

**(052) Math 131: Finite Mathematics.Quiz III(5.1-2,8.1-2,10.3): April 15, 2006**

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**Contents**

**Marks: 20; Time: 30 Minutes**

**NAME:.....**

**I.D.#:**

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**SERIAL# SECTION #: (check one)**

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**NOTE: SHOW ALL STEPS OF THE SOLUTION.**

**NO FULL CREDIT FOR ANSWERS WITHOUT COMPLETE SOLUTION.**

The questions are not in any order of difficulty at all.

Only the nonprogramable calculators are allowed.

Check  $\checkmark$  or circle  $\circ$  very carefully the one correct choice of each question after completing the solution.

**Q.1.(Marks : 5) 294TAN37 Investment Planning.** Find how much money should be deposited in a bank paying interest at the rate of 8.5 % per year compounded quarterly so that at the end of five years the accumulated amount will be \$ 35000.

- (A) Between \$ 20000 and \$ 21000.
- (B) Between \$ 21000 and \$ 22000.
- (C) Between \$ 22000 and \$ 23000.
- (D) Between \$ 23000 and \$ 24000.
- (E) Between \$ 24000 and \$ 25000.

- (F) Between \$ 25000 and \$ 26000.
- (G) Between \$ 26000 and \$ 27000.
- (H) Between \$ 27000 and \$ 28000.
- (I) Between \$ 28000 and \$ 29000.
- (J) Between \$ 29000 and \$ 30000.
- (K) Between \$ 31000 and \$ 32000.
- (L) Between \$ 32000 and \$ 33000.
- (M) Between \$ 33000 and \$ 34000.
- (N) None of the Previous Choices is Correct

and the correct amount is :..... Dollars.

**Q.2. (Marks : 5) 367TAN6.** Find the number of permutations that can be formed from all the letters in the word

*M A T H E M A T I C S*

- (A) 4422110
- (B) 4989600
- (C) 9979200
- (D) 453600
- (E) 16800
- (F) 119750400
- (G) 1814400

(H) 831600

(J) 8743680

(I) 420

(K) 993900

(J) 39916800

(L) 1123000

(K) 3628800

(M) 1125000

(L) 479001600

(N) **None of the Previous Choices is Cor-**

(M) 362880

**rect and the correct Number is :.....**

(N) **None of the Previous Choices is Cor-**

**Q.4. (Marks : 5) 519T10.3B10. Investment. If**

**rect and the correct Number is :..... .**

**\$ 15320 is invested at an annual rate of 3 % com-**

**Q.3. (Marks : 5) 384BZ.Counting Techniques.**

**pounded continuously, find the compound amount**

**Serial numbers for a product are to be made us-**

**at the end of eight years.**

**ing 3 letters followed by 3 numbers. If the letters**

(A) *Between \$ 15000 and \$ 16000*

**are to be taken from the first 20 letters of the al-**

(B) *Between \$ 16000 and \$ 17000*

**phabet with no repeats and the numbers are to**

(C) *Between \$ 17000 and \$ 18000*

**be taken from the 10 digits (0 – 9) with no repeats,**

(D) *Between \$ 18000 and \$ 19000*

**how many serial numbers are possible?**

(E) *Between \$ 19000 and \$ 20000*

[For Example : ABM492, IAB231, DHC560]

(F) *Between \$ 20000 and \$ 21000*

(A) 1572480

(G) *Between \$ 21000 and \$ 22000*

(B) 2419200

(H) *Between \$ 22000 and \$ 23000*

(C) 2937600

(I) *Between \$ 23000 and \$ 24000*

(D) 3525120

(J) *Between \$ 24000 and \$ 25000*

(E) 4186080

(K) *Between \$ 25000 and \$ 26000*

(F) 4924800

(L) *Between \$ 26000 and \$ 27000*

(G) 5745600

(M) *Between \$ 27000 and \$ 28000*

(H) 6652800

(N) **None of the Previous Choices is Cor-**

(I) 76507200

**rect and the correct amount is :.....Dollars.**