

KENDRIYAVIDYALAYA NORTH LAKHIMPUR

HOLIDAY HOMEWORK

CLASS XII

SUBJECT : (ENGLISH)

1. Solve last five years papers of board Exam.

विषय :- हिन्दी

1. विद्यालय द्वारा प्रदत्त अध्ययन सामग्री में संकलित 4 प्रतिदर्श प्रश्न पत्रों को हल करें
2. पढ़ाये गए समस्त पाठों का अभ्यास करें |
3. फीचर और पत्र का अभ्यास करें |
4. अलंकार उपसर्ग ,प्रत्यय, संधि तथा छंद का अभ्यास करें |
5. अभिव्यक्ति और माध्यम का अभ्यास करें |

कमल नयन सिंह

परास्नातक शिक्षक

SUBJECT-PHYSICS

1. What is the amount of work done in moving a point charge Q around a circular arc of radius 'r' at the centre of which another charge 'q' is located?
2. Explain why current cannot through a ideal capacitor when connected to an dc source.
3. What is the electric flux through a cube of 1cm which encloses an electric dipole?
4. Two wires one of copper and other manganin, have same resistance and equal thickness. Which wire is longer? Justify your answer.
5. What happens when forward bias is applied to a p-n junction?
6. How is the speed of em-waves in vaccum determined by the electric and magnetic field?
7. Do waves carry energy and momentum?
8. Write the expression for electromagnetic waves in a medium of electrical permittivity ϵ and magnetic permittivity μ .
9. Identify electromagnetic waves whose wavelength varies as
 - (a) $10^{-12} \text{ m} < \lambda < 10^{-8} \text{ m}$
 - (b) $10^{-3} \text{ m} < \lambda < 10^{-1} \text{ m}$. Write one use of each.
10. Find the condition under which the charge particles moving with different speeds in the presence of electric and magnetic field vector can be used to select charge particle of a particular speed.
11. The ground state energy of hydrogen atom is -13.6eV. If an electron makes a transition from an energy level -1.51eV to -3.4eV , calculate the wavelength of the spectral line emitted name the series of hydrogen spectrum to which it belongs.
12. A nucleus with mass no. A=240 and BE/A= 7.6MeV breaks into two fragments each of A=120 and BE/A= 8.5MeV. Calculate the energy release.

13. State the underlying principle of a potentiometer. Write two factors by which current sensitivity of a potentiometer can be increased. Why is a potentiometer preferred over a voltmeter for measuring the emf of a cell?
14. State Lenz's law. Illustrate, by giving an example, how this law helps in predicting the direction of current in the loop in the presence of a changing magnetic flux. In a given coil of self-induction of 5mH, current changes from 4A to 1A in 30mins. Calculate the emf induced in the coil.
15. Derive an expression for drift velocity of free electrons. How does drift velocity of electrons in a metallic conductor vary with increase in temperature? Explain.
16. How is a galvanometer converted into voltmeter and an ammeter? Draw the relevant diagram and find the resistance of the arrangement in each case. Take resistance of galvanometer as G.
17. (a) State the condition under which a charge particle moving with velocity v goes undeflected in a magnetic field B . (b) An electron after being accelerated through a potential difference of 10^4V enters a uniform magnetic field $0.04T$, perpendicular to its direction of motion. Calculate the radius of curvature of its trajectory
18. Write briefly the underlying principle used in Davison-German experiment to verify wave nature of electrons experimentally. What is the de-broglie wavelength of an electron with kinetic energy $120eV$?
19. Define modulation index. Why is it kept low? What is the role of bandpass filter?
20. (a) Write the necessary condition to obtain sustain interference fringes.
(b) In Young's double slit experiment, plot a graph showing the variation of fringe width versus the distance of the screen from the plane of the slits keeping other parameters same. What information can one obtain from the slope of the curve?
(c) What is the effect on the fringe width if the distance between the slit is reduce keeping other parameters same?

SUBJECT-BIOLOGY

1. SOLVE LAST 5 YEAR CBSE BOARD PAPER.

SUBJECT- COMPUTER SCIENCE

- SOLVE LAST 5 (FIVE) YEAR BOARD PAPER.