FACULTY OF ENGINEERING AND BUILT ENVIRONMENT

UNIVERSITY
OF
JOHANNESBURG

SUPPLEMENTARY-EXAMINATION

DEPARTMENT	**DEPARTMENT OF QUALITY AND OPERATIONS MANAGEMENT**
PROGRAMME	ND MANAGEMENT SERVICES ND OPERATIONS MANAGEMENT
MODULE	ORGANISATIONAL EFFECTIVENESS 1B
CODE	ORE1B/OEF1B
DATE	: SUMMER SSA EXAMINATION 2015 7 DECEMBER 2015
DURATION	: (SESSION 1) 08:00 - 11:00
TOTAL MARKS	100

EXAMINER	MR V. LUKONGA
MODERATOR	MISS. T. 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

Define the following

1.1	Relaxation allowances	(2)
1.2	Contingency	(2)
1.3	Policy allowance	(2)
1.4	Standard time	(2)
1.5	Work study.	(3)
1.6	List seven types of filling equipment discussed in Form Design chapter.	(7)
1.7	List the Time Study Procedure (step-by-step).	(9)

[27]

FIRST NAME	S-NAME	STUDENT #	COURSE	SIGNATURE

QUESTION 2

2.1   Use the form provided below to Calculate the sample size for elements 1, 2 & 4 (show calculations)   (15)

FILL in the form provided below to answer question 2.2

2.2   Calculate rating for ALL the elements.   (25)

Elem no	Rating	Obs Time		Elem no	Rating	Obs Time	
1		18 seconds		1		21 seconds	
2		62seconds		2		107cm	
3		130 seconds		3		2.28min	
4		148cm		4		1.68min	
5		2.47min		5		147 seconds	
1		19 seconds		1		20 seconds	
2		1.05min		2		63 seconds	
3		1232 cm		3		1236cm	
4		168cm		4		100 seconds	
5		149 seconds		5		244cm	
1		22 seconds					
2		62 seconds					
3		1235cm					
4		99 seconds					
5		148 seconds					

[40]

QUESTION 3

Complete the time study sheets provided below.   (33)

Note:

       The observed times provided are in seconds

       Allowances have been provided in the sheets.

       ALL answers must be in 2 decimal places

[33]

	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;

Elem no	Rating	Obs Time	Basic Time	Total Basic Time	Elem no	Rating	Obs Time	Basic Time	Total Basic Time	Elem no	Rating	Obs Time	Basic Time	Total Basic Time
1	87	34			1	100	39							
2	122	611			2	123	617							
3	100	54			3	100	54							
4	98	82			4	102	86							
5	101	330			5	100	329							
6					6	101	95							
1	103	40			1	115	45							
2	120	599			2	15	76							
3	98	53			3	93	50							
4	96	81			4	95	80							
5	101	332			5									
6	98	92			6									
1	92	36												
2	120	600												
3	106	57												
4	106	89												
5	97	319												
6	102	96												

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
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
Totals												
No of Obs												
Elem Basic Time												

Cycle Number (vertical axis label)

SUMMARY SHEET

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

Elm no	Type of elm	Element Description	Element basic time	Volume	Frequency	Element Repres Basic Time

TOTAL REPRESENTATIVE BASIC TIME	
Personal needs Allowance (1.6%)	
Fatigue Allowance (109 cm)	
Rest Allowance	
BASIC WORK CONTENT	
Work Contingency Allowance (0.15 hrs)	
Tool Maintenance Allowance	
Working Allowance	
TOTAL BASIC WORK CONTENT	
Delay Allowance (210 cm)	
OCCUPIED TIME	
MCT = (OT of IW + UT)	
UTA = (MCT – BT of IW)	
Unoccupied Time Allowance	
STANDARD TIME	
Policy Allowance (1 min14seconds)	
ALLOWED TIME (SECONDS)	
ALLOWED TIME (STD. MIN)	
ALLOWED TIME (STD. HR)	