



MUEO

MOI UNIVERSITY

OFFICE OF THE CHIEF ACADEMIC OFFICER

UNIVERSITY EXAMINATIONS 2013/2014 ACADEMIC YEAR

FORTH YEAR END OF SEMESTER II EXAMINATIONS

**FOR THE DEGREE OF
BACHELOR OF BUSINESS MANAGEMENT**

EXAM CODE:- BBM 447

COURSE TITLE:- PRODUCTION & OPERATIONS MGT

DATE:- 9TH JULY, 2013

TIME:- 9.00A.M. - 12.00 NOON.

INSTRUCTION TO CANDIDATES

➤ **SEE INSIDE.**

THIS PAPER CONSISTS OF (2) PRINTED PAGES

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SECOND SEMESTER EXAMINATION

COURSE CODE: BBM 447

COURSE TITLE: PRODUCTION & OPERATIONS MANAGEMENT

INSTRUCTIONS TO CANDIDATES

Answer question **one** and any other three questions

QUESTION ONE

A business trip to Brussels

My flight to Stockholm would be late landing. The pilot told us that we were in a 'stack' of planes circling above the snow clouds that were giving Brussels its first taste of winter. Air traffic control had closed the runways for a short period at dawn, and the early morning flights from all around Europe were now being allocated new landing slots along with the long-haul jumbos from the Far East and the US. After a 20-minute delay, we descended bumpily through the clouds, and landed on a recently cleared runway. Even then there was a further 'hold' on a taxiway; we were told that the de-icing of the apron was being completed so that planes could proceed to their allocated stands and air bridges. All around the airport I could see the scurrying flashing beacons of the snow-clearing vehicles, the catering suppliers' vans, the aviation fuel trucks, the baggage trailers, buses transporting crews and passengers, security police cars, and an assortment of other vehicles all going purposefully about their work. Brussels airport always looks busy, with over 10 million passengers a year, but this morning the complexity and scale of the operations were particularly evident.

Finally, about an hour late, we pulled up to the gate, the engines were turned off, and we disembarked into an icy-cold air bridge, leaving behind a particularly untidy plane strewn with litter from a full cabin of restless passengers. We passed the team of cleaners and maintenance staff waiting just outside. 'They will have a hard time this morning; more mess to clear and probably less time than usual to do it, as the airline will want a quick turnaround to get back on to schedule,' I commented to my colleagues. We could just hear the sounds of frantic activities going on below the plane: baggage and cargo being unloaded, catering vehicles arriving, fuel being loaded, and technicians checking over the engines and control surfaces – everyone trying to get their work completed quickly and correctly, not least so that they could get back indoors out of the biting cold wind!

From the air bridge we walked past the crowded seating areas, where plane-sized groups were gathering anxiously awaiting the signal from the gate staff to board their much delayed flights. Then on to the moving walkways, conveyed leisurely past other departure lounges, equally overfilled with passengers. Anxious to get ahead of the crowd, we took to a running pace past the rows of cafés, bars and shops, hoping to avoid the usual morning queue for passport control. I should have remembered the old saying 'more

haste, less speed' because my next journey was to the First Aid room! I had apparently slipped on some spilt coffee that had not been cleaned up in the haste of the morning, and had fallen awkwardly, straining my ankle and breaking my duty-free brandy. 'At least they would clean the floor after that,' I thought, sadly.

Suitably patched up, I hobbled with my colleagues and joined the long queue for passport control, and eventually through to baggage reclaim. Even with the excellent new baggage handling systems in Brussels, the passengers usually get there first, but the accident had changed all that! Scanning the video screens, we found no reference to our flight arrival; the remaining bags from our flight had apparently already been removed from the carousel and were stored in an adjacent office. After a simple signing ceremony, we were reunited with our belongings, and hastened (slowly in my case) to the taxi rank. Our hopes of a quick ride to the city were dispelled when we saw the long queue in the icy wind, so we made our way to the station below, where a dedicated 'City Express' train departs every 20 minutes for the *Gare du Nord* and *Gare Centrale*. We just missed one!

