



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2012/2013**

COURSE NAME : ENGINEERING MANAGEMENT
COURSE CODE : BEE 30103 / BEX 42603 / BPK 4023
PROGRAMME : BEB/BEC/BED/BEF/BEH/BEU/BEE
EXAMINATION DATE : JUNE 2013
DURATION : 2 HOURS
INSTRUCTION : 1) ANSWER ALL QUESTIONS
2) STUDENT IS NOT ALLOWED TO
BRING OUT THE QUESTION PAPER

THIS QUESTION PAPER CONSISTS OF TEN (10) PAGES

SECTION A (30 marks)

This part consists of **THIRTY** (30) objective questions. You must answer **ALL** of the questions.

Q1 _____ are required at least annually for any publicly held organization and are performed by independent accounting firms.

- A. Internal audits
- B. Accounting audits
- C. External audits
- D. Financial audits
- E. Resource audits

Q2 In the “Bathtub Curve” reliability model, the hazard elements versus time comprise of;

- I. infant mortality
- II. constant failure rate
- III. maintenance period
- IV. breakdown period
- V. wear out period

- A. I, II and III
- B. I, II and IV
- C. I, II and V
- D. I, III and V
- E. I, IV and V

Q3 The generic contents in a statement of work for project management comprises of;

- I. project
- II. risk plans
- III. deliverables
- IV. quality control
- V. customer and support

- A. I, II, III and IV
- B. I, II, III and V
- C. I, III, IV and V
- D. I, III and V only
- E. all of the above

- Q4** Which of the following changes does **not** result in strategy changes?
- A. change in the company's financial situation
 - B. a company's adoption of new technology
 - C. change in the product life cycle
 - D. change in the competitive environment
 - E. change in job scheduling techniques
- Q5** Which of the following is **not** true regarding McGregor's Theory X and Theory Y?
- A. Theory X is concern on human behaviour
 - B. Theory Y relies on self-control and self direction
 - C. The knowledge worker simply does not produce under Theory X
 - D. Theory Y state that the motivator element represent by the hygiene factors
 - E. None of the above
- Q6** Engineering problem solving is more applied and is different from the scientific method. Which of the following is **not** an engineering problem solving approach?
- A. Define the problem
 - B. Collect data
 - C. Search for solutions
 - D. Develop hypothesis
 - E. Evaluate alternatives
- Q7** Which of the following is **not** an element for maintenance management consideration?
- A. Size of maintenance staff
 - B. Work orders
 - C. Work scheduling
 - D. Repair parts inventory
 - E. None of the above are false

- Q8** The purposes of maintenance are;
- I. maximize performance of production equipment efficiently
 - II. prevent breakdown or failures
 - III. minimize production loss from failures
 - IV. increase reliability of the operating systems
- A. I, II and IV
 - B. II, III and IV
 - C. I, III, and IV
 - D. I, II and III
 - E. all of the above
- Q9** The fundamental purpose of an organization's mission statement is to;
- A. create a good human relations climate in the organization
 - B. define the organization's purpose in society
 - C. define the operational structure of the organization
 - D. generate good public relations for the organization
 - E. define the functional areas required by the organization
- Q10** Among the elements that make products more friendly to the environment are;
- A. using less materials
 - B. more recycled materials
 - C. using less energy
 - D. ability to recycle product
 - E. all of the above
- Q11** Primary functions of all organizations emphasize on;
- A. operations, marketing, and human resources
 - B. marketing, human resources, and finance/accounting
 - C. sales, quality control, and operations
 - D. marketing, operations, and finance/accounting
 - E. research and development, finance/accounting, and purchasing

- Q12** The elements of managing technology comprises of;
- I. research
 - II. design
 - III. marketing
 - IV. production planning
 - V. project management
- A. I, II and IV
 - B. I, III and IV
 - C. II, III and IV
 - D. III and IV
 - E. all of the above
- Q13** The controller's responsibilities are primarily _____ in nature, while the treasurer's responsibilities are primarily related to _____.
- A. operational; financial management
 - B. financial management; accounting
 - C. accounting; financial management
 - D. financial management; operations
 - E. operational; accounting
- Q14** Which of the following is **not** true regarding income statement?
- A. profit and loss statement data
 - B. shows money flows through business over specific period of time
 - C. shows revenue of the organization
 - D. shows the investments and budgeting information
 - E. used for business report
- Q15** Typical differences between goods and services do not include;
- A. cost per unit
 - B. ability to inventory items
 - C. timing of production and consumption
 - D. customer interaction
 - E. knowledge content

- Q16** What is the critical path in the CPM method?
- I. Path with longest duration
 - II. Path with least resistance
 - III. Path with shortest duration
 - IV. Path with least slack
 - V. Riskiest path in the project
- A. I and II
 - B. I and III
 - C. I and IV
 - D. III and IV
 - E. II and III
- Q17** Which of the following is most likely to affect the location decision of a service firm rather than a manufacturing firm?
- A. energy and utility costs
 - B. attitude toward unions
 - C. parking and access
 - D. cost of shipping finished goods
 - E. labour costs
- Q18** Total Quality Management emphasizes;
- A. the responsibility of the Quality Control staff to identify and solve all quality-related problems
 - B. a commitment to quality that goes beyond internal company issues to suppliers and customers
 - C. a system where strong managers are the only decision makers
 - D. a process where mostly statisticians get involved
 - E. how resources are transformed into quality goods and services
- Q19** Which of the following is **true** regarding organization design?
- A. Tall organizations are expensive and need more managers
 - B. Multiple levels can increase communication and decision time
 - C. Wide spans leave managers with inadequate times to supervise activities
 - D. Organization design is a grouping of activities to obtain objectives
 - E. All of the above are true.

