



FACULTY OF ENGINEERING AND BUILT ENVIRONMENT

EXAMINATION

DEPARTMENT

DEPARTMENT OF QUALITY AND OPERATIONS MANAGEMENT

PROGRAMME

ND MANAGEMENT SERVICES
ND OPERATIONS MANAGEMENT

MODULE

ORGANISATIONAL EFFECTIVENESS 1

CODE

ORE1BY1/OEF1B00

DATE

29 NOVEMBER 2016

DURATION

3 HOURS

TIME

12:30 -15:30

TOTAL MARKS

100

EXAMINER

MR V. LUKONGA

MODERATOR

MS TM. NEMARUMANE

NUMBER OF PAGES

6 PAGES

INSTRUCTIONS TO CANDIDATES:

- Please answer all questions.
- Calculators are allowed
- Question papers must not be handed in.
- This is a closed book assessment.
- Read the questions carefully and answer only what is asked.
- Number your answers clearly.
- Write neatly and legibly.
- Structure your answers by using appropriate headings and sub-headings.
- The general University of Johannesburg policies, procedures and rules pertaining to written exam apply.

...Cont/

QUESTION 1

- 1.1. Name two types of stop watches used in time Study, and give one example for each. (4)
- 1.2. The scientific investigative procedure has led from selection through planning to the point where the real investigation now starts. At this point facts are gathered by using different techniques. Discuss the 4 fact gathering techniques used in Method study: (8)
- 1.3. A form has the functional and physical aspect. The functional discusses how the use of a form and its purpose. The Physical discusses the appearance of a form including things like lines and colours of the form. List and discuss four examples of functional aspects and two examples of physical aspects discussed in form design chapter. (12)

[24]**QUESTION 2**

- 2.1 Use the information provided below to Calculate the sample size for elements 1 & 4 (show ALL calculations) (10)

Element 1: 175 centi-minutes, 110 seconds, 104 seconds, 185 centi-minutes

Element 2: 1minutes 3seconds, 79 seconds, 77 seconds, 79 seconds

Element 3: 58 seconds, 0.85 minutes, 95 centi-minutes, 52 seconds

Element 4: 365 centi-minutes, 220 seconds, 375 centi-minutes, 224 seconds

Element 5: 565 centi-minutes, 341 seconds, 5.7 minutes, 570 centi-minutes

Element 6: 86 seconds, 145 centi-minutes, 1minutes 4seconds, 82 seconds

[10]

QUESTION 3

A worker operating a machine was observed. After conducting a pilot study the following elements were recorded:

1. collect material from storeroom *only happens in C1:196, C3:185 and C5:195,*
2. Switch on the machine *only happens in C1:61*
3. Adjust the machine settings *does not happen in C4:911, 920, 922, 913.*
4. Load material in the machine (346, 343, 347, 349, 348).
5. Wait for the machine to finish processing 690, 693, 689, 688, 691.
6. Wait for the machine to report any errors *only happens in C1:120 and C5:120.*
7. Take out the finished product from the machine .450, 455, 449, 452, 451.
8. After five tables he switch-off the machine 100.

Allowances...

Fatigue allowances 1.2%, Contingences 3.2%, delay 0.05 hours and Policy allowances 3000 centi minutes, 1.3% personal needs allowance, Tool maintenance 660 seconds,

Complete the time study sheets provided below.

Observation Sheet	(34)
Analysis Sheet	(8)
Summary Sheet	(24)

Note:

- The observed times provided are in seconds
- ALL answers must be in 2 decimal places(**except in Averages and Ratings**, which must be whole number)

[66]

Organisational Effectiveness 1				
FIRST NAME	S-NAME	STUDENT #	COURSE	SIGNATURE

OBSERVATION SHEET

DEPARTMENT;	Time Finished	TEBS	DATE (yy/mm/dd)
DIVISION;		+ TEAS	OPERATION NO;
MACHINE DESCRIPTION;	- Time Started	+Obs Time OF all elements	TAKEN BY;
WORKER; m / f			Elapsed time
	= Elapsed Time	= RT	Recorded Time
			Watch Error (ET-RT/ET *100)

Element Break Points;	TEBS;
	TEAS;

[illegible]

ANALYSIS SHEET

DEPARTMENT;	DATE (yy/mm/dd)
MACHINE no;	OPERATION NO;
MACHINE DESCRIPTION;	TAKEN BY;
TASK DESCRIPTION;	

		Elements											
		1	2	3	4	5	6	7	8	9	10	11	12
Cycle Number	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
	11												
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	25												
	26												
	27												
	28												
	29												
Totals													
No of Obs													
Elem Basic Time													

Organisational Effectiveness 1

SUMMARY SHEET I	
DEPARTMENT;	DATE (yy/mm/dd)
MACHINE DISCR;	OPERATION NO;
TASK DESCRIPTION;	TAKEN BY;
PART DESCRIPTION;	

[illegible]