



### Reforms in Continuous Internal Evaluation (CIE) system at the institutional level Response

S.NO	Description	Page No.
1	MOOCS Courses in B.Tech IV Year I Semester	2-3
2	Sample I Mid-Term Examination Question Paper for B.Tech II Year I Semester.	4
3	Sample I Mid-Term Examination Objective Paper for B.Tech II Year I Semester.	5-6
4	Sample II Mid-Term Examination Question Paper for B.Tech II Year I Semester.	7
5	Sample II Mid-Term Examination Objective Paper for B.Tech II Year I Semester.	8-9
6	Sample Report on Student Performance in Laboratory	10
7	Sample Prefinal Question Papers	11-21
8	Sample Syllabus Coverage Sheet	22

Web : [www.jntuh.ac.in](http://www.jntuh.ac.in)  
E Mail : [dejntuh@jntuh.ac.in](mailto:dejntuh@jntuh.ac.in)  
Phone : Off: +91-40-23156113  
Fax : +91-40-23158668



## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by JNTU Act No. 30 of 2008)  
Kukatpally, Hyderabad – 500 085 Telangana (India)  
ACCREDITED BY NAAC WITH 'A' GRADE

**Dr. V.Kamakshi Prasad**

M.Tech., Ph.D.(IIT-M), FIE, MCSI, LMISTE

**Professor of Computer Science and Engineering &  
DIRECTOR OF EVALUATION**

**Date:17-08-2019**

To

**The Principals**

All the JNTUH Constituent and Affiliated Colleges offering B.Tech Courses

Dear Sir/Madam,

Sub: JNTUH - Implementing MOOCs courses in B.Tech IV Year I Sem (R16 Regulations )  
uploading of opted MOOCs subjects while uploading fortnight attendance –Reg

Ref: Lr.No.DAPO/SWAYAM/2019

With reference to the above, the JNTUH permits the students to register for MOOCs courses for B.Tech IV Year I Sem (R16 Regulations ) in place of Professional Electives in the curriculum offered by the University. Accordingly it is informed to encourage the students to choose the MOOCs courses through SWAYAM platform for the academic year 2019-20. For more details you are requested to go through the letter from DAP, JNTUH as cited above. The opted students details need to be uploaded during the upload of the fortnight attendance to the University. This is for your information.

The Principals are informed to note that if a subject is offered in MOOCs to a student in the current semester, a subject with similar title listed either in Professional Elective/Open Elective in the successive semesters, it should not be offered to such students.

There are lab courses for every elective subject in some of the Professional Elective slots (Ex. Professional Elective-II of CSE & IT). If the subject is selected in MOOCs is similar to professional elective and that Professional Elective is having the corresponding lab, then the student need to register for the corresponding lab course, even though the student registers for a theory course under MOOCs.

Thanking you

*Forwarded to Heads  
and SPOC NITEL*  
Yours Sincerely,

Sd/-

**DIRECTOR OF EVALUATION**

*[Signature]*  
17/8/2019  
Officer Incharge Examinations  
Global Institute of Engineering & Technology  
Chilkur (V).. Moinabad (M).., R.R. Dist.T.S.-501504.

Encl.

*K.Pi*  
17/08/2019  
PRINCIPAL

Date: 20-08-2019.

Dear Principals,

The Fortnight attendance upload service of Regular B.Tech/B.Pharmacy III-I, IV-I is enabled. The last date for uploading is as shown in the table below.

Year	Fortnight	Service start date	Service end date
B.Tech/B.Pharm III-I,IV-I	1 <sup>st</sup> Fortnight	19-AUG-19	23-AUG-19
B.Tech/B.Pharm III-I,IV-I	2 <sup>nd</sup> Fortnight	19-AUG-19	23-AUG-19
B.Tech/B.Pharm III-I,IV-I	3 <sup>rd</sup> Fortnight	01-SEP-19	04-SEP-19
B.Tech/B.Pharm III-I,IV-I	4 <sup>th</sup> Fortnight	14-SEP-19	17-SEP-19
B.Tech/B.Pharm III-I,IV-I	5 <sup>th</sup> Fortnight	06-OCT-19	09-OCT-19
B.Tech/B.Pharm III-I,IV-I	6 <sup>th</sup> Fortnight	01-NOV-19	02-NOV-19
B.Tech/B.Pharm III-I,IV-I	7 <sup>th</sup> Fortnight	16-NOV-19	16-NOV-19(3 PM)

\* Update Regular Students section information before starting of uploading fortnight attendance.

