ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL 2016-17
School of Engineering & Technology

Subject: AM III		Date: 24 /09/16
Marks: 20	Unit Test 1	Duration: 1Hr
Class: SE	(Direct SE students)	Branch: CO

N. B. 1. Attempt any **four** questions of the following.

      2. All questions carry equal marks.

1. Find the constants a, b, c, d & e if

    $f(z) = (ax^4 + bx^2y^2 + cy^4 + dx^2 - 2y^2) + i(4x^3y - exy^3 + 4xy)$ is
    analytic.

2. Find an analytic function $f(z)$ whose real part is $e^x(x\cos y - y\sin y)$.

3. Find an analytic function $f(z) = u + iv$, if $u + v = \dfrac{2\sin 2x}{e^{2y} + e^{-2y} - 2\cos 2x}$.

4. Verify Laplace equation for $u = \left(r + \dfrac{a^2}{r}\right)\cos\theta$. Also find v and $f(z)$.

5. Find a bilinear transformation which maps the points $0, 1, \infty$ $onto$ $\infty, 1, 0$.

**** All the Best ****

Symbol of Secularism & National Integration

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Subject: DS	**Unit-Test: 1**	**Marks: 20**
Date: 01/10/2016		**Duration: 1 hr**
Class : SE CO(DSY)		**Branch : CO**
Semester: III		

Note:1) All questions all compulsory.
      2)Use C language to write any function.
      3)SLL- Singly Linked List, DLL- Doubly Linked List.

Q 1. Attempt any five out of six.   (each 2 marks)
   (i) What is linked list?
   (ii) Define Data structure and give its types.
   (iii) Write at least two comparisons between array and linked list.
   (iv) Explain advantage of linked list over array .
   (v) Explain any two memory management function.
   (vi) Write the difference two between arrow(->) operator and dot(.) operator .

Q 2. (a) Write a function to insert node at the beginning of SLL.   5
                            Or
   (b) Write a function to insert node at the end of SLL.   5

Q 3. (a) Write a function to delete node from the end of SLL.   5
                            Or
   (b) Explain pictorial representation of SLL and DLL.   5

|		
Subject: DIS		Date: 01/10/2016
Marks: 20		Duration: 1 Hr/s
Class: SE (Sem III) for DSY		Branch: COMPUTER

Instructions: 1) All the Questions are compulsory.
2) Assume suitable data wherever necessary.

Q. 1) Attempt any **5** : (10)
a) Define i) Power Set   ii) Partition of a Set
b) Prove that $A-B = A \cap \overline{B}$
c) Write Inverse and Contrapositive of the statement whose converse is given below: "If I come early then I can get the train."
d) If A={a,b,c} B={p,q,r}. Find i) AxB ii) BxA iii) AxA iv) BxB
e) Show that $q \rightarrow p$ and $\sim p \rightarrow \sim q$ are logically equivalent.
f) Explain the term : Universal and Existential Quantifier.

Q. 2) **A)** In a class of 60 students,30 students got first class in Sem I examination and 25 got first class in Sem II examination. If 20 students did not get first class in either examination, how many got first class in both examinations ? (5)

OR

B) Using Laws Of Logic, simplify (5)
$[\sim(p \wedge q)] \rightarrow [\sim p \vee (\sim p \vee q)]$

Q. 3) **A)** Prove by Mathematical Induction, (5)
$x^n - y^n$ is divisible by x-y

OR

B) Find the number of integers between 1 and 60 which are not divisible by 2,nor by 3, nor by 5. (5)

DSY - OOPM
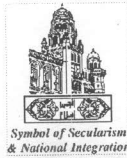
ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
School of Engineering & Technology

Subject: OOPM   Date: 24/9/2016

Marks: 20   Duration: 1 Hr
Class: SE   Branch:Computer Eng.

Instructions: All Questions are compulsary.

Q.1 Answer any 5 questions out of 6 (Each carry 2 marks)   (10M)

a)What will be the output of the following code

```java
class Ques
  {
    public static void main(String arg[])
    {
      int i=7,j=2,k;
      k=i+++j+++i-j--;
      System.out.println("i="+i+"j="+j+"k="+k);
    }}
```

b) List out the Bitwise operator available in Java.

c) True or False with justification:JVM is plateform independent

d) What is the significance of static keyword?

e) Explain how java is plateform Independent?

f) Explain the working of System.arraycopy().

Q.2 Answer any one Question.   (5m)

a) Explain method overloading with example.

b) What is Vector?Explain any five methods of vector.

Q.3 Solve any one Question.   (5M)

a)WAP to find largest second largest and smallest number in an array

b)WAP to calculate GCD of two number taking the numbers from command line

DSY-DLDA

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

School of Engineering & Technology

Subject: Digital Logic Design and Analysis		Marks: 20
Duration: 1 Hr	TEST -I	Class : SE COMP

Q 1) Attempt any 5 questions out of six.

a)	Convert $(650.17)_8$ to decimal and hexadecimal number system.	(2)
b)	Perform $(33)_{10}-(44)_{10}$ using 1s complement.	(2)
c)	Perform $(56)_8 * (45)_8$ directly.	(2)
d)	Perform directly without converting to any other base $(BC5)_H - (A2BD)_H$	(2)
e)	Explain applications of gray code.	(2)
f)	State and prove DeMorgan's theorems.	(2)

Q 2) Write Hamming code for 1011. Prove that hamming code is error detecting and correcting code. (5)

OR

Simplify $f(A,B,C,D)=\Sigma m(3,4,9,13,14,15) + \Sigma d(5,7)$ using Quine McCluskey method. (5)

Q 3) Simplify following expression and draw circuit for the final expression.

