ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
Department of Computer Science and Engineering (CSE)

MID SEMESTER EXAMINATION   SUMMER SEMESTER, 2022-2023
DURATION: 1 HOUR 30 MINUTES   FULL MARKS: 75

CSE 4807: IT Organization and Management

Programmable calculators are not allowed. Do not write anything on the question paper.
Answer all 3 (three) questions. Figures in the right margin indicate full marks of questions with
corresponding COs and POs in parentheses.

1. It may surprise you that two snowboard enthusiasts who simply wanted a better way to sell their
snowboards online have created an e-commerce platform that now has over $275 million in sales
and hosts more than 20000 online retailers, including Pixar, Angry Birds, and the Foo Fighters.
Tobias Lütke, CEO and founder, has created a business that allows companies of all sizes to set
up their own online store, taking a task that used to take months and trimming it down to as little
as half an hour. Shopify takes care of everything behind the scenes in return for a subscription
fee and transaction fee. The business model focuses on dealing with other businesses. Given the
scenario, answer the following questions:

   a) As the CEO of Shopify, what are the skill sets that Tobias Lütke requires? Justify your answer.   5
                                                                                                      (CO1)
                                                                                                      (PO1)

   b) According to Henry Mintzberg, a prominent management researcher at McGill University,   13
   a manager has to perform certain roles in an organization. Considering Shopify as an or-   (CO1)
   ganization which conducts business with other business organizations, what should be the   (PO1)
   roles of Tobias Lütke in orchestrating such a successful organization as Shopify?

   c) How many different types of international organizations are there and what type of organi-   4 + 3
   zation is Shopify? Explain briefly.   (CO1)
                                                                                                   (PO1)

2. A small pastry shop at a tourist destination wants to expand its business to other locations in a
different country. The pastry shop has a loyal customer base and has received positive reviews
for its pastries. The owner wants to maintain control over the pastry shop's operations and brand
identity while expanding its reach. Regarding the pastry shop, it needs to avoid incurring signif-
icant upfront costs because of limited financial resources. At the same time, it desires to keep
control over its operations, brand identity, and customer experience. The pastry shop does not
have the expertise to manage multiple locations and wants to benefit from the expertise of others.

   a) Mention and justify which type of business operation (importing, exporting, licensing, fran-   8
   chising, strategic alliance) would be the most appropriate for the pastry shop.   (CO1)
                                                                                                    (PO1)

   b) Hofstede discovered some dimensions for helping manager understand different national   10
   culture. Analyze them in the context of different countries.   (CO1)
                                                                                                    (PO1)

   c) Management is coordinating work activities so that they are completed efficiently and effec-   7
   tively with and through people. If you had to choose between being effective or being   (CO2)
   efficient, which would you say is more important? Justify with examples.   (PO1)

3. a) PESTEL is an acronym of six factors. What are those factors and why PESTEL analysis is done in strategic management?
    <div align="right">10
(CO1)
(PO1)</div>

    b) What is Organizational Project Management (OPM)? How portfolio, program and project management are integrated here to achieve strategic objectives? Explain with proper diagram.
    <div align="right">3 + 4
(CO1)
(PO1)</div>

    c) What is Cocomo Model? Consider a project size of 300 KLOC is to be developed and the project schedule is not very tight. Identify the project type and calculate the effort and development time considering the developers having very high application experience and very low experience in programming as depicted in Table 1.
    <div align="right">2 + 6
(CO3)
(PO1)</div>

Table 1: Value of Cost Drivers for Question 3.c

Personal Attributes	Very low	low	Nominal	High	Very High
Analyst Capability	1.46	1.19	1.00	0.86	0.71
Application Experience	1.29	1.13	1.00	0.91	0.82
Software Engineer Capability	1.42	1.17	1.00	0.86	0.70
Virtual Machine Experience	1.21	1.10	1.00	0.90	
Programming language Experience	1.14	1.07	1.00	0.95	