\*Update Section Information as READMITTED SUBSTITUTESUBJECT for Readmitted students.

\* Subjects for which 1st fortnight attendance posted will be frozen for remaining fortnight attendance templates.

\* For elective / open elective /substitute subjects, enter the attendance for the selected elective / open elective /substitute subjects only and for other non-selected elective / open elective /substitute subjects fill with '-2' as classes conducted and classes attended, so that there will be no blanks in the excel file.

\* For selected MOOCs course subjects there is no need for uploading of fortnight attendance. For these subjects fill with '-3' as classes conducted and classes attended, so that there will be no blanks in the excel file.

\* The Principals are informed to note that if a subject is offered in MOOCs to a student in the current semester, a subject with similar title listed either in Professional Elective/Open Elective in the successive semesters, it should not be offered to such students.

\* There are lab courses for every elective subject in some of the Professional Elective slots (Ex. Professional Elective-II of CSE & IT). If the subject is selected in MOOCs is similar to professional elective and that Professional Elective is having the corresponding lab, then the student need to register for the corresponding lab course, even though the student registers for a theory course under MOOCs.


*Forwarded to  
Principals*

*[Signature]*  
20/08/2019  
Officer Incharge Examinations  
Global Institute of Engineering & Technology

*Forwarded to Heads with a instruction  
to follow the deadlines meticulously*

*[Signature]*  
20/08/2019  
PRINCIPAL  
Global Institute of Engg. & Tech.

**Sample I Mid-Term Examination Question Paper for B.Tech II Year I Semester  
Object Oriented Programming using C++**

 <b>GLOBAL</b> Institute of Engineering & Technology			College Code	
			U6	
Name of the Exam:	I Mid Examinations	Marks:	10	
Year-Sem & Branch:	II-I & CSE	Duration:	60 Min	
Subject:	OOP using C++	Date & Session	13/09/2019 & AN	
Answer ANY TWO of the following Questions			2X5=10	
Q.NO	QUESTION	BLOOMS TAXONOMY		
1	Explain the structure of c++ program with an example?	L5		
2	a) Write a c++ program to implement all bitwise operators? b) Write a c++ program to swap two numbers without using third variable?	L6		
3	Write a c++ program to declare a class. Declare pointer to a class. Initialize and display the contents of the class member?	L6		
4	What is class in c++? Explain how to create a class and create objects with an example program?	L5		

*P. S. Rao*  
13/9/2019



```
return 0;
```

```
}
```

a) 123

stroustrup

b) stroustrup

stroustrup

c) compile time error

d) none of the mentioned

9. Which among the following can restrict class members to get inherited? [ ]

a) Private    b) Protected    c) Public    d) All three

10. Consider the following recursive implementation to find the factorial of a number: [ ]

```
int fact(int n)
```

```
{
```

```
  if(_____)
```

```
    return 1;
```

```
  return n * fact(n - 1);
```

```
}
```

```
int main()
```

```
{
```

```
  int n = 5;
```

```
  int ans = fact(n);
```

```
  printf("%d",ans);
```

```
  return 0;
```

```
}
```

Which of the following lines should be inserted to complete the above code?

a) n = 0    b) n != 0    c) n == 0    d) n == 1

#### FILL IN BLANKS

11. An Object's state is represented through \_\_\_\_\_ and behavior through \_\_\_\_\_.

12. \_\_\_\_\_ operator is to define the functions outside the class.

13. \_\_\_\_\_ operator is used to assign memory dynamically.

14. \_\_\_\_\_ is the syntax for creating object in C++.

15. \_\_\_\_\_ is the advantage of new operator over malloc() in C.

16. \_\_\_\_\_ is the syntax for dynamically initializing a variable in C++.

17. \_\_\_\_\_ operator is used to provide the new line in C++.

18. \_\_\_\_\_ is known as automatic type conversion.


19. \_\_\_\_\_ is the act of representing essential features without including the background details.

20. \_\_\_\_\_ specifies how the members of a class can be accessed.



