



Register Number:
Date:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
M.Sc. MATHEMATICS - III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2022
(Examination conducted in December 2022)
MTOE 9722: MAKING THE RIGHT DECISION

Duration: 1 $\frac{1}{2}$ Hours

Max Marks: 35

This question paper contains **Two** printed pages.

I. ANSWER ALL QUESTIONS.

1. As the final quarter of the nineteenth century approaches, you, Thomas Edison, foresee Coming era of greater and greater use of machines, particularly those that use electricity. As a result, you are planning on going into business developing those machines. Not only are you talented, but you have always been able to keep your eye on the ball-when you were young, you saved the life of a railway station official's child and asked for lessons in telegraphy as a reward. Despite the fact that you have little or no formal schooling, you have already developed several improvements to the telegraph, and this has given you a modest amount of seed money. As a result, you are nearly at the point where you can start your own company developing inventions. You already have several inventions in mind, but in order for your business to become prosperous, you want to make sure that all your ducks are in a row. The two inventions that you believe have top priority are a sock quotations printer and an electric light. With suitable reasons, mention what would you choose from the following?
 - a) Develop the stock quotations printer first, as there is an immediate demand for it, although the market is small?
 - b) Develop the electric light first because the market for it is so phenomenally large that it is certain to make you rich once electricity is widely available?
 - c) Share work on both projects initially and then concentrate or efforts on Whichever project is coming along best? (9m)
2. And you thought the big problem was getting her to say "yes"! You chose the time and the place, you had the ring ready, and it all went exactly according to the script . While still basking in the warm fuzzy afterglow of this momentous occasion, your intended proceeded to describe her dream wedding, a relatively modest affair with only close family and intimate friends-maybe fifty or so people. This didn't set well with either your parents or hers although they're not about to rent a football stadium for the proceedings, they're envisioning something much more elaborate in the way of ceremony and celebration. Nobody asked you, but you'd just as soon ink the deal at City Hall and spend the money on a nice honeymoon. Oops, someone did just ask you the blush ing bride-to-be.what do you tell her that you prefer ? with suitable reasons.
 - a) A quick trip to City Hall and a nice honeymoon?
 - b) An elaborate ceremony and celebration, as the parents seem to want?
 - c) A small wedding, as she prefers? (8m)
3. Read the following article .

A man of 92 years, short, very well-presented, who takes great care in his appearance, is moving into an old people's home today. After waiting several hours in the retirement home lobby, he gently smiles as he is told that his room is ready. His wife of 80 has recently died, and he is obliged to leave his home. As he slowly walks to the elevator, using his cane, I describe his small room to him, including the sheet hung at the window which serves as Page 3 a curtain. "I like it very much", he says, with the enthusiasm of an 8 year old boy who has just been given a new puppy. " You haven't even seen the room yet, hang on a moment, we are almost there.

” ” That has nothing to do with it ”, he replies. ” It is already decided in my mind that I like my room. It is a decision I take every morning when I wake up. ” ” Happiness is something I choose in advance. Whether or not I like the room does not depend on the furniture, or the decor rather it depends on how I decide to see it. ” ”I can choose. I can spend my day in bed enumerating all the difficulties that I have with the parts of my body that no longer work very well, or I can get up and give thanks to heaven for those parts that are still in working order. ” ”Every day is a gift, and as long as I can open my eyes, I will focus on the new day, and all the happy memories that I have built up during my life. ” ”Old age is like a bank account. You withdraw in later life what you have deposited along the way. I am continuing to fill my account with happy memories”.

Describe the decision process by answering the following questions.

- a) Write 3 options you have if you were that man?
 - b) What information is used to make the choice?
 - c) What payoff system has been used by him?
 - d) What are the likely/possible consequences of each option you have listed in (a)?
 - e) What is/are the final decision/s? (9m)
4. Your best friend, Helen, has passed away, after a long and happy life. Even though she was in her seventies, you always referred to her as Helen the lippie because she hit her stride during the sixties as one of the original flower children from Haight-Ashbury. She never lost the sense of sweetness and innocence that characterized these times.. The two of you might have had very different views on politics and philosophy, but your disagreements were always good-natured. Helen’s family has requested that instead of flowers, you make a donation to an animal rights organization that Helen favored. You have major problems with this, as this organization strongly opposes medical experimentation using animals-a procedure resulting from such experimentation saved the life of another friend of yours. With suitable reasons, mention what would you choose from the following?
- a) Honor their request and write a check to the animal rights organization.
 - b) Find another organization of which both Helen and you would approve but that has nothing to do with animals and donate to them?
 - c) Make a contribution to your local animal shelter? (9m)