

**CONFIDENTIAL**



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2017/2018**

COURSE NAME : ENGINEERING MANAGEMENT  
COURSE CODE : BEE 30103  
PROGRAMME : BEV / BEJ  
EXAMINATION DATE : JUNE / JULY 2018  
DURATION : 2 HOURS 30 MINUTES  
INSTRUCTION : 1) ANSWER ALL QUESTIONS  
2) ANSWER PART A IN THE OMR PAPER  
3) ANSWER PART B IN THE ANSWERING SHEET  
4) STUDENT ARE NOT ALLOWED TO BRING OUT THE QUESTION PAPER

THIS QUESTION PAPER CONSISTS OF **SIXTEEN (16)** PAGES

**TERBUKA**

**CONFIDENTIAL**

**PART A**

**Q1** What is the definition of “Engineering”?

- (a) Solve technical problems.
- (b) Design for customer needs.
- (c) Efficient application of resources.
- (d) All of the above.

(1 mark)

**Q2** What is the definition of “Management”?

- (a) Getting things done through people.
- (b) Directing the actions of a group.
- (c) Process of achieving organizational goals.
- (d) All of the above.

(1 mark)

**Q3** Carry out the plans and objectives are specific type of jobs under

- (a) middle managers.
- (b) lower management.
- (c) first-line managers.
- (d) top management.

(1 mark)

**Q4** First-line managers are consists of

- (a) Chairman and Executive Officer.
- (b) Chief Engineer and Division Head.
- (c) President and Vice President.
- (d) Supervisor and Section Chief.

(1 mark)

**Q5** \_\_\_\_\_ are the key elements in the management process.

- (a) Plan, organize, staff, lead, and control.
- (b) Accounting, marketing, operations, and management
- (c) Organize, plan, control, staff, and manage
- (d) Plan, direct, update, lead, and supervise

(1 mark)

**TERBUKA**

**Q6** An operation manager will involve in the following task except

- (a) forecasting sales.
- (b) the identification of customers' wants and needs.
- (c) work scheduling to meet the due dates promised to customers.
- (d) the quality of products and services to satisfy customers' wants and needs.

(1 mark)

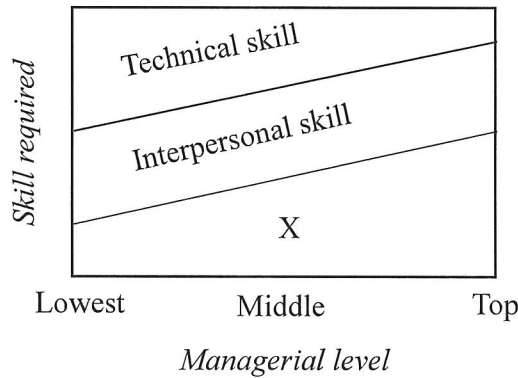
**Q7** Managerial roles required by managers are:

- I. Leadership role.
- II. Interpersonal role.
- III. Decision role.
- IV. Informational role.

- (a) I and II.
- (b) I, II and III only.
- (c) II, III and IV only.
- (d) I, II, III and IV.

(1 mark)

**Q8** Given the skill required versus managerial level as in **Figure Q8**. What is the skill of X?



**Figure Q8** : Skill required vs. Management level

- (a) Managing skill.
- (b) Conceptual skill.
- (c) Cooperation skill.
- (d) Theoretical skill.

(1 mark)

**TERBUKA**

- Q9** Engineering manager has great capability towards
- (a) planning.
  - (b) resolving the uncertainties.
  - (c) evaluate risks and motivate technical personnel.
  - (d) all the above.
- (1 mark)
- Q10** Figurehead role, leader role and liaison role are managerial roles of
- (a) Informational roles.
  - (b) Interpersonal roles.
  - (c) Decisional roles.
  - (d) Leadership roles.
- (1 mark)
- Q11** Why do engineering managers are required?
- (a) Competition is global and companies need these people to compete successfully.
  - (b) To look into profit of a company.
  - (c) To give direction for subordinates.
  - (d) Managers should giving task to workers.
- (1 mark)
- Q12** The fundamental purpose for the existence of any organization is described by its \_\_\_\_\_
- (a) policies.
  - (b) mission.
  - (c) procedures.
  - (d) strategy.
- (1 mark)
- Q13** Which of the following uses three types of participants: decision makers, staff personnel, and respondents?
- (a) executive opinions
  - (b) sales force composites
  - (c) the Delphi method
  - (d) consumer surveys
- (1 mark)

**TERBUKA**

**Q14** Which of the following is **true**?

- (a) Corporate mission is shaped by functional strategies.
- (b) Corporate strategy is shaped by functional strategies.
- (c) Functional strategies are shaped by corporate strategy.
- (d) External conditions are shaped by corporate mission.