Scanned with  
CamScanner

**Sample II Mid-Term Examination Question Paper for B.Tech II Year I Semester  
Object Oriented Programming using C++**

 <b>GLOBAL</b> Institute of Engineering & Technology			College Code	
			U6	
Name of the Exam:	I Mid Examinations		Marks:	10
Year-Sem & Branch:	II-I & CSE	Duration:	60 Min	
Subject:	OOP using C++	Date & Session	13/09/2019 & AN	
Answer ANY TWO of the following Questions				2X5=10
Q.NO	QUESTION	BLOOMS TAXONOMY		
1	Explain the structure of c++ program with an example?	L5		
2	a) Write a c++ program to implement all bitwise operators? b) Write a c++ program to swap two numbers without using third variable?	L6		
3	Write a c++ program to declare a class. Declare pointer to a class. Initialize and display the contents of the class member?	L6		
4	What is class in c++? Explain how to create a class and create objects with an example program?	L5		

*[Signature]*  
13/9/2019

**Sample II Mid-Term Examination Objective Paper for B.Tech II Year I Semester**  
**Object Oriented Programming using C++**



**GLOBAL**  
**Institute of Engineering & Technology**

B.Tech. II Year I Semester II Mid-Term Examinations, November – 2019  
**Object Oriented Programming using C++**  
**Objective Exam**

Name: \_\_\_\_\_ Hall Ticket No. 

						A			
--	--	--	--	--	--	---	--	--	--

**Answer All Questions, All Questions Carry Equal Marks. Time: 20 Min. Marks: 10**

**I. Choose the correct alternative:**

1. What is the role of a constructor in classes? [     ]
  - a) To modify the data whenever required
  - b) To destroy an object
  - c) To initialize the data members of an object when it is created
  - d) To call private functions from the outer world
2. What is a copy constructor? [     ]
  - a) A constructor that allows a user to move data from one object to another
  - b) A constructor to initialize an object with the values of another object
  - c) A constructor to check the whether to objects are equal or not
  - d) A constructor to kill other copies of a given object.
3. Which rule will not affect the friend function? [     ]
  - a) private and protected members of a class cannot be accessed from outside
  - b) private and protected member can be accessed anywhere
  - c) protected member can be accessed anywhere
  - d) private member can be accessed anywhere
4. Which operator is used to declare the destructor? [     ]
  - a) #                      b) ~                      c) @                      d) \$
5. Which is used to create a pure virtual function? [     ]
  - a) \$                      b) =0                      c) &                      d) !
6. Where does the abstract class is used? [     ]
  - a) base class only                      b) derived class
  - c) both derived & base class                      d) virtual class
7. What is meant by exception specification? [     ]
  - a) A function is limited to throwing only a specified list of exceptions
  - b) A catch can catch all types of exceptions
  - c) A function can throw any type of exceptions
  - d) A try can catch all types of exceptions
8. Which is used to check the error in the block? [     ]
  - a) try                      b) throw                      c) catch                      d) handler
9. What should present when throwing a object? [     ]
  - a) constructor                      b) copy-constructor                      c) destructor
  - d) copy-destructor

*[Handwritten Signature]*  
02/11/2019

10. What is the output of the following program?

[     ]

```
#include<iostream>
#include<string.h>
using namespace std;
class SuperHero{
public:
string name;
string power;
string c_name;
string nature;
SuperHero():name("Ironman"),power("fly"),c_name("tony stark"),nature("kind"){
}
void print(){
cout<<"Super Hero \t"<<name<<"\t can \t"<<power<<"\t in sky\n";
cout<<"His name is\t"<<c_name<<endl;
cout<<"He is very \t"<<nature<<endl;
}
};
int main(){
SuperHero s;
s.print();
return 0;
}
```

- a) Super Hero    Ironman can    fly    in sky  
His name is    Ironman  
He is very    kind
- b) Super Hero    Ironman can    fly    sky  
His name is    tony stark  
He is very    kind
- c) Super Hero    Ironman can    fly    in sky  
His name is    tony stark  
He is very    kind
- d) Super Hero    Ironman can    fly    sky  
His name is    tony stark  
He is very    kind

**II. Fill in the Blanks:**

- 11. \_\_\_\_\_ is a member function in the base class that you redefine in a derived class.
- 12. If more than one class is inherited from the base class, it's known as \_\_\_\_\_.
- 13. When you do not specify any destructor in a class, compiler generates a \_\_\_\_\_ and inserts into your code.
- 14. \_\_\_\_\_ manipulator sets the width of the field assigned for the output.
- 15. \_\_\_\_\_ in C++ is a process to handle runtime errors
- 16. \_\_\_\_\_ is used to create files, write information to files, and read information from files.
- 17. \_\_\_\_\_ is a abnormal condition whenever it occurs execution of the program is stopped.
- 18. In \_\_\_\_\_ the function calls are not resolved until runtime.
- 19. The process of removing function entries from function call stack at runtime is called \_\_\_\_\_.
- 20. \_\_\_\_\_ functions are used for performing input/output operations at console and the resulting data is formatted and transformed.