After a busy and successful day at our Brussels office, a taxi was called, and we were back at the airport in the thick of the evening rush hour. The departures check-in area is in the upper floor of a vast new terminal extension, and is very orderly and well equipped. Facing you on entry from the taxi drop-off point is a huge electronic display which lists all departures scheduled for the next few hours and shows the appropriate check-in desk number for each flight. The speed of the check-in systems has been improved dramatically, so there was no queue at our desk, and the three of us were issued with boarding passes in only a couple of minutes. Our baggage sped away on conveyors down to the new sorting hall two storeys below. Brochures explain that the new terminal extension was designed to make it possible to go from check-in to final boarding in only 20 minutes, which has involved investment in a state-of-the-art automated baggage handling system. On my last visit, following traffic delays on the way to the airport, I found that this system works, but I doubt that it would if everyone arrived only 20 minutes before departure! It is no wonder that they advise checking in one hour before; it also gives passengers much more time to spend money in the duty-free shops, restaurants and bars!

By this time, my injured leg had swollen up and was throbbing painfully. This seemed to be a routine situation for the check-in staff, who arranged for a wheelchair and attendant to take me through border control and security checks. While my colleagues traveled down to the departures hall by escalator, I took the slower route by lift, meeting just outside the duty-free shops where the attendant left them to take care of me. We had some time to spare, so we replenished the brandy, bought some Belgian chocolates and headed for a café-bar. While Brussels is renowned for its excellent cuisine, we didn't expect to find high standards of food in the quick-service environment of an airport, but we were wrong! The delicious aromas of freshly prepared food attracted our custom, and we weren't disappointed. After a welcome glass of specialty raspberry flavoured beer to round off the meal, we headed for the airline's executive lounge.

The view across the airfield was not promising! After a bright, crisp day, more snow laden clouds had arrived and a chill wind cut across the tarmac. De-icing crews were working on the parked aircraft and others were treating the runways, taking quick action between the aircraft movements. Concerned that we might be delayed and miss our connection at Oslo, we checked with the staff at the airline's flight information desk. After some phoning, they confirmed that, although there might be some delays, Oslo had arranged to hold connecting flights, as many passengers originated from Brussels. Their professional and friendly advice made us feel much more at ease, and they even offered to allow us to send fax or phone messages to our destination. They couldn't have been more helpful.

Announcements of the minor delays were made over the speaker system, but it wasn't long before we were directed to the departure lounge and were preparing to board. Outside, around the aircraft in the gloom, the baggage trucks were pulling away and a giant tow tractor was being connected to the nose-wheel. Ten minutes later, we were at the end of the runway, ready for takeoff.

'Today must have been a very busy one for everyone involved in keeping the airport open,' I thought, 'but perhaps every day has its own challenges in such a complex operation'.

QUESTIONS

- a) Identify all the processes and their activities that were mentioned in the case study. Classify them in accordance with their type. (15 marks)
- b) Which of these processes were most affected by the severe weather? (5 marks)
- c) Approximately how many different organizations are involved in delivering the goods and services described in this report? What are the implications of this? (5marks)

QUESTION TWO

Discuss the ways in which JIT approach is different from traditional approach to inventory management. Do you believe that JIT simply passes the burden of holding stock on the supplier? Explain your reasons. (15 marks)

QUESTION THREE

Profitability of a company depends to a large extent on the effectiveness of its purchase function. Discuss. (15 marks)

QUESTION FOUR

Explain what do you understand by quality and discuss the various factors that affect quality in a manufacturing or any other business operation. (15 marks)

QUESTION FIVE

Discuss in detail various systems of stock taking. The answer should include a discussion of the merits and demerits of each system. **(15 marks)**

QUESTION SIX

Operations management is one of the three major functions of any organization, and it is integrally related to all other business functions. Briefly discuss the functions performed by each of the three divisions and indicate how they relate to each other. **(15 marks)**