

ID No _____	Section _____	Signature of Invigilator _____
-------------	---------------	--------------------------------

Presidency University, Bengaluru  
School of Engineering

II Semester 2015-2016

Quiz 1

Course: **PUEA 102 Science Lab**  
( Closed Book)

Max Marks: 10

Max Time: 30 Min

Weightage: 5 %

Date 29<sup>th</sup> April 2016 **Set A**

**Instructions to Candidates**

1. Write legibly with pen only and do not over write. Write ID No, Section No in the designated place
2. Answer the questions in the question paper itself, no extra answer book shall be provided. Rough work can be done at the back of the sheet

Q. No.	Question ( One Mark Each)	Answer
1.	Expand the term LASER:	
2.	Newton rings are formed as a result of _____	
3.	In the estimation of Iron (II) in an Iron ore sample, $\text{KMnO}_4$ acts as a powerful oxidizing agent and also as a _____	
4.	_____ is added to remove the acidic impurities in the iodometric estimation of copper	
5.	Cytolysis takes place when cell is placed in _____ solution	
6.	Gram staining is an example of a. Acid fast stain b. Acid stain c. Differential stain d. Haematological stains	
7.	The most common stains used in Gram staining is a. crystal violet and methylene blue b. crystal violet and safranin c. crystal violet and carbolfuschin d. safranin and methylene blue	
8.	A medium of dielectric constant K is introduced between the plates of a parallel plate condenser. As a result its capacitance a. Increases b. Decreases c. Constant d. Zero	
9.	The pH of the buffer used in the estimation of hardness of water is 8. TRUE or FALSE	
10.	The ratio of the intensity of the transmitted light to the intensity of reflected light is called transmittance True or False	

ID No	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Presidency University, Bengaluru  
School of Engineering

II Semester 2015-2016

Quiz 1

Course: PUEA 102 Science Lab  
( Closed Book)

Max Marks: 10

Max Time: 30 Min

Weightage: 5 %

Date 29<sup>th</sup> April 2016 Set B

**Instructions to Candidates**

1. Write legibly with pen only and do not over write. Write ID No, Section No in the designated place
2. Answer the questions in the question paper itself, no extra answer book shall be provided. Rough work can be done at the back of the sheet

Q. No.	Question ( One Mark Each)	Answer
	The motion of a simple pendulum will be _____, when the amplitude of motion is very small.	
2.	Expression for dielectric constant in terms of permittivity _____	
3.	The law, "Absorbance is proportional to the concentration of the analyte", is called as _____	
4.	An example of gram negative bacteria is _____	
5.	The total hardness of water is always expressed in a. ppm b. mg/L c. Degree clarke d. All of the above	
6.	Express 500 LPI in terms of LPM a. 20,000 b. 4,000 c. 2000 d. 10,000	
7.	Oxygen combine with hemoglobin in blood and form a. Oxyhemoglobin b. Deoxyhemoglobin c. Carboxy haemoglobin d. Leghemoglobin	
8.	In Newton's rings pattern the center spot is bright due to constructive interference TRUE or FALSE	
9.	Widal agglutination test is based on the principle of enzyme substrate reaction	
10.	Ferrous Sulphate is also called Mohr's salt. TRUE or FALSE	

Set-1

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The procedure of determining the concentration of the titrant is known as _____	
2	Quantitative analysis is divided into _____ and volumetric or titrimetric analysis	
3	In the Iodometric estimation of copper, starch is added towards the end point of the reaction. TRUE or FALSE	
4	When plant cell is dipped in hypotonic solution, the cell becomes Turgid TRUE or FALSE	
5	_____ is an anticoagulant	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-2

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The charge per unit voltage is known as -----of the capacitor	
2	Expression for dielectric constant in terms of capacitance-----	
3	EDTA forms complexes with _____ and _____ ions at the pH of around 9.5 to 10.5	
4	Hemoprotein is composed of Globin and Heme TRUE OR FALSE	
5	Rheo discolour is a Stain used for bacteria TRUE OR FALSE	

