

KANDASWAMI KANDAR'S COLLEGE
Department of Physics
Model Examination –April 2021
II B.Sc CHEMISTRY
NMEC – PHYSICS IN EVERYDAY LIFE (19UPHN02)

Time : Three hours

Maximum: 75 marks

Part A - (15×1 = 15 marks)

Answer ALL questions

1. What do we get by the product of mass and velocity?
a) Force b) Inertia c) Momentum d) Newton
2. Kepler's laws of planetary motion replaced circular orbits with ____
a) elliptical orbits b) parabolic orbits c) conical orbits d) hyperbolic orbits
3. The capacity to do work is called:
a) Heat b) Energy c) Work d) none of the above
4. What was the principle Archimedes discovered?
a) Principle of Volume b) Principle of Density c) Principle of Buoyancy
d) Principle of Gravity
5. Viscosity means the flow of the liquid is resisted by ____
a) Itself b) Other liquid c) Water d) Alcohol
6. On which principle the aircraft fly?
a) Newton's third law b) Conservation of mass c) Bernoulli's principle d) Gravity
7. With the increase in temperature, heat will be:
a) increase b) constant c) decrease d) double
8. The boiling of water inside the pressure cooker is
a) 0°C b) 100°C c) 120°C d) -120°C
9. Sound waves are produced by
a) linear motion b) circular motion c) vibrating bodies d) transitional motion
10. Lenz law is based on which of the following conservation
a) Charge b) Mass c) Momentum d) Energy
11. Correct form of ohm's law
a) $I = VR$ b) $V \propto 1/I$ c) $V = IR$ d) Above B and C
12. The transformer is based on the principle
a) Photoelectric effect b) Electromagnetic induction c) Newton's first law of motion
d) Huygens principle
13. Combining of two light nuclei of low mass to produce a heavy nucleus is called
a) Nuclear fusion b) Nuclear fission c) Double beta decay d) Spontaneous fission
14. What type of Reaction takes place in sun?
a) Nuclear fission b) Nuclear fusion c) Spontaneous fission d) Double beta decay
15. Devices used to see a very very small object is called
a) Simple microscope b) Compound microscope c) Telescope d) Mirror

Part B - (2×5=10 marks)
Answer ANY TWO questions

13. Explain the variation of g with (a) altitude (b) depth.
14. State Pascal's law. Give any three applications of Pascal's principle in everyday life.
13. Explain the clinical thermometer with neat diagram.
14. Explain in detail about lighting arrester.
15. Explain the structure and basic principle of atom bomb.

Part C- (5×10=50 marks)
Answer any ALL questions

16. a) Explain Kepler's laws of planetary motion. **(Or)**
b) Explain the working of communication satellites with neat diagram.
17. a) Write Bernoulli's principle and explain the application of Bernoulli's principle with neat diagram. **(Or)**
b) Define coefficient of viscosity of liquid. Describe the burette method to determine the same.
18. a) Explain the effect of pressure on boiling point and melting point. **(Or)**
b) Write an essay on acoustics of buildings.
19. a) State and explain the Faraday's Laws of electromagnetic induction. **(Or)**
b) Explain the construction and working of transformer.
20. a) Explain the working of telescope. **(Or)**
b) Explain the construction and working of nuclear power plants.
