

PHYSICS PAPER-XII
HSSC-12th-Kohat-2026
(A-I-KT-26)

Sign & Stamp of Supdt:

Roll No.

C No. 62

VERSION: B

Name:

Time Allowed: 20 Minutes

SECTION-A

Marks:18

Write Roll No. in the boxes and shade the appropriate circle.

--	--	--	--	--	--

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Shade the correct answers for each question below.

1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐
11.	☐	☐	☐	☐
12.	☐	☐	☐	☐
13.	☐	☐	☐	☐
14.	☐	☐	☐	☐
15.	☐	☐	☐	☐
16.	☐	☐	☐	☐
17.	☐	☐	☐	☐
18.	☐	☐	☐	☐
19.	☐	☐	☐	☐
20.	☐	☐	☐	☐

1. A charged particle enters a uniform magnetic field with its velocity parallel to the field. The trajectory of particle will be :
 A. a straight line B. a circle C. a helix D. an ellipse
2. A transformer steps up A.C voltage of 200V to 2000V, the ratio of turns in its secondary to primary coil is :
 A. 2:1 B. 4:1 C. 100:1 D. 10:1
3. In LRC series circuit, the capacitance is changed from C to 4C. For the same resonant frequency, the inductance must be changed from L to :
 A. 2L B. L/2 C. L/4 D. 4L
4. In pure inductive A.C circuit, the current :
 A. leads the voltage by 90° B. lags behind the voltage by 90° C. is in phase with voltage D. leads the voltage by 45°
5. The bulk modulus of a perfectly rigid body is :
 A. zero B. infinite C. equal to its Young modulus D. equal to its shear modulus
6. If the points corresponding to ultimate tensile strength and fracture stress are close on a stress-strain graph, the material is said to be :
 A. ductile B. brittle C. tough D. polymer
7. The materials which have filled valence band, empty conduction band and a large forbidden energy gap are :
 A. insulators B. semiconductors C. conductors D. superconductors
8. The collector is the part of a bipolar junction transistor which is :
 A. large in size and heavily doped B. moderate in size and heavily doped C. large in size and moderately doped D. small in size and lightly doped
9. The Compton shift in wavelength for photons scattered at an angle of 60° with respect to the incident photons is :
 A. h/mc B. $2h/mc$ C. $h/2mc$ D. zero
10. For photoelectric effect, the cut off wavelength of tungsten metal is $2300 \text{ \AA}$. If light of wavelength $1800 \text{ \AA}$ is incident on it, photoelectric effect :
 A. does not take place B. takes place C. takes place only if intensity is sufficient D. takes place with electrons of zero K.E
11. The operation of LASER is based on the phenomenon called :
 A. spontaneous emission B. induced absorption C. stimulated emission D. thermionic emission
12. If E_0 is the ionization energy of hydrogen atom, the energy required to move an electron from ground state to the first excited state is :
 A. $3E_0/4$ B. $4E_0/3$ C. $8E_0/9$ D. $9E_0/8$
13. The half-life of a radioactive substance is 10 days. The time taken for its activity to reduce to one-eighth of its initial value is :
 A. 10 days B. 20 days C. 30 days D. 40 days
14. Two point charges exert a force (F) on each other in vacuum. If a dielectric of relative permittivity (ϵ_r) is placed between the charges, the Coulomb force between them becomes :
 A. $\epsilon_r F$ B. F/ϵ_r C. $F - \epsilon_r$ D. $F/2\epsilon_r$
15. If the number of electric field lines leaving and entering a closed surface is equal, the surface must contain :
 A. net positive charge B. net negative charge C. equal positive and negative charge D. infinite charge
16. The work done to move 3C of charge between points having potential difference of 9V is :
 A. 3J B. 6J C. 18J D. 27J
17. The electrical resistance of a unit length and unit cross sectional area of a material is called its :
 A. specific resistance B. conductance C. conductivity D. coefficient of resistance
18. If the external resistance is equal to the internal resistance of a cell having a.m.f (E) in a closed circuit, the terminal voltage of the cell is :
 A. $2E/3$ B. E C. $E/2$ D. 2E