Unit 2 Method study

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| Sr. No |  |
| 1. | **Work study consists of**   1. a)Effective use of plant and equipment 2. b)Effective use of human effort 3. c) Evaluation of human work 4. d) All of the above |
| Ans | 1. d) All of the above |
| 2. | **Work study examines**   1. a) method 2. b) duration of work 3. c) both ‘a’ and ‘b’ 4. d) None of the above |
| Ans | 1. c) both ‘a’ and ‘b’ |
| 3 | **Work study is also recognised as**   1. a) Time study 2. b) Motion study 3. c) both ‘a’ and ‘b’ 4. d) None of the above |
| Ans | 1. c) both ‘a’ and ‘b’ |
| 4 | **The correct order of procedure in method study is**   1. a) Select – Record – Examine – Develop – Define – Install – Maintain 2. b) Select – Define – Examine – Develop – Record – Install – Maintain 3. c)Select – Record – Develop – Examine – Define – Install – Maintain 4. d) Select – Record – Examine – Define – Develop – Install – Maintain |
| Ans | 1. a) Select – Record – Examine – Develop – Define – Install – Maintain |
| 5 | **The following factor(s) must be considered while selecting the work for method study**   1. a) Economic considerations 2. b) Technical considerations 3. c) Human reactions 4. d) All of the above |
| Ans | 1. d) All of the above |
| 6 | **In process charts, the symbol used for storage is**   1. a)Circle 2. b) Square 3. c) Arrow   d)Triangle |
| Ans | d)Triangle |
| 7 | **In process charts, the symbol used for inspection is**   1. a)Circle 2. b)Square 3. c)Arrow 4. d)Triangle |
| Ans | 1. b)Square |
| 8 | **Delay occurs when**   1. a)someone stops the process 2. b)product wait for next event (operation) 3. c) both ‘a’ and ‘b’ 4. d) None of the above |
| Ans | 1. c) both ‘a’ and ‘b’ |
| 9 | **A milk powder tin is being weighed as it is filled is an example of**   1. a) Operation cum transportation 2. b)Operation cum inspection 3. c)Transportation cum inspection 4. d) None of the above |
| Ans | 1. b)Operation cum inspection |
| 10 | **In outline process chart, the horizontal lines represents**   1. a) general flow of process 2. b)materials being introduced 3. c) both ‘a’ and ‘b’ 4. d)None of the above |
| Ans | 1. b)materials being introduced |
| 11 | **The outline (operation) process chart, the following symbols are used**   1. a) operation and inspection 2. b)operation and transportation 3. c)inspection and transportation 4. d)operation and storage |
| Ans | 1. a) operation and inspection |
| 12 | **The following is (are) the type(s) of flow process chart**   1. **(i)Man type** 2. **(ii)Material type** 3. **(iii)Equipment type**   **The correct answer is**   1. A)only i 2. B) i & ii 3. C) ii & iii 4. D)All of the above |
| Ans | 1. D)All of the above |
| 13 | **Two hand process chart is commonly used for**   1. A) repetitive operations 2. B) short operations 3. C) both ‘a’ and ‘b’ 4. D)none of the abov |
| Ans | 1. C) both ‘a’ and ‘b’ |
| 14 | **The following chart(s) record the movements**   1. operation process chart 2. a) b) flow process chart 3. c) both ‘a’ and ‘b’ 4. d) None of the above |
| Ans | 1. b) flow process chart |
| 15 | **Which of the following is a scale plan?**   1. A) String diagram 2. B) Flow process chart 3. C) Operation process chart 4. D) All of the above |
| Ans | 1. A) String diagram |
| 16 | **In THERBLIGS, colour for ‘search’ is**   1. A) black 2. B) grey 3. C) red 4. D) green |
| Ans | 1. A) black |
| 17 | **In THERBLIGS, ‘**→**’ symbol is used for**   1. A)Search 2. B)Find 3. C)Position 4. D)Select |
| Ans | 1. D)Select |
| 18 | **In THERBLIGS, Abbreviation used for Disassemble is**   1. A) D 2. B) DE 3. C) DA 4. D) DS |
| Ans | 1. C) DA |
| 19 | **A \_\_\_\_ is based on film analysis**   1. A) SIMO chart 2. B) Flow process chart 3. C) String diagram 4. D)Operation flow chart |
| Ans | 1. A) SIMO chart |
| 20 | **In SIMO chart, the movements are recorded against time measured in \_\_\_\_\_.**   1. A) Minutes 2. B) Seconds 3. C) Micro seconds 4. D) Winks |
| Ans | 1. D) Winks |
| 21 | **As per principle of motion economy**   1. A) Motion of arms should be symmetrical and in opposite direction 2. B) both the hand should not remain idle except during rest period 3. C) both hands should start and complete their work simultaneously 4. D) All of the above |
| Ans | 1. D) All of the above |
| 22 | **The height of chair should be such that the top of work table is \_\_\_\_\_\_\_\_ the elbow level of the operator.**   1. A) at same level of 2. B) about 30 mm below 3. C) about 30 mm above 4. D) about 50 mm above |
| Ans | 1. D) about 50 mm above |