# Sample Report on Student Performance in Laboratory

YEAR/SEM:		III-I SEM		NAME OF FACULTY :		G MOUNIKA															
Lab Name:		DAA LAB																			
H.T.No		NAME OF THE STUDENT		INTERNAL EVALUATION (Day to Day Performance + Record)																	
S. No	H.T.No	NAME OF THE STUDENT	Expt 1	Expt 2	Expt 3	Expt 4	Expt 5	Expt 6	Expt 7	Expt 8	Expt 9	Expt 10	Expt 11	Expt 12	Expt 13	Expt 14	Internal Exam	University marks			
1	167BI/A0503	Y BHANU VARDHAN REDDY	10	10	12	12	10	12	12	13	12	12	12	12	12	10	6	45			
2	167BI/A0507	VADLA KISHORE	10	9	10	9	10	10	9	10	8	9	12	11	10	9	4	56			
3	16L6I/A0501	ANNAADI AKHIL	10	10	12	13	12	12	12	13	12	12	12	12	12	10	6	72			
4	16L6I/A0502	APPANI DEEPIKA	11	12	12	13	12	11	13	13	12	13	12	12	12	10	5	63			
5	16L6I/A0505	ASIE RAHAN	12	12	13	13	13	12	13	13	12	13	12	14	13	12	7	71			
6	16L6I/A0504	BIBRUGU	8	8	8	7	6	5	10	11	11	8	9	8	8	8	4	58			
7	16L6I/A0505	BANADRI HARSHINI	10	10	12	13	12	12	12	13	12	12	12	12	12	10	6	73			
8	16L6I/A0506	CHINTALA RAVALI	11	12	12	13	12	11	13	13	12	13	12	12	12	10	6	73			
9	16L6I/A0508	D RISHENDRA KRISHNA	15	15	15	14	15	15	12	14	14	15	14	15	15	15	10	62			
10	16L6I/A0514	K.SAKIUMAR MURALI	10	10	12	13	12	12	12	13	12	12	12	12	12	10	8	71			
11	16L6I/A0515	MOHAMMED ATIYA BANU	10	10	9	9	11	11	12	10	9	10	12	10	9	10	4	46			
12	16L6I/A0516	MOHAMMED FAIAZ	12	12	12	13	12	12	12	13	12	12	12	12	12	10	8	70			
13	16L6I/A0518	MOHAMMED SAMI UDDIN SHAMS	10	10	10	10	9	9	8	11	11	8	12	12	12	10	6	74			
14	16L6I/A0522	PARUPATI VEEDENDRA	10	10	9	8	8	10	10	9	8	12	12	12	12	10	6	74			
15	16L6I/A0524	QUNABRUDDIN AHMAD	12	12	13	13	12	12	12	13	12	12	12	12	12	10	5	63			
16	16L6I/A0526	SUNGOJU SREERAJ	10	10	10	10	9	9	8	11	11	8	12	12	12	10	5	45			
17	16L6I/A0532	ZUN AID AKTHAR ANSARI	10	10	9	8	8	10	10	9	8	12	12	12	12	10	4	56			
No. of Students scored > target Marks			17	17	17	16	16	17	17	17	17	17	17	17	17	17	13	17			
Total No. of Students			100%	100%	100%	94%	94%	94%	100%	100%	100%	100%	100%	100%	100%	100%	76%	100%			
% Students scored > target Marks			100%	100%	100%	94%	94%	94%	100%	100%	100%	100%	100%	100%	100%	100%	76%	100%			

*Mounika*  
LAB FACULTY 1

*Mounika*  
LAB FACULTY 2

*Mounika*  
HOD-CSE

**HEAD**  
Department of Computer Science & Engg.  
Global Institute of Engineering & Technology  
Chikur (V), Moinebad (M), R.R. Dist. T.S.-501504.

