Math 1332 Contemporary Math **Fall 2018 Final Exam**
G-Number- **Name (Print):** _____

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1. (6 points) Identify the premises, conclusion, and the type of Fallacies
   (a) I ate oysters for dinner and later that night I had a nightmare. Oyster caused my nightmare

   (b) Apple's iPhones outsell all other smart phones, so they must be the best smart phones on the market.

2. (10 points) For the two statements p, q find the following logical argument truth table for Negation: not p ($\sim p$), Conjunction: p and q ($p \wedge q$), Disjunction: p or q ($p \vee q$), Conditional: if p then q ($p \implies q$), Inverse: if not p then not q ($\sim p \implies \sim q$), Converse: if q then p ($q \implies p$), Contrapositive: if not q then not p ($\sim q \implies \sim p$) .

3. (12 points) A movie critics reviewed 36 films: 12 were documentaries and 24 were feature films. She gave favorable reviews to 18 of the 24 were feature films. She gave favorable reviews to 8 of the documentaries and unfavorable reviews to 6 of the feature films.

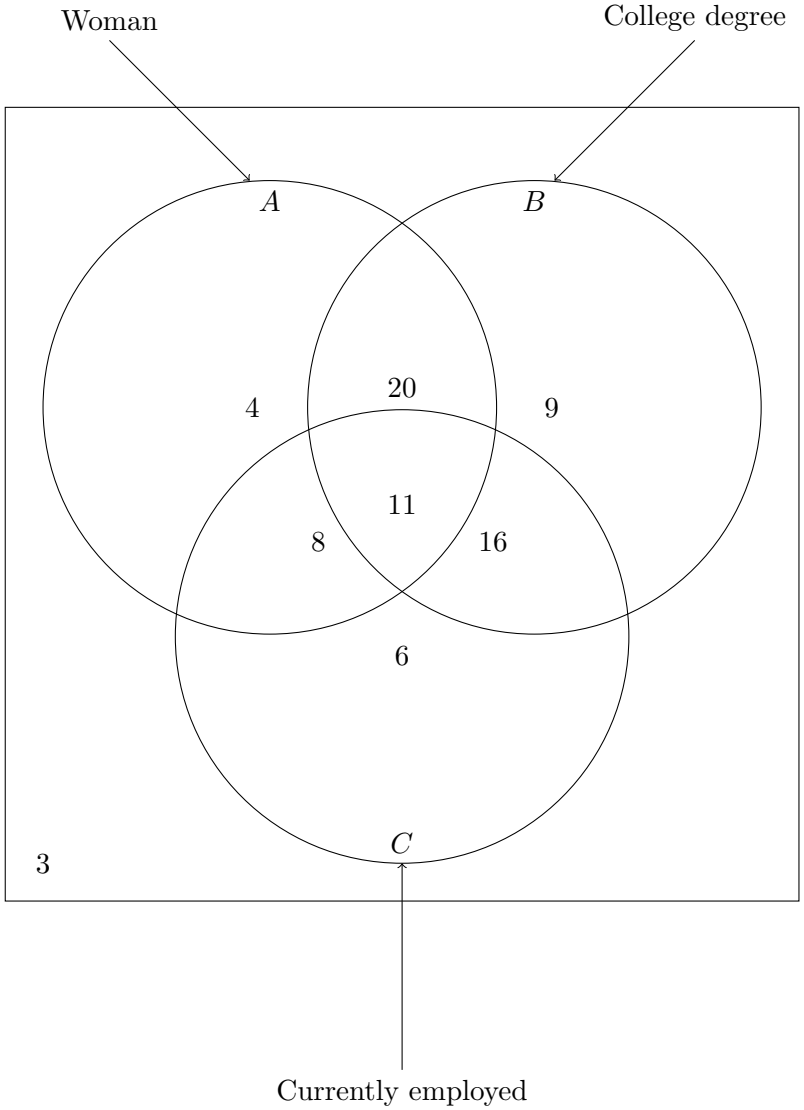
   (a) Make a two-way table summarizing the reviews.

   (b) Make a Venn diagram from the table in part (a).

   (c) How many documentaries received unfavorable reviews?

   (d) How many feature films received favorable reviews?

4. (8 points) Following is the Venn-diagram of the people at conference. Use the Venn Diagram to answer the following questions



(a) How many people at the conference are employed men with a college degree?

(b) How many people at the conference are employed men?

(c) How many people at the conference are unemployed woman?

(d) How many women are at the conference?

5. (6 points) For the following income and expenses compute the Net Cash flow:
   Income:
   Part-time Job = $650 per month
   College fund from grandparents: $400 per month
   Scholarship: $6000 per year.

   Expenses:
   Rent: $500 per month.
   Groceries: $60 per week.
   Tuition and Fees: $3600 twice a year.
   Incidentals: $120 per week

6. (7 points) Make a frequency table and then find cumulative, relative frequency also present them in Bar Diagram for the following data
A, C, D, F, H, C, C, C, A, C, H, D, D, C, A, F, H, H, H, H, A, A, D, D, A, A, C, D.

7. (6 points) If interest rates stay at 4% APR and I continue to make my monthly $25 deposit into my retirement plan, how much total money I would have after 30 years.

8. (6 points) Your goal is to create a college fund for your child. Suppose you find a fund that offers an APR of 5% How much should you deposit monthly to accumulate $\$170,000$ in 15 years?

9. (5 points) The following data represents the number of boys and girls attended at San Jacinto College from 2010 to 2015 in College Comtemporary math classes. Make a multiple bar diagram (single or double) for these data, with vertical axes representing the number of students running from 1 to 15.

Number of boys and girls from 2010-2015		
Academic year	Number of boys	Number of girls
2010	12	14
2011	9	16
2012	14	10
2013	13	8
2014	6	10
2015	6	12

Table 1: Students log table in Contemporary math class

10. (5 points) Find the mean, median,and mode for following data and also find outliers if exits: 7, 3, 3, 11, 12, 3, 4, 14, 6, 4, 3, 53, 4,14, 6

11. (8 points) Find the five point summary, range and standard deviation of the following data:12, 7, 9, 10, 7, 8

12. (3 points) Find the probability distribution table for the sample space when tossing two coins.

13. (6 points) When forming a committee of three members consisting boys and girls then find
    (a) All girs

    (b) Exactly two boys

    (c) At least two boys

14. (6 points) Find the following "AND" probability
    (a) When rolling a die in one hand and tossing a coin in another hand then what is the probability of P(Even numbers and T)

    (b) There are 10 tennis balls in a balls of two different colors 6 red and 4 White balls. John wants to take out two balls from that bag then what is the probability P(White and Red)=P(W and R)

15. (6 points) There are 20 cards in a deck of card numbering from 1 through 20 that is $S = \{1, 2, 3, ..., 20\}$. And Events A=$\{Evennumbers\}$, B=$\{multipleof 5\}$ and $C = \{3, 7, 13\}$ then find the following probability

    (a) P(A or B)

    (b) P(A or C)

Bonus:

16. (5 points) The population of Pearland in 2010 was 10,000 and it is doubling up in every 10 years then what would be population of Pearland in 2050?