| 23 | Basic tool in work study is (a) graph paper (b) process chart (c) planning chart (d) stop watch (e) analytical mind. |
| Ans | (d) stop watch |
| 24 | What does symbol ‘O’ imply in work study (a) operation       (b) inspection (c) transport (d) delay/temporary storage (e) none of the above. |
| Ans | (a) operation |
| 25 | What does symbol ‘D’ imply in work study (a) inspection (b) transport (c) delay/temporary storage (d) permanent storage (e) none of the above. |
| Ans | (c) delay/temporary storage |
| 26 | What does symbol ‘V’ employ in work study (a) operation (b) inspection (c) delay/ temporary Storage (d) permanent storage (e) none of the above. |
| Ans | (d) permanent storage |
| 27 | String diagram is used when (a) team of workers is working at a place (b) material handling is to be done (c) idle time is to be reduced (d) all of the above (e) none of the above. |
| Ans | (a) team of workers is working at a place |
| 28 | Work study is most useful (a) where production  activities are  involved (b) in judging the rating of machines (c) in improving industrial relations (d) in judging the output of a man and improving it (e) where men are biggest contributor to success of a project. |
| Ans | (a) where production  activities are  involved |
| 29 | Micro motion study is (a) enlarged view of motion study (b) analysis of one stage of motion study (c) minute and detailed motion study (d) subdivision of an operation into therbligs and their analysis (e) motion study of small components upto mirco-seconds. |
| Ans | (d) subdivision of an operation into therbligs and their analysis |
| 30 | In micro motion study, therblig is described by (a)  a symbol       (b)  an event (c)  an activity     (d)  micro motions (e)  standard symbol and color. |
| Ans | (e)  Standard symbol and color. |
| 31 | The allowed time for a job equals standard time plus (a) policy allowance (b) interference allowance (c) process allowance (d) learning allowance (e) unforeseen allowance. |
| Ans | (a) policy allowance |
| 32 | Micro motion study involves following number of fundamental hand motions (a) 8 (b) 12 (c) 16 (d) 20 (e) 24 |
| Ans | (c) 16 |
| 33 | The standard time for a job is (a) total work content (b) base time + relaxation time (c) total work content + basic time (d) total work content + delay contingency allowance (e) total work content + relaxation time. |
| Ans | (d) total work content + delay contingency allowance |
| 34 | Work study is done with the help of (a) process chart (b) material handling (c) stop watch     (d) all of the above (e) none of the above. |
| Ans | (c) stop watch |
| 35 | Scheduling gives information about (a) when work should start and how much work should be completed during a certain period (b) when work should complete (c) that how idle time can be minimized (d) proper utilization of machines (e) none of the above. |
| Ans | (a) when work should start and how much work should be completed during a certain period |
| 36 | Expediting function consists in keeping a watch on (a) operator’s activity (b) flow of material and in case of trouble locate source of trouble (c) minimizing the delays (d) making efficient dispatching (e) none of the above. |
| Ans | (b) flow of material and in case of trouble locate source of trouble |
| 37 | Choose the wrong statement Time study is used to (a) determine overhead expenses (b) provide a basis for setting piece prices or incentive wages (c) determine standard costs (d) determine the capability of an operator to handle the number of machines (e) compare alternative methods. |
| Ans | (a) determine overhead expenses |
| 38 | Job evaluation is the method-of determining the (a) relative worth of jobs (b) skills required by a worker (c) contribution of a worker (d) contribution of a job (e) effectiveness of various alternatives. |
| Ans | (a) relative worth of jobs |
| 39 | Micro motion study is (a) analysis of a man-work method by using a motion picture camera with a timing device in the field of view (b) motion study\* observed on enhanced time intervals (c) motion study of a sequence of operations conducted systematically (d) study of man and machine conducted simultaneously (e) scientific, analytically procedure for determining optimum work method. |
| Ans | (a) analysis of a man-work method by using a motion picture camera with a timing device in the field of view |
| 40 | Percent idle time for men or machines is found by (a) work sampling (b) time study (c) method study (d) work study (e) ABC analysis. |
| Ans | (a) work sampling |