(1 mark)

**Q15** Employee empowerment in general means

- (a) increased job autonomy for the superiors.
- (b) increased job autonomy for the subordinates.
- (c) decreased job autonomy for the subordinates.
- (d) decreased job autonomy for the superiors.

(1 mark)

**Q16** The symptom of large inventory accumulation in anticipation of price rise in future will be indicated by

- (a) inventory turnover ratio.
- (b) asset turnover ratio.
- (c) working capital turnover ratio.
- (d) accounts receivable turnover.

(1 mark)

**Q17** For a healthy business the current ratio lies between

- (a) 0 to 1.5.
- (b) 1.5 to 3.
- (c) 3 to 4.5.
- (d) 4.5 to 6.

(1 mark)

**Q18** An example of fixed asset is

- (a) live stock.
- (b) value stock.
- (c) income stock.
- (d) inventory stock.

(1 mark)

**TERBUKA**

**Q19** Which of the following activities is not required as part of the employee empowerment process?

- (a) Transfer of authority.
- (b) Assignment of responsibility.
- (c) Establishment of accountability.
- (d) None of the above.

(1 mark)

**Q20** \_\_\_\_\_ is defined as the record of outcomes produced on a specific job familiar activity during a specific time period.

- (a) Performance
- (b) Work function
- (c) Effort
- (d) Evaluation

(1 mark)

**Q21** A plan or programmes to motivate individual or group performance can be categorised as

- (a) reward.
- (b) promotion scheme.
- (c) incentive scheme.
- (d) appraisal.

(1 mark)

**Q22** Which of the following describes on a strategy?

- (a) action plan to achieve the mission.
- (b) broad statement of purpose.
- (c) simulation used to test various product line options.
- (d) plan for cost reduction.

(1 mark)

**Q23** The acronym SWOT stands for;

- (a) Special Weapons for Operations Timeliness.
- (b) Services, Worldwide Optimization, and Transport.
- (c) Strengths Worldwide Overcome Threats.
- (d) Strengths, Weaknesses, Opportunities, and Threats.

(1 mark)

**TERBUKA**

**Q24** The two general approaches to forecasting are

- (a) mathematical and statistical.
- (b) qualitative and quantitative.
- (c) historical and associative.
- (d) judgmental and qualitative.

(1 mark)

**Q25** Qualitative method in forecasting are

- I. judgment methods.
- II. time-series methods.
- III. counting methods.
- IV. causal methods.

- (a) I and III only.
- (b) I, II and III only.
- (c) II, III and IV only.
- (d) I, II, III and IV.

(1 mark)

**Q26** 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 is a quantitative method plan, direct, update, lead, and supervise.

(1 mark)

**Q27** A forecast with a time horizon of about 3 months to 3 years is typically called a;

- (a) long-range forecast.
- (b) medium-range forecast.
- (c) short-range forecast.
- (d) medium-long forecast.

(1 mark)

**Q28** One purpose of short-range forecasts is to determine

- (a) production planning.
- (b) inventory budgets.
- (c) research and development plans.
- (d) job assignments.

(1 mark)

TERBUKA

- Q29** When choosing a forecasting technique, a critical trade-off that must be considered is that between
- (a) cost and accuracy.
  - (b) seasonality and cyclicalities.
  - (c) length and duration.
  - (d) simplicity and complexity.
- (1 mark)
- Q30** Which is the following is **NOT** in the categories of decision making tools?
- (a) Control.
  - (b) Certain.
  - (c) Risk.
  - (d) Uncertainty.
- (1 mark)
- Q31** Under which decision type that requires to choose minimum among maximum regrets with unknown probabilities?
- (a) Certain.
  - (b) Risk.
  - (c) Uncertain.
  - (d) Unknown.
- (1 mark)
- Q32** Which one is a kind of routine decisions?
- (a) Paying suppliers.
  - (b) Unstructured situations.
  - (c) New problem in a novel product.
  - (d) Incomplete knowledge.
- (1 mark)
- Q33** Which of the following data is shared in an integrated database oriented approach in computer-based data information?
- (a) Personnel data
  - (b) Tax data.
  - (c) Project data.
  - (d) None above.
- (1 mark)

**TERBUKA**



**Q34** The most critical information to forecast is

- (a) training needs.
- (b) resource needs.
- (c) sale levels
- (d) production levels.