Set 3

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016

Quiz II

Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	_____ is also called Conical Flask	
2	In Gram staining _____ dissolves lipids within the cell wall.	
3	In Newton's rings pattern the center spot is dark due to _____ interference	
4	When a light ray is incident on the upper surface of the lens, it is reflected as well as refracted TRUE OR FALSE	
5	Magnasite is an ore of Iron. TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-4

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016

Quiz II

Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	Hardness present in a given sample of water can be determined by using the _____ method	
2	Express the unit for Inductance _____	
3	The unit in which haemoglobin quantity is represented is _____	
4	Acetic acid is a mineral acid. TRUE or FALSE	
5	0.1 N HCl is commonly used as anticoagulant for storing blood samples TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-5

**Presidency University, School of Engineering, Bengaluru**

Semester 2015-2016

Quiz II

Course : PUEA 102 Science Lab

S.N o	Question (One Mark Each)	Answer
1	Two examples for Dielectric materials are _____ and _____	
2	Incompatibility between erythrocytes between donor and recipient will result in _____	
3	A _____ is used to transfer the analyte into a conical flask	
4	When plant cells are placed in hypotonic solution they become turbid. TRUE or FALSE	
5	Superposition of waves results an interference pattern TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-6

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016

Quiz II

Course : PUEA 102 Science Lab

S.N o	Question (One Mark Each)	Answer
1	Two examples of semi conductors are _____ and _____	
2	In an acid base titration, the equivalent weight is calculated by dividing the molecular weight by the number of replaceable _____ and _____ ions	
3	Haemoglobin molecule is a carbohydrate. TRUE or FALSE	
4	Complete collapse of cell wall due to plasmolysis is known as cytorrhysis. TRUE or FALSE	
5	The time period of simple pendulum depends on the effective length and mass of the bob TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-7

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The incidence angle on to the glass plate to get Newton's ring is _____	
2	An oxidant always oxidizes the reductant but itself undergoes _____	
3	A basic buffer solution of $\text{NH}_4\text{OH} + \text{NH}_4\text{Cl}$ serves a pH of _____	
4	Haemoglobin molecule is a carbohydrate. TRUE OR FALSE	
5	Complete collapse of cell wall due to plasmolysis is known as cytorrhysis. TRUE OR FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-8

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The least count of travelling microscope is _____	
2	Quantitative analysis is divided into _____ and volumetric or titrimetric analysis	
3	Antigen present in <i>S. typhi</i> is _____	
4	All dielectric materials are semiconductors TRUE or FALSE	
5	The complexes of calcium and magnesium with EDTA are colorless. TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-9

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	If you replace sodium light with white light what type of Rings you can observe _____	
2	The bandgap of Germanium is _____	
3	Titration involving $KMnO_4$ is always performed slowly (dropwise) TRUE or FALSE	
4	Potassium is source for Iodine. TRUE or FALSE	
5	Rh factor incompatibility causes Erythroblastosis Fetalis TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-10

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	In the estimation of hardness of water, _____ is used as indicator, which forms an unstable wine red colored complex with calcium and magnesium	
2	Acid-Base titration can also be called as _____	
3	The unit for dielectric constant is F/m TRUE or FALSE	
4	In laser diffraction experiment If the distance "P" increases the wavelength increases. TRUE or FALSE	
5	In a compound microscope the lens which is near to the sample being observed is known as _____.	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set 11

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016

Quiz II

Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	If a sample is focused under compound microscope using 10X objective lens and 5X Eyepiece the magnification is _____	
2	Newton rings are formed as a result of scattering TRUE or FALSE	
3	Haemoglobin content of the blood was measured in the lab using _____ method.	
4	Acid leads to acidity, base leads to _____	
5	The potassium permanganate (KMnO <sub>4</sub> ) is a powerful _____	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set 12

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016

Quiz II

Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	In interference the fringe pattern have unequal width TRUE or FALSE	
2	Laser is a coherent source TRUE or FALSE	
3	_____ is used as a counter stain in gram staining procedure.	
4	The process of transferring blood from a healthy donor to recipient is known as _____	
5	Copper sulphate can be estimated indirectly via the liberation of _____ from potassium iodide	



ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-13

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	Interference occurs between the two waves which interfere constructively if path difference between them is $(m+1/2)\lambda$ and destructively if path difference between them is $m\lambda$ producing alternate bright and dark rings	
2	Stimulated emission is the principle behind the production of laser	
3	Acid haematin is formed by reaction between haemoglobin and _____	
4	_____ can act as a self-indicator	
5	The liberated iodine reacts with Sodium thiosulphate. This method is known as direct Iodimetric titration method (Iodimetry). TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-14

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	When the refracted ray strikes the glass sheet, it undergoes a phase change of $180^\circ$ on reflection TRUE or FALSE	
2	In which part of blood antibodies are present _____.	
3	Agglutinin present in blood group "O" is _____.	
4	The copper sulphate solution may contain mineral acid impurities. By adding _____ can neutralize the above acids	
5	The complexes of calcium and magnesium with EDTA are colorless. TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-15

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The solution of accurately known strength is called _____ solution	
2	In an acid base titration, the equivalent weight is calculated by dividing the molecular weight by the number of replaceable _____ and _____ ions	
3	Genetic inheritance and environmental influences during the life time influences ABO blood group determination TRUE or FALSE	
4	In the estimation of Iron in iron ore, the butette is filled with Mohr's salt solution. TRUE or FALSE	
5	Laser is a monochromatic source TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-16

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The expression for resonant frequency is $f_r = 1/T$ TRUE or FALSE	
2	The motion of a simple pendulum will be damped harmonic TRUE or FALSE	
3	A person with blood type AB can give blood to type O. TRUE or FALSE	
4	Monochromatic light is the light with _____ wave length	
5	Bleaching powder in water gives Chlorine and _____	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-17

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	Newton's rings are formed due to interference between the light waves reflected from the top and bottom surfaces of the air film formed between the lens and glass sheet TRUE or FALSE	
2	The purpose of heat fixing in gram staining procedure is to kill the bacteria and adhere it to the slide. TRUE or FALSE	
3	Blood group AB is known as universal recipient because it has both antigens A and B and both antibodies A and B. TRUE or FALSE	
4	The abundantly available ore of copper is _____	
5	The negative logarithm of Transmittance is called _____	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-18

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	When a mixture of acids like a strong acid and weak acid are titrated against a strong base, _____ reacts first.	
2	Absorbance is directly proportional to concentration of the solution. This law is called _____	
3	Semiconductor diode laser emits a monochromatic wave TRUE OR FALSE	
4	The principle behind lasing action is spontaneous emission TRUE OR FALSE	
5	Antisera used in ABO blood group determination is an example of haematological stain. TRUE OR FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-19

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	Unit of conductance is _____	
2	The chemical methods analysis is mainly divided into _____ and _____ analysis	
3	Laser has high directionality compare to ordinary light TRUE OR FALSE	
4	Osmosis is a process by which molecules of solvent tend to pass through asemipermeable membrane from a less concentrated solution into a concentrated one. TRUE OR FALSE	
5	The principle behind lasing action is absorption TRUE OR FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-20

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The wave length of sodium light is 7000A° TRUE OR FALSE	
2	The sodium lamp emits yellow light. TRUE OR FALSE	
3	Sodium carbonate also precipitates some of copper sulphate as copper carbonate. It can be re-dissolved with _____	
4	A medium of dielectric constant is introduced between the plates of a parallel plate condenser. As a result its capacitance decreases by K times: TRUE OR FALSE	
5	Rod shaped bacteria are called _____	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-21

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	In the colorimetric determination of copper, the absorbance of series of standard solution is measured using photoelectric colorimeter at _____ nm	
2	A deep blue coloured cupraammonium complex ion is formed when $\text{Cu}^{2+}$ ions are mixed with _____	
3	In iodometric titrations _____ is used as an indicator, which gives blue colored complex even at very low concentrations of iodine	
4	Radius of curvature is inversely proportional to wavelength: TRUE OR FALSE	
5	Antiserum is _____	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-22