| 41 | TMU in method time measurement stands for (a) time motion unit (b) time measurement unit (c) time movement unit (d) technique measurement unit (e) time method unit. |
| Ans | (b) time measurement unit |
| 42 | Time study is (a) the appraisal, in terms of time, of the value of work involving human effort (b) machine setting time (c) time taken by workers to do a job (d) method of fixing time for workers (e) method of determining the personnel Requirement. |
| Ans | (a) the appraisal, in terms of time, of the value of work involving human effort |
| 43 | Work sampling observations are taken on The basis of (a) detailed calculations (b) convenience (c) table of random numbers (d) past experience (e) fixed percentage of daily production. |
| Ans | (c) table of random numbers |
| 44 | One time measurement unit (TMU) in method time measurement system equals (a) 0.0001 minute (b) 0.0006 minute (c) 0.006 minute (d) 0.001 minute (e) 0.06 minute. |
| Ans | (b) 0.0006 minute |
| 45 | Basic motion time study gives times for basic motions in ten thousandths of (a) second (b) minute (c) hour (d) day (e) none of the above. |
| Ans | (b) minute |
| 46 | Choose the wrong statement. Motion study is used for (a) improving a work method (b) improvising a work method (c) designing a work method (d) providing a schematic framework (e) reducing inventory costs. |
| Ans | (e) reducing inventory costs. |
| 47 | Gatt chart provides information about the (a) material handling (b) proper utilization of manpower (c) production schedule (d) efficient working of machine (e) all of the above. |
| Ans | (c) production schedule |
| 48 | ABC analysis deals with (a) analysis of process chart (b) flow of material (c) ordering schedule of job (d) controlling inventory costs money (e) all of the above. |
| Ans | (d) controlling inventory costs money |
| 49 | Process layout is employed for (a)  batch production (b) continuous type of product (c) effective utilization of machines (d) all of the above (e) none of the above. |
| Ans | (a)  batch production |
| 50 | For a product layout the material handling equipment must (a) have full flexibility (b) employ conveyor belts, trucks, tractors etc. (c) be a general purpose type (d) be designed as special purpose for a particular application (e) arranging shops according to specialization of duties. |
| Ans | (d) be designed as special purpose for a particular application |
| 51 | Travel charts provide (a) an idea of the flow of materials at various stages (b) a compact estimate of the handling which must be done between various work sections (c) the information for changes required in rearranging material handling equipment (d) an approximate estimate of the handling which must be done at a particular station (g) solution to handling techniques to achieve most optimum results. |
| Ans | (b) a compact estimate of the handling which must be done between various work sections |
| 52 | Product layout is employed for (a) batch production (b) continuous production (c) effective utilization of machine (d) all of the above (e) none of the above. |
| Ans | (b) continuous production |
| 53 | The most important objective behind plant layout is (a) overall simplification, safety of integration (b) economy in space (c) maximum travel time in plant (d) to provide conveniently located shops (e) to avoid any bottlenecks. |
| Ans | (a) overall simplification, safety of integration |
| 54 | The process layout is best suited where (a) specialization exists (b) machines are arranged according to sequence of operation (c) few number of non-standardized units are to be produced (d) mass production is envisaged (e) bought out items are more. |
| Ans | (c) few number of non-standardized units are to be produced |
| 55 | A low unit cost can be obtained by following (a) product layout (b) functional layout (c) automatic material handling equipment (d) specialization of operation (e) minimum travel time plan and compact layout. |
| Ans | (a) product layout |
| 56 | Military organization is known as (a) line organization (b) line and staff organization (c) functional organization (d) all of the above (e) none of the above. |
| Ans | (a) line organization |
| 57 | The main disadvantage of line organization is (a) top level executives have to do excessive work (b) structure is rigid (c) communication delays occur (d) all of the above (e) none of the above. |
| Ans | (d) all of the above |
| 58 | The main advantage of line organization is its (a) effective command and control (b) defined responsibilities at all levels (c) rigid discipline in the organization (d) ability of quick decision at all levels (e) all of the above. |