# Sample Prefinal Question Papers

## B.Tech I Year I Semester 2018

### Mathematics-I



# GLOBAL Institute of Engineering & Technology

DEPARTMENT OF HUMANITIES & SCIENCES

B.Tech I Year I Semester Pre-Final Examination Nov.2018

MATHEMATICS – I (Common to All Branches)

Time: 3 Hours

Max. Marks: 75

Note: This Question Paper contains two Parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units.

Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

#### PART – A

(25 Marks)

1. (a) Find k such that rank of  $\begin{bmatrix} 1 & 2 & 3 \\ 2 & k & 7 \\ 3 & 6 & 10 \end{bmatrix}$  is 2. [2]
- (b) Find the eigen values of  $\begin{pmatrix} 1 & 4 \\ 3 & 2 \end{pmatrix}$  [3]
- (c) Find the nature of quadratic form  $x^2 + 4y^2 + z^2 - 4xy + 2xz - 4yz$  [3]
- (d) Write the matrix form from the given Q.F.  $x^2 + y^2 + z^2$  [2]
- (e) Test convergent or not for  $\sum \frac{2^n}{n^3}$  [3]
- (f) Test convergent or not for  $\sum \frac{x^n}{n}$  [2]
- (g) Write the necessary conditions to find the Rolle's theorem? [3]
- (h) Write the formula for Taylor's theorem? [2]
- (i) If u, v are independent of x & y then write the formula for Jacobian? [3]
- (j) If  $Z = \log(x^2 + y^2)$  then find  $\frac{\partial z}{\partial x}$  and  $\frac{\partial z}{\partial y}$  [2]

M. Kauria  
26/11/18

## PART - B

( 50 Marks )

2. Verify Cayley – Hamilton theorem for  $A = \begin{bmatrix} 1 & -1 & 0 \\ 0 & 1 & 1 \\ 2 & 1 & 2 \end{bmatrix}$  hence  $A^{-1}$  [10]

OR

3. Reduce the Quadratic Form  $2x^2 + y^2 - 3z^2 + 12xy - 4xz - 8yz$  to Canonical form and find rank, signature and index. [10]

4. Test the consistency of  $x + y + z = 1$ ,  $x - y + 2z = 1$ ,  $x - y + 2z = 5$ ,  $2x - 2y + 3z = 1$  [10]

OR

5. Solve the system by Gauss–Seidel method  $10x + y + z = 12$ ,  $2x + 10y + z = 3$ ,  $2x + 2y + 10z = 14$  [10]

6. a) Test convergency of  $\sum \sqrt{n^2 + 1} - \sqrt{n^2 - 1}$  [5+5]

b) Test convergency of  $\sum_{n=1}^{\infty} \frac{n}{n!}$

OR

7. a) Test convergence of  $\sum (1 + \frac{1}{\sqrt{n}})^{-n^2}$  [5+5]

b) Test convergence of  $\frac{x}{1+x} - \frac{x^2}{1+x^2} + \frac{x^3}{1+x^3} - \dots$

8. a) Verify the Rolle's theorem for  $f(x) = (x - a)^m (x - b)^n$ ,  $a, b > 0$  in  $[a, b]$  [5+5]

b) Prove that  $\frac{\pi}{3} - \frac{1}{5\sqrt{3}} > \cos^{-1} \frac{3}{5} > \frac{\pi}{3} - \frac{1}{8}$  using Lagrange's Mean value theorem?

OR

9. a) Verify Cauchy's Mean value theorem  $f(x) = e^x$  and  $g(x) = e^{-x}$  in  $(a, b)$ ,  $a, b > 0$  [5+5]

b) Expand by using Taylor's theorem for  $f(x) = \log(\sin x)$  at  $x = \frac{\pi}{3}$ .

10. a) If  $\sin u = \frac{x^2 y^2}{x+y}$  then show that  $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = 3 \tan u$  [5+5]

b) If  $u = \frac{yz}{x}$ ,  $v = \frac{zx}{y}$ ,  $w = \frac{xy}{z}$  then find  $\frac{\partial(u,v,w)}{\partial(x,y,z)}$

OR

11.a) find the maximum and minimum for  $x^3 + y^3 - 3axy$

[5+5]

b) find the minimum value of  $x^2 + y^2 + z^2$  given that  $xyz = a^3$

# Sample Prefinal Question Papers

## B.Tech I Year I Semester 2018

### Chemistry



**GLOBAL**  
Institute of Engineering & Technology

DEPARTMENT OF HUMANITIES & SCIENCES

I.B.Tech I-Sem Pre-Final Examination Nov-2018

Chemistry (Common for CSE/EEE)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, or c as sub questions.