- Q20** Project success or failure is determined by the outcome of the project variables, including;
- A. resource
 - B. scope
 - C. time
 - D. quality
 - E. all of the above
- Q21** Which of following statement is **true** regarding control charts?
- A. Values above the upper and lower control limits indicate points out of adjustment.
 - B. Control charts are built so that new data can be quickly compared to past performance data.
 - C. Control charts graphically present data.
 - D. Control charts plot data over time.
 - E. All of the above are true.
- Q22** Pareto charts are used to;
- A. identify inspection points in a process
 - B. organize errors, problems or defects
 - C. outline production schedules
 - D. show an assembly sequence
 - E. provide guidelines for quality training
- Q23** Which of the following scenarios illustrates a moment that exceeds the customer's expectations?
- A. An express mail service that guarantees overnight delivery
 - B. A flight attendant that responds shortly after being called
 - C. A hairdresser that cuts your hair at the right length
 - D. A professor that contacts people in several companies to find you a job
 - E. All of the above
- Q24** Which of the following is **not** a characteristic of simple moving averages?
- A. It smoothes random variations in the data
 - B. It has minimal data storage requirements
 - C. It weights each historical value equally
 - D. It smoothes real variations in the data
 - E. It is a quantitative method

- Q25** Standardization is an appropriate strategy in which stage of the product life cycle?
- A. Introduction
 - B. Growth
 - C. Maturity
 - D. Decline
 - E. Retirement
- Q26** Forecasts used for new product planning, capital expenditures, facility location or expansion, and R&D typically utilize a;
- A. short-range time horizon
 - B. medium-range time horizon
 - C. long-range time horizon
 - D. naive method, because there is no data history
 - E. all of the above
- Q27** Cost minimization is an appropriate strategy in which stage of the product life cycle?
- A. introduction
 - B. growth
 - C. maturity
 - D. decline
 - E. retirement
- Q28** The fundamental purpose for the existence of any organization is described by its;
- A. policies
 - B. mission
 - C. procedures
 - D. strategy
 - E. tactics
- Q29** Which of the following is an element of the marketing?
- A. pricing
 - B. staffing
 - C. planning
 - D. controlling
 - E. leading

- Q30** An operations manager is not likely to be involved in;
- A. the design of products and services to satisfy customers' wants and needs
 - B. the quality of products and services to satisfy customers' wants and needs
 - C. the identification of customers' wants and needs
 - D. work scheduling to meet the due dates promised to customers
 - E. forecasting sales

SECTION B (50 marks)

This part consists of **THREE** (3) questions. You must answer **ALL** of the questions.

- Q31** (a) You operate a small wooden toy company making two products: alphabet blocks and wooden trucks. Your profit is RM30 per box of blocks and RM40 per box of trucks. Producing a box of blocks requires one hour of woodworking and two hours of painting; producing a box of trucks takes three hours of woodworking, but only one hour of painting. You employ three woodworkers and two painters, each working 40 hours a week. How many boxes of blocks (X) and trucks (Y) should you make each week to maximize profit? Solve graphically as a linear program and confirm analytically.

(10 marks)

- (b) Your company has proposed to produce a component for an automobile plant, but it will not have a decision from that plant for six months. You estimate the possible future states and their probabilities as follows: Receive full contract (N_1 , with probability $p_1=0.3$); receive partial contract (N_2 , $p_2=0.2$); and lose award (no contract) (N_3 , $p_3=0.5$). Any tooling you use on the contract must be ordered now. If your alternatives and their outcomes are as shown in the following table, what should be your decision?

	N_1	N_2	N_3
A1: full tooling	+800	+400	-400
A2: minimum tooling	+500	+150	-100
A3: no tooling	-400	-100	0

(10 marks)

- Q32** (a) Total Quality Management (TQM) has several tools and techniques that can be implemented. Flow Chart and Check Sheet are two widely used techniques. Explain AN advantage and illustrate an example for each technique. (6 marks)
- (b) Risk management is an element that must be considered managing a project. Define risk and explain briefly what is risk management. (3 marks)
- (c) List out four (4) types of risk and explain two(2) of them. (6 marks)
- Q33** (a) A new product may begin as an idea for the solution of a problem. Decline is one of the essential elements in the product life cycle. List out the other three (3) elements of the product life cycle. (3 marks)
- (b) Marketing is all about managing the four P's. List out four (4) P's of the marketing and recommend one suggestion for each element on how to increase your company marketing level. (8 marks)
- (c) Compare how preventive maintenance is different from corrective maintenance. (4 marks)

- END OF QUESTION -