| Ans | (e) all of the above. |
| 59 | Frederick W. Taylor introduced a system of working known as (a) line organization (b) line and staff organization (c) functional organization (d) effective organization (e) none of the above. |
| Ans | (c) functional organization |
| 60 | The salient feature of functional organisation is (a) strict adherence to specification (b) separation of planning and design part (c) each individual maintains functional efficiency (d) work  is properly planned and distributed (e) all of the above |
| Ans | (e) all of the above |
| 61 | The most popular type of organization used for Civil Engineering Constructions is (a) line organization (b) line and staff organization (c) functional organization (d) effective organization (e) none of the above. |
| Ans | (a) line organization |
| 62 | Routing prescribes the (a) flow of material in the plant (b) proper utilization of man power (c) proper utilization of machines (d) inspection of final product (e) none of the above. |
| Ans | (a) flow of material in the plant |
| 63 | The grouping of activities into organizational units is called (a) corporate plans (b) higher level management (c) functional authority (d) departmental (e) company policy. |
| Ans | (d) departmental |
| 64 | Which of the following organisation is preferred in automobile industry (a) functional organization (b) line organization (c) staff organization (d) line and staff organizations (e) scalar organization. |
| Ans | (d) line and staff organizations |
| 65 | Which of the following organizations is best suited for steel plants (a) functional organization (b) line organization (c) staff organization (d) line, staff and functional organizations (e) scalar organization. |
| Ans | (d) line, staff and functional organizations |
| 66 | Gantt charts are used for (a) forecasting sales (b) production schedule (c) scheduling and routing (d) linear programming (e) none of the above. |
| Ans | (b) production schedule |
| 67 | he technique of value analysis can be applied to (a) complicated items only (b) simple items only (c) crash programmer items only (d) cost consciousness items only (e) any item. |
| Ans | (e) any item. |
| 68 | The term ‘value’ in value engineering refers to (a) total cost of the product (b) selling price of the product (c) utility of the product (d) manufactured cost of the product (e) depreciation value. |
| Ans | (c) utility of the product |
| 69 | Value engineering aims at finding out the (a) depreciation value of a product (b) resale value of a product (c) major function of the item and accomplishing the same at least cost without change in quality (d) break even point when machine re-quires change (e) selling price of an item. |
| Ans | (c) major function of the item and accomplishing the same at least cost without change in quality |
| 70 | Merit Rating is the method of determining worth of (a) a job (b) an individual employee (c) a particular division in workshop (d) machine (e) overall quality |
| Ans | (b) an individual employee |
| 71 | Works cost implies (a) primary cost (b) factory cost (c) factory expenses (d) primary cost + factory expenses (e) none of the above. |
| Ans | (d) primary cost + factory expenses |
| 72 | Motion study involves analysis of (a) actions of operator (b) layout of work place (c) tooling and equipment (d) all of the above (e) none of the above. |
| Ans | (a) actions of operator |
| 73 | Standard time as compared to normal time is (a) greater (b) smaller (c) equal (d) there is no such correlation (e) none of the above. |
| Ans | (a) greater |
| 74 | Pick up the incorrect statement about advantages of work sampling (a) permits a fine breakdown of activities and delays (b) simultaneous study of many operators may be made by a single observer (c) calculations are easier, method is economical and less time consuming (d) no time measuring devices are generally needed (e) as operators are not watched for long periods, chances of obtaining misleading results are less. |
| Ans | (a) permits a fine breakdown of activities and delays |
| 75 | In which of the following layouts, the lines need to the balanced (a) process layout (b) product layout (c) fixed position layout (d) plant layout (e) functional layout. |
| Ans | (b) product layout |
| 76 | Which of the following layouts is suited for mass production (a) process layout (b) product layout (c) fixed position layout (d) plant layout (e) functional layout. |
| Ans | (b) product layout |
