FACULTY OF ENGINEERING AND BUILT THE ENVIRONMENT

SUPPLEMENTARY EXAMINATION 2019

DEPARTMENT OF QUALITY AND OPERATIONS MANAGEMENT

PROGRAMME	ND MANAGEMENT SERVICES ND OPERATIONS MANAGEMENT
MODULE	ORGANISATIONAL EFFECTIVENESS 1B
CODE	ORE1BY1
DATE	JANUARY 2020
DURATION	3 HOURS
TOTAL MARKS	100

EXAMINER	Mr T Mokoena
MODERATOR	Mr M Molefe
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.

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QUESTION 1

1.1. Define a form. (2)

1.2. Name the three {3} types of Time study equipment and give two {2} examples for each factor.

(9)

1.3. The scientific investigative procedure has led from selection through planning to the point where the real investigation starts. At this point facts are gathered by using different techniques. Discuss the four {4} fact gathering techniques used in Method study. (8)

1.4. A form has the functional and physical aspects. The functional discusses 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 {4} examples of functional aspects and two {2} examples of physical aspects discussed in form design chapter.

(12)

1.5. List and explain the four Basic elements of a Form. (8)

[39]

QUESTION 2

Use the case Study from question 3 to calculate sample size for element 2, 4 and 5.

[15]

QUESTION 3

The following activities are followed when a worker carry out a job *"capturing data from a form"*:

Switch on the computer 99 (only happens in C1). Collect a form from the cabinet 989 seconds, 640centi-minutes, 993 seconds, 1635 centi-minutes. Open the programme in the computer 0.05 hours (only happens in C1). Type in the information in the computer 6 minutes, 7min, 7min 20 seconds, 6min 30 seconds. Email the data to the supervisor, 2min, 3min (only happens in C2 and C4). Wait for the computer to confirm the delivery of information 5min, 4min 5 seconds, 4 minutes, 4 minutes 10 seconds. After four forms has been captured she closes the computer programme. 12min 13 seconds. The study started at 10:00 until 12:18, TEAS of 3 minutes and TEBS of 2 minutes was recorded.

Use the case study above to complete the time study sheets provided below. (46)

Note:

The observed times provided MUST ALL be converted to seconds
Allowances have been provided in the sheets.
ALL answers must be in 2 decimal places (**except** Average and Rating which must be in whole number)

[46]

	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											
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Cycle Number	**1**												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
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	22												
	23												
	24												
	25												
	26												
	27												
	28												
	29												
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 (1.5%)		
Fatigue Allowance (160 cm)		
Rest Allowance		
BASIC WORK CONTENT		
Work Contingency Allowance (0.05 hrs)		
Tool Maintenance Allowance 950cm		
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 min 20seconds)		
ALLOWED TIME (SECONDS)		
ALLOWED TIME (STD. MIN)		
ALLOWED TIME (STD. HR)		

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