This question paper contains 4 printed pages.

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Your Roll No. .....

B.Sc. (Hons.) PHYSICS / II Sem. A

Paper— PHHP – (Physics Lab. II)

Time : 1 hour *Maximum Marks* : 20

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any twenty questions.
All questions carry equal marks.

1. In bar pendulum, what is the distance of the point having minimum time period, from the centre of gravity? What is the expression for minimum time period? 1

2. In Kater's pendulum why do we place the metallic cylinder and the wooden cylinder symmetrically at the two ends? 1

3. At what height from the surface of earth is the acceleration due to gravity g half of its value on the surface of the earth? 1

4. How does the time period of spring-mass system vibrating vertically change if the spring is not massless? 1

P. T. O.

5. What is the basic difference between dynamic and static method for determining the spring constant? 1

6. Define modulus of rigidity. What are its units? 1

7. Why is the formula for calculating the frequency of tuning fork in longitudinal and transverse mode different in Melde's experiment? 1

8. In Melde's experiment what is the effect of friction in the pulley? 1

9. On what factors does the number of loops depend in Melde's experiment? 1

10. Why should the lamp ideally be placed at a distance of 1 meter from the mirror in the lamp and scale arrangement of the ballistic galvanometer (B.G.)? 1

11. What is the basic principle of a moving coil galvanometer? 1

12. Define critical damping resistance for a B.G. 1

13. What is logarithmic decrement? 1

14. What is the advantage of Carey Foster's Bridge over meter bridge? 1

15. Can you measure low resistance by leakage method? Why? 1

16. What is the unit of specific resistance? If the length of the wire is doubled, what will be the effect on its specific resistance? 1

17. What is the advantage of an air capacitor over mica capacitor? 1

18. Explain graphically the growth of current in a circuit containing capacitance only (with d.c. source). 1

19. Why is it not possible to get a perfect balance in De Sauty's bridge? 1

20. On what factors does the self inductance of a coil depend? 1

21. Why should the mutual inductance coil be placed at a large distance from B.G. while measuring the mutual inductance? 1

22. What is the relationship between mutual inductance and self inductance of two coils? 1

23. What do you mean by sharpness of resonance? 1