

Table 2

Department	A	B	C	D
A		6	10	8
B	11	-	21	14
C	6	18	-	22
D	50	20	17	-

(OR)

- b. Describe the factors that should be taken into account in deciding the location of plant.

28. a. Describe the work system design components for increased productivity.

(OR)

- b. Explain briefly the various types of intermittent production system.

29. a. What is group technology? Explain the different methods to identify the part families.

(OR)

- b. What is ABC analysis? Enumerate the procedure in the implementation of ABC analysis. Also state its advantages.

30. a. Explain the various types of image incentive plans.

(OR)

- b. What do you understand by the term merit rating? Explain its various methods.

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Reg. No.

B.Tech. DEGREE EXAMINATION, NOVEMBER 2022
Sixth and Seventh Semester

18MEO111T – INDUSTRIAL ENGINEERING

(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

Note:




- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
(ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours

Max. Marks: 75

PART – A (25 × 1 = 25 Marks)

Answer ALL Questions

- | | Marks | BL | CO | PO |
|---|-------|----|----|----|
| 1. The symbol used for transport in work study is
(A) \Rightarrow (B) 
(C)  (D)  | 1 | 1 | 1 | 1 |
| 2. A diagram showing the path followed by men and materials while performing a task is known as
(A) String diagram (B) Flow diagram
(C) Process chart (D) Travel chart | 1 | 2 | 1 | 3 |
| 3. Work study is concerned with
(A) Improving present method and finding standard time (B) Motivation of workers
(C) Improving production capability (D) Improving production planning and control | 1 | 2 | 1 | 2 |
| 4. Two hand process chart is commonly used for
(A) Repetitive operations (B) Short operations
(C) Cycle operations (D) Short and repetitive operations | 1 | 1 | 1 | 2 |
| 5. The time is allowed to perform the job satisfactory
(A) Observed time (B) Basic time
(C) Standard time (D) Allowances | 1 | 2 | 1 | 2 |
| 6. In micro – motion study, therblig is described by
(A) A symbol (B) An event
(C) An activity (D) Standard symbol and colour | 1 | 2 | 2 | 3 |
| 7. Identifying the optimal place to maximize business and minimize the cost of product is called
(A) Plant location (B) Market
(C) Process planning (D) Production planning | 1 | 2 | 2 | 3 |

8. In process charts, the symbol used for storage is
(A) Circle (B) Triangle
(C) Square (D) Arrow 1 1 2 3
9. Basic tool in work study is
(A) Graph paper (B) Stop watch
(C) Process chart (D) Planning chart 1 1 2 2
10. The production rate of an assembly line is determined by its
(A) Work station (B) Idle station
(C) Slowest station (D) Fastest station 1 1 2 3
11. The following type of layout is preferred to manufacture a standard product in large quantity.
(A) Process layout (B) Fixed position layout
(C) Combination layout (D) Product layout 1 2 3 3
12. Process layout is employed for _____.
(A) Batch production (B) Job production
(C) Mass production (D) Scale production 1 1 3 3
13. The following is not a method of job design
(A) Job enlargement (B) Job analysis
(C) Job enrichment (D) Job rotation 1 1 3 3
14. Productivity index
(A) Turnover/ capital input (B) Output/ actual machine hours used
(C) Output/ human input (D) Effectiveness/ efficiency 1 1 3 2
15. _____ is an important component in production and operations management.
(A) Job design (B) Work measurement
(C) Motion study (D) Work system design 1 1 3 2
16. There are various methods to reduce cost of production EXCEPT:
(A) Increase in production output (B) Reduction in number of rejections
(C) Maintaining maximum inventory levels (D) Producing standardized products 1 2 4 2
17. The process of establishing units of measures by which extent, quality, quantity rate and performance are compared and measured.
(A) Standardization (B) Simplification
(C) Specialization (D) Process planning 1 2 4 2
18. A system for inventory control by classifying the material consumption
(A) Group technology (B) Process planning
(C) Production control (D) ABC analysis 1 1 4 2

19. The attributes, which consider the sequence of processing steps required to make a part
(A) Design (B) Manufacturing
(C) Materials (D) Process 1 1 4 3
20. Breakeven point represents
(A) Profit (B) Loss
(C) Maximum profit and minimum loss (D) No profit and no loss 1 1 4 2
21. The employee compensation that is based on the number of hours worked multiplied by an hourly rate of pay
(A) Salary (B) Wages
(C) Overpay (D) Income 1 1 5 3
22. A technique by which an attempt is made to reconcile the needs and objectives of workers and employers and is therefore an integral part of an industrial society.
(A) Wage (B) Wage analysis
(C) Wage fixation (D) Wage payment 1 1 5 8
23. Which among the following is non-financial incentive?
(A) Appreciation (B) Allowance
(C) Bonus (D) Profit sharing 1 1 5 2
24. Which one of the following method belongs to merit rating?
(A) Classification method (B) Rating scale method
(C) Point method (D) Grading methods 1 1 5 2
25. A reward offered to the employee to encourage his work
(A) Prize (B) Incentive
(C) Salary (D) Income 1 1 5 2

PART – B (5 × 10 = 50 Marks)

Answer ALL Questions

Marks BL CO PO

26. a. What is meant by work measurement? And explain its techniques in detail. 10 2 1 3
- (OR)
- b. Define method study and explain the procedures for improving the productivity. 10 2 1 3
27. a. Consider the following layout problem with unit cost matrix. Use craft algorithm to obtain layout. The initial layout is shown in table 1 and flow matrix in table 2. 10 3 2 2

Table 1

2	2	2	2
2	A	B	2
2	D	C	2
2	2	2	2