$Y= A (B + C \overline{(AC+AB)})$ (5)

OR

Simplify following function using k-map and implement using NAND gates only. (5)

$f(A,B,C,D)=\Sigma m(1,3,7,11,15)+\Sigma d(0,2,5,8,14)$

Subject: ECCF	Date: 24/09/2016
Marks: 20	Duration: 1 Hr/s
Class: SECO	Branch: COMPUTER

Instructions:
Q -1 is compulsory


Q-1)	Define pinch-off voltage (V_p) & cut-off voltage - $V_{GS(off)}$.	2
Q-2)	Draw low frequency small signal model of JFET.	2
Q-3)	Draw transfer characteristics of n-channel JFET & mark important voltage, current on it.	2
Q-4)	Define – I_{DSS} . g_m.	2
Q-5)	Explain JFET as voltage variable resistor (VVR).	2
Q-6)	Draw drain characteristics of N-channel JFET & mark operating regions on it.	2

Q-2) **Attempt any one.**
a) Differentiate between fixed bias, voltage divider bias and self bias.   5
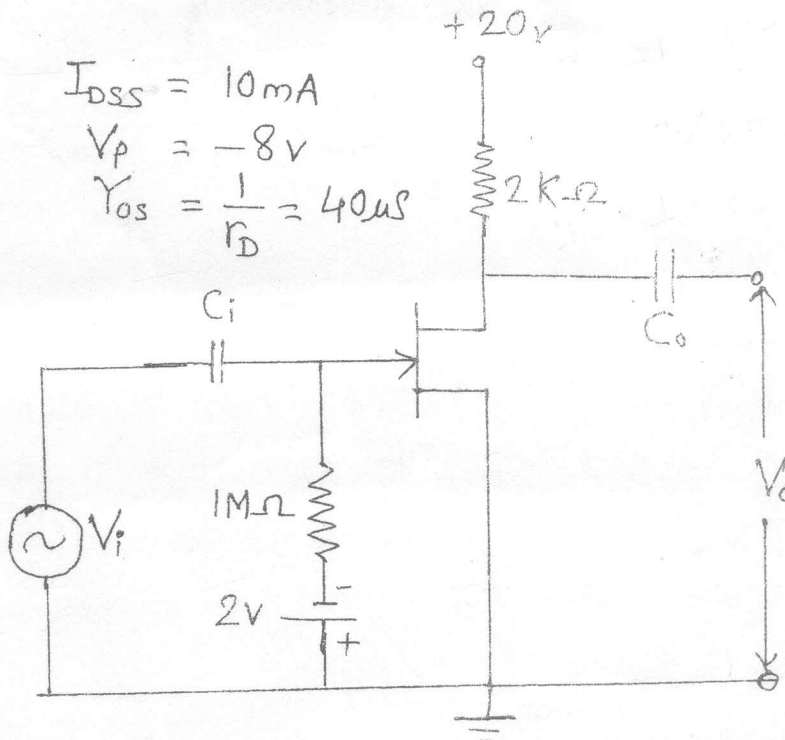b) For fig. 2(B) Find V_{GS}, V_{DS}, I_D.   5

Q-3) **Attempt any one.**
a) For fig. 3(A) Find Zi, Zo, Av.   5
b) Using Shockley's equation derive, $g_m = - 2 I_{DSS} / V_p * (1 – V_{GS} / V_p)$ 5
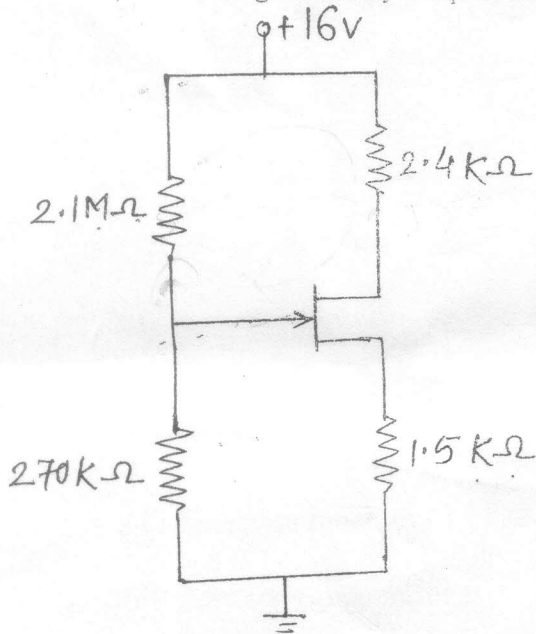
fig 2(B)

$$I_{DSS} = 8\,mA$$
$$V_p = -4v$$

$$I_{DSS} = 10\,mA$$
$$V_p = -8v$$
$$Y_{os} = \frac{1}{r_D} = 40\,\mu S$$

fig - 3 (A)