#### PART- A

(25 Marks)

1. a) Distinguish between atomic and molecular orbital's? [2m]
- b) Give the salient features of CFT? [3m]
- c) Explain briefly about reverse osmosis? [3m]
- d) How Calgon treatment prevents scale formation in boilers? [2m]
- e) What is electrode potential? What is standard electrode potential? [2m]
- f) Compare galvanization and tinning? [3m]
- g) Define (a) Optical isomerism (b) Enantiomers ? [2m]
- h) What is saytzafts rule? Explain dehydrohalogenation of alkyl halides? [3m]
- i) State and derive Beer-Lamberts law? [3m]
- j) Discuss about selection rules? [3m]

#### PART- B

(50 Marks)

2. a) What do you understand by LCAO (linear combinations of atomic orbitals)? What are conditions necessary for combination of atomic orbitals?
- b) What is MOT? Draw the MO diagram of  $O_2$  molecule. Calculate the bond order of the following  $O_2$ ,  $O_2^-$ ,  $O_2^{2-}$ ? [5+5]

M. Karthika  
25/11/18

V. Renuka  
28/11/18

OR

3. a) Draw molecular orbital diagram of  $N_2$  molecule?. Calculate its bond order and predict its magnetic behavior? [5+5]
- b) Describe the crystal field theory for the octahedral complexes of the transition metals?
4. a) Discuss the ion-exchange process for softening of water.
- b) Write a note on Scale and Sludge's.? [5+5]

OR

5. a) What is Break point of Chlorination? Explain. [3+3+4]
- b) What is hardness of water? Give the causes of hardness.
- c) Calculate the amount of temporary and permanent hardness of a water sample which contains following impurities.  $Ca(HCO_3)_2 = 121.5$  ppm,  $Mg(HCO_3)_2 = 116.8$  ppm,  $MgCl_2 = 79.2$  ppm,  $CaSO_4 = 102$  ppm. ?
6. a) Write Nernst Equation and its applications. [3+3+4]
- b) Explain the construction of Quinhydrone and calomel electrode?
- c) Explain charging and discharging of Lead acid storage cell with chemical reactions ?

OR

7. a) Explain sacrificial anode and impressed cathodic protection method for control of corrosion?. Give its advantages, limitations and applications?
- b) Define electroplating?. Explain electroplating process with neat labeled diagram and applications? [5+5]
8. a) Describe the conformational isomers of n-butane?
- b) What is nucleophilic substitution reaction? Explain the mechanism of  $SN^1$ ,  $SN^2$  reactions? [5+5]

OR

9. a) Explain Markownikoffs and anti markownikoffs rule with addition of HBr to propene?
- b) Give the structure and synthesis and pharmaceutical applications of paracetamol and aspirin? [5+5]

10. a) Explain principle , instrumentation and applications of UV-visible spectroscopy?

b) What are the conditions for molecule to be IR active? Discuss the various modes of vibrations possible for CO<sub>2</sub>. Which are IR active? [5+5]

**OR**

11. a) What is spin-spin coupling? Explain NMR spectra for CH<sub>3</sub>CH<sub>2</sub>OH and give applications of NMR? [5+5]

b) Describe Magnetic Resonance Imaging (MRI) and give its applications?

# Sample Prefinal Question Papers

B.Tech I Year II Semester 2019

## Applied Physics



**GLOBAL**  
Institute of Engineering & Technology

DEPARTMENT OF HUMANITIES AND SCIENCES

I.B.Tech II-Sem Pre-Final Examination April,2019

APPLIED PHYSICS (CSE,EEE)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, or c as sub questions

### PART A

(25 Marks)

1.
  - a) State the principle of uncertainty. [3]
  - b) What is Fermi level ? [2]
  - c) What is reverse saturation current? [3]
  - d) What is population inversion? [2]
  - e) Why susceptibility of diamagnetic material is negative? [3]
  - f) What is blackbody ?state deBroglie hypothesis [2]
  - g) What is carrier generation and recombination? [3]
  - h) What are the advantage of LED [2]
  - i) An optical fibre has a core material of refractive index is 1.55 and cladding refractive index 1.50. calculate its numerical aperture. [3]
  - j) Differentiate graded index fibre from step index fibre. [2]

