UNIVERSITY OF CALICUT

IV SEM B.Sc PHYSICS COPLIMENTARY (CUCBCSS-UG) PRACTICAL JUNE 2019

(ATTEMPT THE MARKED QUESTION) **Time 3 Hrs**

PH 2507 E **Reg. No.....**

1. Construct a full wave rectifier and find out the ripple factor with and without filter for various values of load resistance. Take at least 6 sets of readings
2. Determine the refractive index of the material of given prism using spectrometer
3. Find radius of the wire using it as a torsion pendulum Verify by direct method (n= . . . . . .)
4. Determine the moment of inertia of a fly wheel. Take 6 sets of readings
5. Determine ratio of moments of the given two magnets using Searl's vibration magnetometer.
6. Standardize the potentiometer using Daniel cell and use it to calibrate a low range voltmeter
7. Find out the resistance of a wire using Carey Fosters Bridge and hence find its resistivity.
8. Using Melds apparatus verify the relation between the tension and the length of the vibrating segment. Hence calculate the frequency of the vibrator (Use both modes)

UNIVERSITY OF CALICUT

COMPLIMENTARY PHYSCIS PRACTICAL EXAMINATION

PCJ 12 **Time: 3 hrs**

Attempt the Question Marked 'X'

1. Find the density of a given coil of wire of length 1m (common balance, screw gauge given).
2. Find the optical constants of a given convex lens. Also find the refractive index of the given liquid by parallel ax method(Water given.
3. Determine coefficient of viscosity of a given liquid by capillary flow method Find radius of the tube by travelling microscope.
4. Establish the relation between the twist and length of the rod using static torsion apparatus. Hence determine the rigidity modulus of the material of the rod.
5. Study the variation of magnetic flux density along the axis of a circular coil carrying current and find out the value of the horizontal component of earth's field.
6. Find the refractive index of the given prism using spectrometer.
7. Compare the moments of two magnets using deflection magnetometer in Tan B position .Take 6 sets of readings.
8. Construct a half wave rectifier and find out the ripple factor with and without filter for various values of load resistance. Take at least 6 sets of readings.
9. Find out the resistance of a coil using potentiometer, hence find the resistivity of the material of the wire.
10. Determine the diameter of a wire using air wedge apparatus.

UNIVERSITY OF CALICUT

IV SEM B.Sc PHYSICS COPLIMENTARY (CUCBCSS-UG) PRACTICAL

AUGUST 2017

(ATTEMPT THE MARKED QUESTION) **Time 3 Hrs**

PH 24 M **Reg. No.....**

1. Find the optical constants of a given convex lens. Also find out the refractive index of the given liquid by parallax method (Mercury given).
2. Determine the rigidity modulus of the given wire by using torsion pendulum.
3. Find the length of given resistances wire using potentiometer. Resistivity of the wire = ...
4. Construct a half wave rectifier and find out the ripple factor with and without filter for various values of load resistance. Take at least 6 sets of readings
5. Standardize grating using the green line of the mercury spectrum and hence find out the wavelength of other prominent lines in the spectrum by normal incidence method.
6. Determine coefficient of viscosity of a given liquid by capillary flow method.
7. Determine the radius of the coil of wire using Carey Foster' s Bridge apparatus. Resistivity of the material of wire = ...
8. Determine the reduction factor a TG using potentiometer Also find the horizontal component of earth's magnetic field

UNIVERSITY OF CALICUT

COMPLIMENTARY PHYSCIS PRACTICAL EXAMINATION

PCJ 16 **Time: 3 hrs**

Attempt the Question Marked 'X'

1. Determine the Young's modulus ofthe material of the given bar by subjecting into uniform bending and measuring the elevation using optic lever.
2. Find the optical constants of a given convex lens. Also find the refractive index of the given liquid by parallel ax method(Mercury given).
3. Establish the relation between the twist and length of the rod using static torsion apparatus. Hence determine the rigidity modulus of the material of the rod.
4. Using Melds apparatus verify the relation between the tension and the length of the vibrating segment. Hence calculate the mass of a given body. Verify the result by direct measurement.
5. Find the refractive index of the given prism using spectrometer.
6. Compare the moments of two magnets using deflection magnetometer in Tan B position. Take 6 sets of readings.
7. Plot the reverse characteristics of a zener diode and hence find the break down voltage.
8. Convert a galvanometer into an Ammeter which can read up to 1A. Calibrate it using a potentiometer.
9. Compare the moments of two bar magnets using Searls Vibration magnetometer. Also find the moment of one of the magnets.
10. Study the variation of magnetic flux density along the axis of a circular coil carrying current and find out the value of the horizontal component of earth's field.