| 77 | Which of the following layouts is suited to job production (a) process layout (b) product layout (c) fixed position layout (d) plant layout (e) functional layout. |
| Ans | (a) process layout |
| 78 | Father of time study was (a) F.W. Taylor   (b) H.L. Gantt (c) F.B. Gilberfh (d) R.M. Barnes (e) H.B. Maynord. |
| Ans | (a) F.W. Taylor |
| 79 | Current assets include (a) manufacturing plant (b) manufacturing plant and equipment (c) inventories (d) common stock held by the firm (e) all of the above. |
| Ans | (a) manufacturing plant |
| 80 | The objective of time study is to determine the time required to complete a job by (a) fast worker   (b) average worker (c) slow worker (d) new entrant (e) any one of the above. |
| Ans | (b) average worker |
| 81 | Job enrichment technique is applied to (a) reduce labour monotony (b) overcome boring and demotivating work (c) make people happy (d) all of the above (e) none of the above. |
| Ans | (d) all of the above |
| 82 | For ship vessel industry the following layout is best suited (a) process layout (b) product layout (c) fixed position layout (d) plant layout (e) functional layout. |
| Ans | (c) fixed position layout |
| 83 | In Halsey 50-50 plan, output standards are established (a) by time study (b) from previous production records (c) from one’s judgement (d) all of the above (e) none of the above. |
| Ans | (b) from previous production records |
| 84 | Routing is essential in the following type of industry (a) assembly industry (b) process industry (c) job order industry (d) mass production industry (e) steel industry. |
| Ans | (a) assembly industry |
| 85 | An optimum project schedule implies (a) optimum utilization of men, machines and materials (b) lowest possible cost and shortest possible time for project (c) timely execution of project (d) to produce best results under given constraints (e) realistic  execution  time, minimum cost and maximum profits. |
| Ans | (b) lowest possible cost and shortest possible time for project |
| 86 | ‘Value’ for value engineering and analysis purposes is defined as (a) purchase value (b) salable value (c) depreciated value (d) present worth (e) function/cost. |
| Ans | (e) function/cost. |
| 87 | One of the basic essentials of an incentive plan is that (a) a differential piece rate system should exist (b) minimum wages should be guaranteed (c) provide incentive to group efficiency performance (d) all standards should be based on optimum standards of production (e) all standards should be based on time studies. |
| Ans | (e) all standards should be based on time studies. |
| 88 | String diagram is used (a) for checking the relative values of various layouts (b) when a group of workers are working at a place (c) where processes require the operator to be moved from one place to another (d) all of the above (e) none of the above. |
| Ans | (d) all of the above |
| 89 | PMTP (predetermined motion time systems) include (a) MTM (method time measurement) (b) WFS (work factor systems) (c) BNTS (basic motion time study) (d) all of the above (e) none of the above |
| Ans | (d) all of the above |
| 90 | Work study comprises following main techniques (a) method study and work measurement (b) method study and time study (c) time study and work measurement (d) method study and job evaluation (e) value analysis and work measurement |
| Ans | (a) method study and work measurement |
| 91 | The disadvantage of product layout is (a) high initial investment for the specialized facilities (b) skilled labour to operate machines (c) production time is longer, requiring more goods in inventory (d) high cost of inspection (e) costly and complex production control. |
| Ans | (a) high initial investment for the specialized facilities |
| 92 | Emergency rush order can be pushed more effectively in (a) job production (b) automatic production (c) continuous production (d) intermittent production (e) none of the above. |
| Ans | (d) intermittent production |
| 93 | Routing assists engineers in deciding in advance (a) the flow of material in the plant (b) the methods of proper utilization of manpower (c) the methods of proper utilization of machines (d) the layout of factory facilities (e) normal route of workers through the plant. |
| Ans | (c) the methods of proper utilization of machines |
| 94 | The determination of standard time in a complex job system is best done through   * 1. Stop watch time study   2. Analysis of micromotion   3. Grouping timing techniques.   4. Analysis of standard data system |
| Ans | * + 1. Analysis of standard data system |
| 95 |  |
| Ans |  |
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