(1 mark)

**Q35** Decision making under certainty is

- (a) equally likely.
- (b) linear programming.
- (c) expected value.
- (d) simulation.

(1 mark)

**Q36** Which of the following is **true** about ISO 14000 certification?

- (a) It is a prerequisite for ISO 9000 certification.
- (b) It deals with environmental management.
- (c) It is only sought by companies exporting their goods.
- (d) It indicates a higher level of adherence to standards than ISO 9000.

(1 mark)

**Q37** "Kaizen" is a Japanese term meaning,

- (a) foolproof mechanism.
- (b) just-in-time (JIT).
- (c) continuous improvement.
- (d) setting standards.

(1 mark)

**Q38** ISO 9000 seeks standardization in terms of

- (a) managing products.
- (b) procedures to manage quality.
- (c) suppliers' specifications.
- (d) production procedures.

(1 mark)

**TERBUKA**

- Q39** 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) how resources are transformed into quality goods and services.
- (1 mark)
- Q40** Which of the following is **not** one of the major categories of costs associated with quality?
- (a) prevention costs.
  - (b) appraisal costs.
  - (c) internal and external failures.
  - (d) none of the above, they are all major categories of costs associated with quality.
- (1 mark)
- Q41** 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.
- (1 mark)
- Q42** The principle/s of continuous improvement is/are:
- (a) customer focus
  - (b) process improvement
  - (c) total involvement
  - (d) all the above
- (1 mark)
- Q43** The Program Evaluation Review Technique (PERT) is a project management tool used to schedule, organize, and coordinate tasks within a project. PERT is used when
- (a) the project activity times are certain.
  - (b) the project activity times are not certain.
  - (c) the project activity needs more than 1 year to complete.
  - (d) the project activity needs less than 6 months to complete.
- (1 mark)

**TERBUKA**

**Q44** Project success or failure is determined by the outcome of the project variables, including

- (a) resource.
- (b) scope.
- (c) time.
- (d) all the above.

(1 mark)

**Q45** Which of the following is not correct about initial phase of a project?

- (a) The cost associated at the beginning of the project is highest.
- (b) Stakeholders have maximum influence during this phase.
- (c) The highest uncertainty is at this stage of the project.
- (d) All the above statements are correct.

(1 mark)

**Q46** Which of these is not one of the constraints of a project?

- (a) Team
- (b) Scope.
- (c) Resources.
- (d) Budget.

(1 mark)

**Q47** If the Earned Value is equal to Actual Cost, it means

- (a) project is on budget and on schedule.
- (b) schedule Variance Index is 1.
- (c) there is no cost variance.
- (d) there is no schedule variance.

(1 mark)

**Q48** Which of the following is the most important element of Project Management Plan that is useful in HR Planning process?

- (a) Risk Management activities.
- (b) Activity Resource requirements.
- (c) Quality Assurance activities.
- (d) Budget Control activities.

(1 mark)

**Q49** A company is planning to buy ten desktops for \$1500 each from a leading computer store. Which type of contract will get signed in this case?

- (a) Cost plus Fee.
- (b) Purchase Order.
- (c) Fixed cost.
- (d) Time and Material.

(1 mark)

**Q50** The phases of a project life cycle are

- (a) concept, definition, development, handover and closure.
- (b) initiation, definition, planning, monitoring and operations.
- (c) starting, planning, control and closing.
- (d) concept, definition, implementation and operations.

(1 mark)

**Q51** The close-out meeting should discussed the following agenda except

- (a) identifying area for improvement.
- (b) summarize what was done well.
- (c) update the project resource plan.
- (d) evaluate the subcontractor performance.

(1 mark)

**Q52** The progress review meetings must discussed the following agenda except

- (a) planning the statement of work (SOW).
- (b) review of action items from last meeting.
- (c) update on activities and schedule.
- (d) problem identification and corrective action plan.

(1 mark)

**Q53** What is the meaning of “slack” time which is used in the network diagram?

- (a) The difference between early finish time and early start time.
- (b) The difference between late finish time and late start time.
- (c) The difference between early start time and early finish time.
- (d) The difference between late start time and early start time.