M. Kavitha  
17/4/19

17/4/19

**PART B**

(50 Marks)

2. a) Derive one-dimensional time independent schrodinger wave equation for an electron. (7+3)  
b) Calculate the velocity and kinetic energy of an electron of wavelength  $1.66\text{\AA}$

**OR**

3. a) Obtain an expression for energy levels of an electron in a one dimensional potential well of infinite height. (7+3)  
b) An electron is confined to a one dimensional potential box of length  $2\text{\AA}$ . calculate the energies corresponds to the second and fourth quantum state.

4. a) Define hall effect. Show that for a n-type semiconductor the hall coefficient  $R_H = -1/ne$  (7+3)  
b) Explain the application of hall effect.

**OR**

5. a) With neat diagram explain the construction and working of bipolar junction diode. (7+3)  
b) Explain the V-I characteristics of zener diode in both biasing.

6. a) What is LED ? write in detail the construction and working of a LED. (7+3)  
b) Draw V-I characteristics of a solar cell and discuss its features.

**OR**

7. a) What are photodetectors? Name different types of detectors. write in detail the construction and working of any one detector. (7+3)  
b) What are the application of photodiode.

8. a) With neat diagram describe the construction and working of Ruby laser. (7+3)  
b) What are the application of laser.

**OR**

9. a) Derive an expression for acceptance angle for an optical fibre. How it is related to numerical aperture. (7+3)  
b) What are the different losses in optical fibre.

10. a) Obtain an expression for the internal field seen by an atom in an infinite array of atoms subjected to an external field. (7+3)  
b) Derive clausius-mosotti relation in dielectric

**OR**

11. a) What is ferromagnetism. Explain in detail domain theory of ferromagnetism.  
b) Explain the hysteresis curve of a ferromagnetic material.

# Sample Prefinal Question Papers

## B.Tech I Year II Semester 2019

### Engineering Graphics



# GLOBAL Institute of Engineering & Technology

Department of Humanities & Sciences  
I.B.Tech II.Sem Pre-Final Examinations April, 2019

### Engineering Graphics (Common to CSE/EEE)

I. Answer ANY FIVE of the following

Max.Time : 3 Hrs

Max Marks : 75

1. a) Construct a parabola, with distance of the focus from directrix as 60mm and also draw normal and tangent to the curve at a point 40mm from the directrix 7M
- b) A circle of 40 mm diameter is rolling outside the circle of radius 60 mm. Draw the locus of a point on the circumference of rolling circle for one complete revolution 8M

OR

2. a) Draw a cycloid for one revolution of a circle having 50mm diameter. Draw tangent and normal to the curve at a point 35mm above the directing line or base line. 8M
- b) If 1 cm long line measures a real distance of 40 m. Find R.F. The scale is to measure up to meter and long enough up to 500 m. Mark on it a distance of 250 m. 7M
3. a) The front view of a line AB 80 mm long measures 55 mm while its top view measures 70 mm. End A is in both HP and VP. Draw the projections of the line and find its inclinations with the reference planes. 8M
- b) A square ABCD of 50mm side has its corner A in the HP, its diagonal AC inclined at  $30^\circ$  to the HP and the diagonal BD inclined at  $45^\circ$  to the VP, and parallel to the HP. Draw its projections. 7M

OR

*Signature*  
13/4/19

M. Kantia  
13/4/19

4. a) A pentagonal plate of side 30mm is resting on HP on one of its sides with its surface inclined at  $45^\circ$  to HP and the resting side is inclined at  $55^\circ$  to VP. Draw its projections. 8M

b) A line AB of 70 long has its end A at 10 above HP and 15 in front of VP, its front view and top view measure 50 and 60 respectively; Draw the projections of the line. Determine its inclinations with VP and HP. 7M

5. A pentagonal pyramid, having a base with a 30 mm side and a 70 mm long axis, has one of the corners on the ground with its axis inclined at  $45^\circ$  to the H.P. A vertical plane containing the axis and that corner is inclined at  $30^\circ$  to the V.P. Draw its projections. 15M

