IES COLLEGE OF TECHNOLOGY, BHOPAL

B.E. (3rd SEM) Assignment Paper-1

MATHEMATICS-II (BE-301)

DATE OF AWARD: 16/7/2014 **DATE OF SUBMISSION: 24/7/2014**

1	Expand $f(x) = x\sin x$, $0 < x < 2\pi$ in a Fourier Series.
2	Exapand $f(x) = \pi x - x^2$, $0 < x < \pi$ in a half range sine series.
3	Find the Fourier series to represent the function $f(x) = x^2$, $-l < x < l$
4	Find the Fourier series expansion of f(x) when: $f(x) = -\pi \quad -\pi < x < 0$
5	Find the Fourier series expansion of f(x) when: $f(x) = -\pi \quad -\pi < x < 0$

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B.E. (IIIth SEM) Assignment Paper-1

Discrete Structure (CS-302)

Date of Assign:16/07/14 Date of Submission:24/07/14

Q.1	Use Mathematical Induction to prove that $2 .7^n + 3.5^n - 5$ is divisible by 24 for all n>0 **Dec-2011**
Q.2	If R is a relation defined on integers by aRb if a-b is even. Show that R is an equivalence relation and Find its class. **Dec-2011**
Q.3	Prove law of distribution on sets. **June-2011** $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$
Q.4	Explain Denumerable and uncountable set.
Q.5	Using mathematical Induction show $2^{n+2} + 3^{2n+1}$ is divisible by 7, n>0

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B.E. (3rd SEM) Assignment Paper-1

Digital Circuits and Systems (CS-303)

DATE OF ASSIGN: 16/07/2014 Date of submission: 24/07/2013

Q.1	i)Define number system. Explain all the number systems in detail. ii) Convert the following numbers into other numbers - (a) (37.24)8 = ()16 (b) (11010.101)2 = ()10 (c) (71.35)10 = ()8	**2**
Q.2	Explain Boolean algebra. Prove the law of Boolean algebra.	**2**
Q.3	Minimize the function f Karnaugh map method – f (A,B,C,D) = A'B'C'D'+ AC'D+ ACD'+ BD+ BC	**2**
Q.4	Minimize the function f given below by Quine-McClusky method using decimal notation. f (A,B,C,D)= A'B'C'D'+ A'BC'D+ A'BCD'+ A'BCD+ AB'C'D+ AB'CD'+ ABC'D+ ABCD'+ ABCD	**2**
Q.5	Prove the following Boolean identity – (a) A+(BC) = (A+B)(A+C) (b) A(B+C) = (AB) +(AC)	**2**

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1st ASSIGNMENT 2014

(CSE304)

DATE OF AWARD: 16/7/2014 **DATE OF SUBMISSION: 24/7/2014**

1	Give the ideal and practical diode equivalent circuit.
2	Explain Common Emitter Configuration with input and Output Configuration.
3	Explain briefly about half wave and full wave rectifier circuit.
4	Write the difference between JFET & MOSFET.
5	Short notes on (i) PIN diode (ii) Photo diode (iii) LED

IES COLLEGE OF TECHNOLOGY, BHOPAL

BE –III YR,DATA STRUCTURE(CS-305)

ASSIGNMENT SHEET-1

Date of Issued: 16/07/14 **Date of Submission:24/07/14**

Q.1	Explain the Basic Terminology, Data types and its classification?	
Q.2	What do you mean by Array Definition, Representation and Analysis of Arrays?	
Q.3	Explain Recursion-definition and processes, simulating recursion,	
Q.4	Explain Tower of Hanoi Problem.	
Q.5	What do you mean by Tail recursion, Removal of recursion.	