that the price of a unit is Rs.12.
(iii) What is the function of Ammeter and Voltmeter?
(iv) What is meant by M.R.I?
(v) Describe Fleming's Left Hand Rule.
(vi) Which has more Penetrating Power; an Alpha Particle or Gamma Ray Photon?
(vii) What is meant by Nuclear Fusion?
(viii) Define Isotopes and give one example.

(ورق الٹ)