**OR**

6. A square pyramid with side of base 30mm and 50mm long is resting on its base on HP with an edge of the base parallel to VP. It is cut by a section plane perpendicular to VP and inclined at  $45^\circ$  to HP. The section plane is passing through the midpoint of the axis. Draw the development of the surface of the cut pyramid. 15M

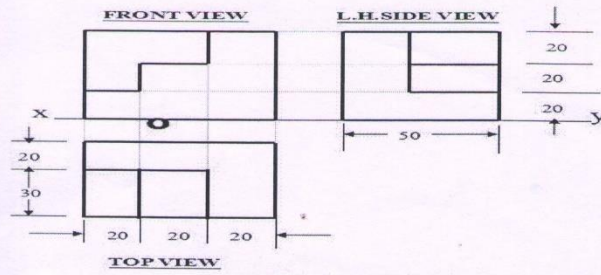
7. A cylinder of base 50 diameter and 60 long has its axis parallel to both HP and VP. It is cut by a vertical section plane inclined at  $30^\circ$  to VP such that the axis is cut at a point 25 from one end. Draw the projection and determine the true shape of the section. 15M

**OR**

8. A hexagonal prism, 30 mm base side & 55 mm axis is lying on HP on its rectangular face with axis parallel to VP. It is cut by a section plane normal to HP and  $30^\circ$  inclined to VP and bisecting the axis. Draw the development of the surface of the remaining part of prism. 15M

9. Draw the isometric view of the following orthographic projections.

15M



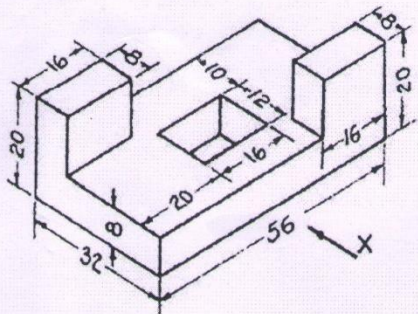
**ORTHOGRAPHIC PROJECTIONS**

OR

10. Draw the orthographic projections of the following figure.

15M

a) Front view b) Top view and c) side view



# Sample Syllabus Coverage Sheet



**GLOBAL**  
Institute of Engineering & Technology

(Approved by AICTE & Affiliated to JNTUH)

Survey No. 179, Chilkur (V), Moimabad (M), Ranga Reddy Dist. T.S.

*Department Of Computer Science and Engineering Academic Year: 2018-19*

## CSE-II Yr-II SEM SYLLABUS COVERAGE STATUS

From 24.12.18 To 05.12.19

Collected On 25.12.19

S.NO	SUBJECT	FACULTY HANDLING	NO.OF CLASSES CONDUCTED	UNITS COMPLETED	Number CONDUCTED		REMARKS	SIGN	CLASS
					SLIP TESTS	ASSIGNMENTS			
1	DBMS	Mr.K.Monachary	50	4½	2	4	-	<i>[Signature]</i>	
2	FLAT	Mrs.P.Rishitha	54	4	2	4	-	<i>[Signature]</i>	
3	OS	Ms.Shefali S	50	4½	3	4	-	<i>[Signature]</i>	
4	CO	MS.Shaik Asra Tabassum	51	4	2	4	-	<i>[Signature]</i>	
5	BEFA	Mrs.Bushra Jabeen	55	4½	3	3	-	<i>[Signature]</i>	
6	DBMS LAB	Mr.K.Monachary/Ms.G.Mounika	39	11-Experiments Completed	-	-	-	<i>[Signature]</i>	
7	OS LAB	Ms.Shefali S/Ms.Swetha Acharya	36	12-Experiments Completed	-	-	-	<i>[Signature]</i>	
8	CO LAB	Ms.Shaik Asra Tabassum/Mr.Sanka Ravi	39	11-Experiments Completed	-	-	-	<i>[Signature]</i>	
9	GS LAB	Ms.Rishitha P	49	4½	2	3	-	<i>[Signature]</i>	
10	SEMINAR	Ms.Shefali S	40	-	-	-	-	<i>[Signature]</i>	

*[Signature]*  
HEAD  
Mr.Syed Mazharuddin

*[Signature]*  
Co Ordinator IQAC  
Mr. G.Ahmed Zeeshan

*[Signature]*  
PRINCIPAL  
Dr. VVS Murthy