(1 mark)

**Q54** Which of the following are the types of maintenance

- I. Corrective
- II. Preventive
- III. Scheduled
- IV. Predictive

- (a) I, II and III
- (b) I, II and IV
- (c) I, III and IV
- (d) All the above

(1 mark)

**Q55** Faris bought a light bulb and the manufacturer mentioned that the life span of the bulb is 2 years. Faris decided to replace the bulb after 1 year and 11 months. This is called \_\_\_\_\_ maintenance.

- (a) scheduled
- (b) preventive
- (c) predictive
- (d) early stage

(1 mark)

**Q56** Which of the following are the elements of Reliability

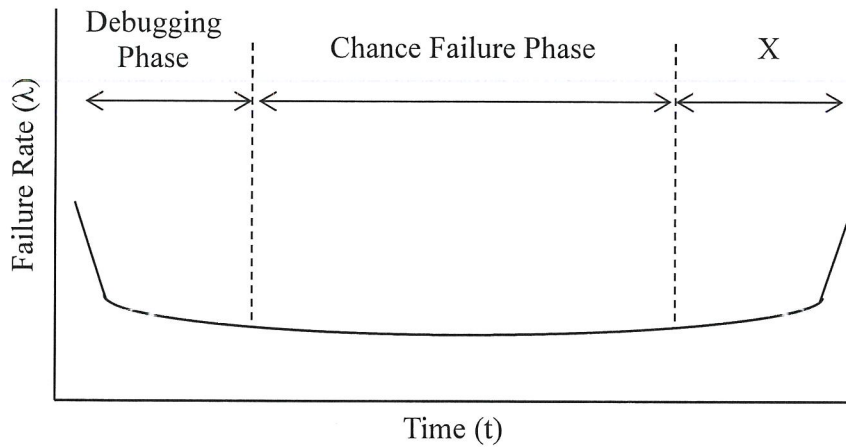
- I. Probability
- II. Satisfactory performance
- III. Specified time
- IV. Specified operating conditions

- (a) I, II and III
- (b) I, II and IV
- (c) I, III and IV
- (d) All the above

(1 mark)

**TERBUKA**

**Q57** Given the life-cycle curve that consists of three distinct phase as in **Figure Q57**. What is the phase of X?



**Figure Q57 : Life Cycle Curve**

- (a) Failure.
- (b) Wear-out.
- (c) Hazard.
- (d) Fatigue.

(1 mark)

**Q58** 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

- (a) I and II
- (b) II and III
- (c) I and IV
- (d) III and IV

(1 mark)

**Q59** The market price of a share of common stock is determined by:

- (a) individuals buying and selling the stock.
- (b) the stock exchange on which the stock is listed.
- (c) the president of the company.
- (d) the board of directors of the firm.

(1 mark)



**Q60** Which of the following tasks within an airline company are related to operations?

- (a) international monetary exchange.
- (b) crew scheduling.
- (c) advertising.
- (d) sales.

(1 mark)

**PART B**

**Q61** (a) There are three management levels which are top, middle, and first-line managers. What is the difference between middle and first-line managers in term of their job of supervision?

(6 marks)

(b) An effective manager requires three important skills to deal with subordinates. Describe these **THREE (3)** skills with an appropriate diagram that related to managerial level

(9 marks)

**Q62** You are operating a small wooden toy company which produces two products: wooden trucks and alphabet blocks. Your profit is RM40 per box of trucks and RM10 less profit per box of alphabet blocks. Producing a box of trucks requires three hours of woodworking and one hour of painting meanwhile; producing a box of alphabet blocks takes only one hour of woodworking and two hours of painting. Producing a box of blocks requires one hour of woodworking and two hours of painting meanwhile; 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.

(a) Calculate the number of boxes of wooden trucks (Y) and alphabet blocks (X) for each week so that the maximum profit is achieved?

Hint: Use graphically as a linear program and confirm analysis.

(10 marks)

TERBUKA

**Q63** You have to manage a project with their activities and their respective durations as listed in the following table.

Predecessor	Activity	Duration (months)
-	A	2
A	B	4
A	C	2
B	D	2
B, C	E	4
A, E	F	6
D	G	4
D, E, F	H	2
G, H	I	6
H, F	J	6
H, I, J	K	4

- (a) Construct a PERT network diagram for the project by assuming slack time of each activity is 1 month. State the early start, late start, early finish and late finish in your diagram (9 marks)
- (b) What is the project duration? (2 marks)
- (c) Identify the critical activities? (4 marks)

**-END OF QUESTIONS-**