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	In Widal agglutination test, serum sample is a source of antigens and O, H, AH and BH solutions are source of antibodies TRUE OR FALSE	
2	The phenomenon of the formation of the Newton's rings can be explained on the basis of wave theory of light TRUE OR FALSE	
3	In presence of sulphuric acid $\text{Mn}^{+7}$ is reduced to _____ and $\text{Fe}^{+2}$ is oxidized to _____	
4	Acceleration due to gravity is indirectly proportional to the square of the time period of simple pendulum. TRUE OR FALSE	
5	In normal human blood, the iron is present in _____	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-23

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.N o	Question (One Mark Each)	Answer
1	In the estimation of Iron (II) from iron ore, instead of a redox reaction, a decomposition reaction may occur if Mn <sup>+7</sup> is reduced to _____	
2	1 $\mu$ f is equal to -----farad	
3	If the gram staining procedure is stopped after addition of grams iodine and slide is observed under microscope color which will be observed for gram negative bacteria --- -----.	
4	The antigens for ABO and Rh blood groups are present in -----	
5	----- is the outer boundary of the cell	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-24

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab      Weightage: 5 %

S.N o	Question (One Mark Each)	Answer
1	Express 250 LPI in terms of LPM-----	
2	EDTA Stands for _____	
3	In the Iodometric estimation of copper, the titration is started immediately after adding potassium iodide. TRUE or FALSE	
4	Acceleration due to gravity is directly proportional to the length of the pendulum.TRUE OR FALSE	
5	Hemoglobin carries _____ through the bloodstream	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set 25

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	Estimation of strength of an acid in a given solution is an example of _____ titration	
2	Express 100 LPI in terms of LPM-----	
3	Mohr's salt ( $\text{FeSO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$ ) is a _____ salt in which Iron(II) acts as a reducing agent	
4	Superposition of waves results a constructive interference pattern TRUE OR FALSE	
5	----- <i>typhi</i> causes typhoid fever	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set 26

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The unit of hardness of water is _____	
2	The active constituent of the bleaching powder is _____, which is responsible for the bleaching action of the material	
3	The theoretical value of Quality factor is -----	
4	All simple harmonic motions are periodic but all periodic motions are damped harmonic . TRUE OR FALSE	
5		

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-27

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	All insulators are dielectric materials TRUE OR FALSE	
2	The bandgap of silicon is: -----	
3	In the complexometric titration, calcium ions complexed first with EDTA, but the color change does not occur until all the magnesium has completely reacted. TRUE or FALSE	
4	The time period of simple pendulum depends on the effective length and not on acceleration due to gravity. TRUE OR FALSE	
5	Bacillus subtilis is virulent Gram Negative bacteria TRUE OR FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-28

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The titrant is always taken in a glass ware called _____	
2	When a monochromatic beam of light of intensity passes through a transparent medium, part of light is reflected, part of it is absorbed and a remaining part is _____	
3	Starch forms soluble red colored complex with iodine even at low concentrations. TRUE or FALSE	
4	All dielectric materials are conductors TRUE OR FALSE	
5	Widal test is not considered as presumptive test TRUE or FALSE	



ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-29

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The convex lens in Newton's ring apparatus is replaced by an ordinary glass plate, then Interference takes place but the shape of the fringes is irregular. TRUE or FALSE	
2	Dielectric constant of air is ----- -	
3	Nascent oxygen has the property of bleaching. TRUE or FALSE	
4	Gram staining gives morphological characteristics of Bacteria TRUE or FALSE	
5	Widal can be false positive, if the patient is having been treated with chloramphenicol TRUE or FALSE	

ID NO	_____	Section _____	Signature of Invigilator
-------	-------	---------------	--------------------------

Set-30

**Presidency University, School of Engineering, Bengaluru**

II Semester 2015-2016      Quiz II      Course : PUEA 102 Science Lab

S.No	Question (One Mark Each)	Answer
1	The dielectric constant is directly proportional to the distance between the plates: TRUE OR FALSE	
2	Two sources are said to be coherent, if their emitted waves have Same amplitude, wavelength and different Phase TRUE OR FALSE	
3	In the Iodometric estimation of copper, starch is added towards the end point of the reaction. TRUE or FALSE	
4	The percentage of NaCl used to prepare hypertonic solution is _____	
5	Plasmolysis occurs in _____ solution	