UNIVERSITY OF CALICUT

IV SEM B.Sc PHYSICS COPLIMENTARY (CUCBCSS-UG) PRACTICAL

AUGUST 2017

(ATTEMPT THE MARKED QUESTION) **Time 3 Hrs**

PH 23 M **Reg. No.....**

1. Plot the reverse characteristics of the given zener diode and find the break down voltage.
2. Determine the refractive index of the material of the given lens by liquid lens arrangement. (Water given)
3. Find out the moment of inertia of the given disc using it as a torsion pendulum. Verify by direct method (n=. . . . . .)
4. Find out the pole strength of the given magnet using deflection magnetometer in 'Tan A position'. Take 6 sets of readings
5. Determine the Young's modulus of the material of the bar when it is subjected to uniform bending. Use Optic lever
6. Standardize grating using the green line of the mercury spectrum and hence find out the wavelength of other prominent lines in the spectrum by normal incidence method.
7. Determine the surface tension of the given liquid by determining the rise of liquid in the capillary tube. Determine the radius of tube by using microscope.
8. Determine ratio of moments of the given two magnets using Searl's vibration magnetometer.

UNIVERSITY OF CALICUT

IV SEM B.Sc PHYSICS COPLIMENTARY (CUCBCSS-UG) PRACTICAL

AUGUST 2017

(ATTEMPT THE MARKED QUESTION) **Time 3 Hrs**

PH 23 E **Reg. No.....**

1. Plot the forward characteristics of a p-n junction diode and hence find the static resistance and knee voltage of the diode.
2. Find radius of the wire using it as a torsion pendulum Verify by direct method (n= . . . . .)
3. Determine the ratio of resistances of two coils of same material using potentiometer.
4. Establish the relation between the twist and length of the rod using static torsion apparatus. Hence determine the rigidity modulus of the material o f the rod
5. Construct a full wave rectifier and find out the ripple factor with and without filter for various values of load resistance. Take at least 6 sets of readings
6. Determine the Young's modulus of the material of the given bar by subjecting it to non-uniform bending and measuring the elevation using pin and microscope
7. Compare the Surface Tension of 2 liquids by capillary rise method. Hares apparatus given.
8. Find out the moment of inertia of a fly wheel. Take 6 sets o readings

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IV SEM B.Sc PHYSICS COPLIMENTARY (CUCBCSS-UG) PRACTICAL

AUGUST 2017

(ATTEMPT THE MARKED QUESTION) **Time 3 Hrs**

PH 29 M **Reg. No.....**

1. Determine the refractive index of the material of the given lens by liquid lens arrangement. (Water given)
2. Find out the pole strength of the given magnet using deflection magnetometer in 'Tan A position'. Take 6 sets of readings
3. Establish the relation between the twist and length of the rod using static torsion apparatus. Hence determine the rigidity modulus of the material o f the rod
4. Construct a full wave rectifier and find out the ripple factor with and without filter for various values of load resistance. Take at least 6 sets of readings
5. Determine the Young's modulus of the material of the given bar by subjecting it to non-uniform bending and measuring the elevation using pin and microscope
6. Find out the resistance of a wire using Carey Fosters Bridge and hence find its resistivity.
7. Determine the surface tension of the given liquid by determining the rise of liquid in the capillary tube. Determine the radius of tube by using microscope.
8. Determine the reduction factor a TG using potentiometer Also find the horizontal component of earth's magnetic field

UNIVERSITY OF CALICUT

IV SEM B.Sc PHYSICS COPLIMENTARY (CUCBCSS-UG) PRACTICAL JUNE 2019

(ATTEMPT THE MARKED QUESTION) **Time 3 Hrs**

PH 2507 M **Reg. No.....**

1. Construct basic gates using diodes and transistor and verify their truth table
2. Standardize grating using the green line of the mercury spectrum and hence find out the wavelength of other prominent lines in the spectrum by normal incidence method.
3. Establish the relation between the twist and length of the rod using static torsion apparatus. Hence determine the rigidity modulus of the material o f the rod
4. Determine the Young's modulus of the material of the given bar using it as a cantilever and measuring the depression of the bar by pin and microscope
5. Find out the pole strength of the given magnet using deflection magnetometer in 'Tan A position'. Take 6 sets of readings
6. Convert the given Galvanometer to in to a volt meter to read 0.1 volt/div and calibrate it.
7. Study the variation of magnetic flux density along the axis of a circular coil carrying current and find out the value of the horizontal component of earths field
8. Determine coefficient of viscosity of a given liquid by capillary flow method.