



Date:
Registration number:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
M.Sc Mathematics - III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2021
(Examination conducted in January-March 2021)
MTOE9718: Making The Right Decision

Duration: 1.5 Hours

Max Marks: 35

This question paper contains Three printed pages

Answer ALL questions

1. Centuries ago, they knew about the effectiveness of extract from willow bark in treating pain and fever, but it was less than a century ago that aspirin was synthesized and became a staple of the medicine cabinet. However, aspirin has some undesirable side effects, notably ulcers and stomach bleeding, and your company, Johnson & Johnson, had the leading competitor to aspirin. Acetaminophen relieves pain and fever also, but without the unpleasant side effects, and under the trade name Tylenol, it contributes almost 20 percent of your annual profits. However, something has just happened that threatens to cut the sales of Tylenol to zero. It's the fall of 1982, and some sicko in Chicago has put lethal doses of cyanide in packages of Extra-Strength Tylenol. Seven people have now died, and you have a major headache on your hands that neither aspirin nor Tylenol can cure. You've pulled Tylenol off the shelves and the police are investigating, but you've got to decide the future of Tylenol. Should you?
 - a. Repackage Tylenol in the newly developed tamper-resistant gelcaps and bottle them in tamper-evident containers?
 - b. Make Tylenol a prescription-only drug so it is no longer available over the counter?
 - c. Wait awhile and repackage acetaminophen, an effective and widely used analgesic, under a different brand name so as to remove the Tylenol taint?

[8]

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 blushing bride-to-be. Do you tell her that you prefer?

- 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? **[9]**

3. You saw your first movie when you were three years old, and you instantly knew what you wanted to do: be a movie star (you and approximately twenty million others). The odds are no longer twenty million to one against—you've recently graduated with a degree in drama (you and maybe one million others) and starred in your college productions, and every so often someone asks you if you're Angelina Jolie's sister (you and very few others). With all this going for you, you've decided to turn down your father's offer of a position in his plumbing-supply business and take your show on the road. You're mulling over three possibilities. Should you?

- a. Take an offer to be an understudy to the lead in a revival of *My Fair Lady* in Chicago?
- b. Take a leading role in a performance of *Phantom of the Opera* in Charleston, South Carolina?
- c. Head for Hollywood, where you know absolutely no one, and make a living as a waitress while waiting for that one big break? **[9]**

4. Read the following article. With this information, if you are one of the persons from the Government what is your Decision criterion. Specify the payoff.

Social media is a new phenomenon worldwide and is here to stay. Social media has enabled people to be connected in real time and is bringing out new facets of people interest, engagement and behaviour. From trivia to disasters, information reaches people as it happens and is keeping them engaged like never before. But how they express or react thereafter, makes social media a double-edged sword. Just yesterday, the plight of a young schoolboy from a poor family, sitting outside a Noida metro station, trying to earn some money through a weighing scale and studying at the same time, caught a commuter's attention. He took a picture and uploaded on Facebook, which went viral. In response, there have been several people who have come forward to help, including the U.P Chief Minister Akhilesh Yadav, who has promised to ensure full opportunity for the boy to study without having to work. While this may be an example of the positive impact of social media, the negative side is also gaining ground, perhaps dangerously.

In 2012, one of the early cases of misuse of social media came to the government's attention, when morphed pictures and videos of earthquake victims began to go viral on social media. Miscreants were morphing these images to show that these were Muslim victims of civil riots in Assam and Burma. This was done to provoke further riots by vested interests and it did bring a reaction.

The social media space was soon full of hate and revenge messages against Hindu migrants living in South India, which spread panic and soon there was mass exodus of people from the North East, who were forced to return back to Assam and other North eastern states. This was a clear example of the negative side of social media which helped in stoking mass hysteria in a very short time.

At the individual level, social media is full of examples where a relationship gone sour results in one of the partners uploading intimate pictures, videos or information, in revenge against their former partners. Whatever the subsequent legal consequences, the damage to the victim's reputation is instant and in some cases, results in fatal consequences.