

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

SEMESTER FINAL EXAMINATION

SUMMER SEMESTER, 2018-2019

DURATION: 3 Hours

FULL MARKS: 150

**CSE 4807: IT Organization and Management**

**Programmable calculators are not allowed. Do not write anything on the question paper.**

There are **8 (eight)** questions. Answer any **6 (six)** of them.

Figures in the right margin indicate marks.

1. a) Managers everywhere need to plan. Why would managers want to plan? Identify the potential benefits and drawbacks of planning. 3+6
- b) PESTEL is an acronym for six factors used in a step of strategic management. What are those factors? Why do we use PESTEL analysis in strategic management? What is SWOT analysis in strategic management process? 4+4
- c) One term that is often used in conjunction with strategic management and strategies is business model. What is business model? What are the two things that a business model focuses on? 3
- d) What are the sources of leader power? 5
2. a) What is communication in management? Explain the interpersonal communication process model with diagram. How can distortions happen in interpersonal communication? 7+8
- b) What types of skills does a manager need? Explain. Also classify the skills according to different management levels. 3+3
- c) Information technology has radically changed the way organizational members communicate. Give some examples of it. While the economic benefits of information technology are obvious, managers must not forget to address the psychological drawbacks. Give examples of some psychological drawbacks of the use of information technology. 2+2
3. a) What are the four types of leadership behavior according to Path-Goal theory? Explain each in one sentence. Followings are the four situations of followers. Which of the leadership behavior is appropriate for each of the situations? What will be the impact on the followers and overall outcome for those behaviors? 4+6
  - i. Follower lacks self-confidence
  - ii. Ambiguous job
  - iii. Lack of job challenge
  - iv. Incorrect reward
- b) Explain the three common organizational communication networks. Discuss the effectiveness of the networks on the basis of their speed, accuracy and member satisfaction. 3+9
- c) IUT is an organization; so is the AB Bank. What are the common characteristics that made both of them as organizations? 3
4. a) What is emotional intelligence? Why do emotions matter in project management? What are the characteristics of a successful project manager? 3+6
- b) What are the objectives of structuring a virtual team in IT project? What is the process of staffing a project team? 4+2
- c) What is a stakeholder? How do we analyze the stakeholders of an IT project? Mention some stakeholder management strategies. 10
5. a) What is work breakdown structure (WBS)? Why do we need WBS? Give example of the two ways to represent a WBS. 5
- b) What are the purposes of doing network analysis in project management? What is a critical path in network? 2+1



c)

Table 1: Precedence table for Question 5.c.

WBS Task	Precedence	Duration (in days)	Cost
A	-	15	750 \$
B	-	21	1,250 \$
C	A	9	190 \$
D	A	35	2,850 \$
E	B	26	2,250 \$
F	C	29	2,625 \$
G	D, E	20	1,250 \$
H	F, G	5	190 \$

Consider the precedence table in table 1 and find out the followings:

- i. Precedence diagram with early schedule & late schedule 10
  - ii. Slack for each task 2
  - iii. Critical path 2
  - iv. Total cost and schedule 3
6. a) Define the following terms and mention how they are calculated for a project? 3
- i. Planned Value (PV)
  - ii. Actual Cost (AC)
  - iii. Earned Value (EV)
- b) You have a project to be completed in 12 months. The budget of the project is \$100,000. Six months have passed, and \$60,000 has been spent. On a closer review, you identified that only 40% of the work has been completed so far.
- At this stage, find out the followings for the project to plan for necessary actions to be taken.
- i. PV, AC, EV, Schedule at completion (SAC), Budget at completion (BAC). 5
  - ii. Calculate Cost and Schedule Variance. Explain what the results indicates. 6
  - iii. Calculate Schedule and Cost Performance Indexes. What is the benefit of using SPI and CPI over SV and CV? 5
  - iv. Final schedule and budget at completion. Calculate the worst case latest revised budget estimate. 6
7. a) What are the activities of a project manager in the concept phase, planning phase and termination phase of a project life cycle of an IT project? 14
- b) What are the activities of a project manager in the concept phase, planning phase and termination phase of a system development life cycle (SDLC) of an IT project? 11
8. a) We are planning to develop an IUT blood bank management system. In the system, we will keep information of blood donors in IUT. The donors will provide information of their blood group, last blood donation date, user type (student/staff), residence status while they are registering in the system. We want to create regular blood donation event in IUT. An admin will create an event in the system for each donation program to notify all the registered users in the system. Users will have to register to the event to participate in the program. We want to keep all this information to be visible only to the system users.
- As the system is for IUT, we want to make the color theme to be aligned with the theme of IUT. Also, there will be logo of IUT in the home page and the logo the blood donation system. Identity five functional and three non-functional requirements of the system. Also, find out at least four stakeholders of the system to set meeting with them. 10
- b) Explain the steps of requirements identification process of an IT project? 8
- c) One of your friends starting to work on an IT project as a project manager (PM). As a new PM, he is being reluctant to document the requirements of the project and considers it as a waste of time. Convince him in writing project requirements as a clear and high-quality statements of work (SOW)? Also, give him some tips for writing good SOW for any IT project? 3+4