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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2015/2016**

COURSE NAME : ENGINEERING MANAGEMENT
COURSE CODE : BEE 30103
PROGRAMME : BACHELOR OF ELECTRONIC
ENGINEERING WITH HONOURS /
BACHELOR OF ELECTRICAL
ENGINEERING WITH HONOURS
EXAMINATION DATE : DECEMBER 2015 / JANUARY 2016
DURATION : 3 HOURS
INSTRUCTION : ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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- Q1** (a) List **FIVE (5)** expectations to the engineers in management (5 marks)
- (b) Briefly explain:
- (i) Incompetent managers (2 marks)
 - (ii) Non-entrepreneurial thinking (2 marks)
 - (iii) Managers by default (2 marks)
- (c) Briefly explain:
- (i) Technical skills (3 marks)
 - (ii) Interpersonal skills (3 marks)
 - (iii) Conceptual skills (3 marks)
- Q2** (a) Briefly explain the importance of planning (2 marks)
- (b) List **THREE (3)** component of planning process (3 marks)
- (c) Describe the organizing roles by key activities (15 marks)
- Q3** (a) Briefly explain the important of Total Quality Management (TQM) (5 marks)
- (b) List the **SEVEN (7)** levels of integrated action in the process of continuous improvement under TQM (7 marks)
- (c) Briefly explain:
- (i) Flow Chart (2 marks)

- (ii) Fishbone Chart (2 marks)
- (iii) Statistical Process Control (2 marks)
- (iv) Nominal Group Technique (2 marks)

- Q4** (a) List the purposes of maintenance management (4 marks)
- (b) Define total productive maintenance (TPM) (4 marks)
- (c) Discuss the **FOUR (4)** main elements of reliability (12 marks)

Q5 SMR Company has observed the monthly sales for the year 2014 as per Table **Q5**:

Table Q5

Period	Month	Order per Month
1	Jan	815
2	Feb	781
3	March	814
4	April	802
5	May	758
6	June	741
7	July	732
8	August	709
9	September	677
10	October	635
11	November	664
12	December	-

- (a) Calculate:
- (i) Simple moving average forecast for three months from October to December (3 marks)
 - (ii) Simple moving average forecast for six months from October to December (3 marks)

- (iii) The weighted moving average from October to December if SMR Company weights 50% for November, 30% for October, 20% for September (3 marks)
- (b) (i) Which one provides the better stability? (1 mark)
- (ii) Which one provides the better responsiveness? (1 mark)
- (iii) Give **TWO (2)** reasons for the answer in **Q (b) (ii)**. (2 mark)
- (c) SMR Services exponential smoothed forecasts with $\alpha = 0.50$ and $\beta = 0.30$
- (i) Determine the forecast period 2 to period 4 using simple exponential smoothing. Since there is no forecast available for period 1, the actual observed customer demand in January is use for the forecast in period 1. (3 marks)
- (ii) Determine the forecast period 3 and period 4 using adjusted exponential smoothing. (4 marks)

- **END OF QUESTIONS** -