FACULTY OF ENGINEERING AND BUILT ENVIRONMENT

2017 EXAMINATION

DEPARTMENT OF QUALITY AND OPERATIONS MANAGEMENT

UNIVERSITY OF JOHANNESBURG

PROGRAMME:	NATIONAL DIPLOMA
MODULE	ORGANISATIONAL EFFECTIVENESS 1B
CODE	OEF11B1 /ORE 11B1
DATE	21 NOVEMBER 2017
DURATION	3 HOURS
TIME	12H30 – 15H30
TOTAL MARKS	100

EXAMINER	Mr. M MOLEFE
INTERNAL MODERATOR	Mr. V LUKONGA
NUMBER OF PAGES	6 PAGES

INSTRUCTIONS TO CANDIDATES:

- There are two section.
- There are four question asked
- Question papers must 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.
- Round of all digits to 2 decimal spaces, unless instructed otherwise.
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

SECTION A

QUESTION 1

1.1   Method study is based on recording the data so that it can be analysed. The main key of doing this is "Observation". Discuss any five {5} issues that need to be considered when carrying out the observation Method.

(5)

1.2   There are certain key symbols used in process charts that helps one determine what type of activity is being conducted, illustrate and discuss the five {5} symbols used in process charts.

(10)

1.3   Describe the five {5} Different charts and diagrams have been developed to make the recording of facts and the analysis easier.

(10)
[25]

QUESTION 2

2.1   Explain the Requirements of a good form.

(10)

2.2   Form filing is known to be the systematic storage of documents, filing therefore includes the storing of account books, letters, orders, invoices, etc. with this in mind discuss the different sequences of filing.

(10)
[20]

QUESTION 3

Use the information provided below to Calculate the sample size for elements 2 & 6 (show ALL calculations and round off your answer by 2 decimal spaces)

(10)

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

Element 2: 1minutes 3seconds, 175 centi-minutes, 98 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]

SECTION B

QUESTION 4
Use the provided case study to answer the following:

NB: **Averages must not be rounded off.**
Ratings must be rounded to whole numbers

A company called ABZ is located in Randburg north of JHB. It specializes on making different types of electronical equipment's like cables, plugs, bulbs etc. recently they had so many disputes in the department which make plugs. Some worker claims they do more work while other does nothing. As a work study practitioner, you decided to solve the disputes by coming up with a standard time for every worker making plugs in the department. After considering all the necessity and done all the checks and preparations, On the 4th of April 2001 you decided to observe a worker assembling four electrical plug tops. Due to some reserved reasons a TEBS of 1 minute was recorded. The study began at 8:20 and the following results were recorded in seconds;

She takes the plug base and puts it into a jig on the table: 60,50,55,53.
She picks up a pin. And inserts it into the hole marked "E": 58, 49, 50, 48.
She then takes the top & places it on the position: 35, 25, 30.
She takes the plug from the jig, turns it upside-down puts it onto the table: 90,85,80,85.
She takes two screws and positions them in to the hole: 16, 20, 23, 25.
Lastly She then puts the assembled plug top aside: 20,20,15.

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,

1. Basic time (22)
2. Element basic time (6)
3. Total Representative Time (7)
4. Allowances (6)
5. Standard Time & Allowed Time (4)

[45]

Total Marks [100]

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

ANALYSIS SHEET

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

Elements

Cycle Number	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												
Totals												
No of Obs												
Elem Basic Time												

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		
Fatigue Allowance		
Rest Allowance		
BASIC WORK CONTENT		
Work Contingency Allowance		
Tool Maintenance Allowance		
Working Allowance		
TOTAL BASIC WORK CONTENT		
Delay Allowance		
OCCUPIED TIME		
MCT = (OT of IW + UT)		
UTA = (MCT – BT of IW)		
Unoccupied Time Allowance		
STANDARD TIME		
Policy Allowance		
ALLOWED TIME (SECONDS)		
ALLOWED TIME (STD. MIN)		
ALLOWED TIME (STD. HR)		