Code No: 58107 **Set No. 1**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

PRODUCT DESIGN AND ASSEMBLY AUTOMATION

Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. The cost of feeding and orienting parts will depend on the cost of the equipment required and on the time interval between delivery of _____ [ ]
(a) Successive parts (b) Next part (c) Left part (d) Defective parts

2. If apart can only be inserted into the assembly in one direction then it is referred to as [ ]
(a) Not symmetric (b) Symmetric (c) Alpha symmetric (d) Not alpha symmetric

3. In addition to the problems of using the geometric features of the part to orient it automatically, other part characteristics can make feeding particularly_____ [ ]
(a) Un equal (b) Difficult (c) Equal (d) Easy

4. Expand DFA_____ [ ]
(a) Design for Assembly (b) Design for Automation
(c) Design for Arrays (d) Design for Assembly automation

5. An essential ingredient of the DFA method is the use of a measure of the DFA _____ of a proposed design. [ ]
(a) Catalyst (b) Index (c) Gradient (d) Element

6. The part features that affect manual handling time significantly are_____ [ ]
(a) Size (b) Thickness (c) Weight (d) All

7. There were _____ code numbers in the original manual insertion and fastening coding system, as in the manual handling coding system. [ ]
(a) 10000 (b) 10 (c) 100 (d)1000

8. _____symmetry, which depends on the angle through which a part must be rotated about an axis perpendicular to the axis of insertion. [ ]
(a) Alpha (b) Beta (c) Gama (d) Delta

9. When the economic choice of part-presentation method is to be determined, there will usually be only two basic types to consider, i.e Those involving manual handling and loading of individual parts into _____ [ ]
(a) Part trays (b) Magazine (c) Pallet (d) All

10. The maximum feed rate of oriented parts will be given by [ ]
(a) $F_m = vE/l$ (b) $F_m = vE$ (c) $F_m = E/l$ (d) $F_m = v/l$

Cont.....2

II Fill in the Blanks:

11. If a part can be sorted from bulk and delivered to a convenient location correctly oriented, a special-purpose mechanism or work head can usually be designed that will place it in the assembly. Such work heads can generally be designed to operate on a cycle as short as_____

12. If a force, comparable to the weight of a nontangling or nonnesting part, is required to separate it from bulk, the part is considered _____

13. _____ Very poor location; does not centralize without Positive control on the outside diameter of the screws.

14. A variety of predetermined time standard systems are currently used to establish assembly times in industry, The two most commonly used systems are _____and _____ systems.

15. For the effect of weight on a part handled using one hand, the total adjustment t_{pw} to handling time can be represented by_____

16. There are many ways in which the application of _____ principles can reduce manufacturing and assembly costs.

17. Expand PCB_____

18. Assembly part may require two hands for manipulation when_____

19. When the suitability of products for robot assembly is determined, it is important to consider the available methods of parts presentation. These range from _____

20. If it is assumed that the base, top, and fuse clip are to be assembled manually on an _____ machine, at least two assembly workers will be required.

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Code No: 58107 **Set No. 2**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

PRODUCT DESIGN AND ASSEMBLY AUTOMATION

Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. Expand DFA_____ [ ]
   (a) Design for Assembly (b) Design for Automation
   (c) Design for Arrays (d) Design for Assembly automation

2. An essential ingredient of the DFA method is the use of a measure of the DFA _____ of a proposed design. [ ]
   (a) Catalyst (b) Index (c) Gradient (d) Element

3. The part features that affect manual handling time significantly are_____ [ ]
   (a) Size (b) Thickness (c) Weight (d) All

4. There were _____ code numbers in the original manual insertion and fastening coding system, as in the manual handling coding system. [ ]
   (a) 10000 (b) 10 (c) 100 (d)1000

5. _____symmetry, which depends on the angle through which a part must be rotated about an axis perpendicular to the axis of insertion. [ ]
   (a) Alpha (b) Beta (c) Gama (d) Delta

6. When the economic choice of part-presentation method is to be determined, there will usually be only two basic types to consider, i.e Those involving manual handling and loading of individual parts into _____ [ ]
   (a) Part trays (b) Magazine (c) Pallet (d) All

7. The maximum feed rate of oriented parts will be given by [ ]
   (a) $F_m = vE/l$ (b) $F_m = vE$ (c) $F_m = E/l$ (d) $F_m = v/l$

8. The cost of feeding and orienting parts will depend on the cost of the equipment required and on the time interval between delivery of _____ [ ]
   (a) Successive parts (b) Next part (c) Left part (d) Defective parts

9. If apart can only be inserted into the assembly in one direction then it is referred to as [ ]
   (a) Not symmetric (b) Symmetric (c) Alpha symmetric (d) Not alpha symmetric

10. In addition to the problems of using the geometric features of the part to orient it automatically, other part characteristics can make feeding particularly_____ [ ]
    (a) Un equal (b) Difficult (c) Equal (d) Easy

Cont.....2

II Fill in the Blanks:

11. A variety of predetermined time standard systems are currently used to establish assembly times in industry, The two most commonly used systems are _____and _____ systems.

12. For the effect of weight on a part handled using one hand, the total adjustment t_{pw} to handling time can be represented by_____

13. There are many ways in which the application of _____ principles can reduce manufacturing and assembly costs.

14. Expand PCB_____

15. Assembly part may require two hands for manipulation when_____

16. When the suitability of products for robot assembly is determined, it is important to consider the available methods of parts presentation. These range from _____

17. If it is assumed that the base, top, and fuse clip are to be assembled manually on an _____ machine, at least two assembly workers will be required.

18. If a part can be sorted from bulk and delivered to a convenient location correctly oriented, a special-purpose mechanism or work head can usually be designed that will place it in the assembly. Such work heads can generally be designed to operate on a cycle as short as_____

19. If a force, comparable to the weight of a nontangling or nonnesting part, is required to separate it from bulk, the part is considered _____

20. _____ Very poor location; does not centralize without Positive control on the outside diameter of the screws.

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Code No: 58107 **Set No. 3**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

PRODUCT DESIGN AND ASSEMBLY AUTOMATION

Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. The part features that affect manual handling time significantly are_____ [ ]
(a) Size (b) Thickness (c) Weight (d) All

2. There were _____ code numbers in the original manual insertion and fastening coding system, as in the manual handling coding system. [ ]
(a) 10000 (b) 10 (c) 100 (d)1000

3. _____symmetry, which depends on the angle through which a part must be rotated about an axis perpendicular to the axis of insertion. [ ]
(a) Alpha (b) Beta (c) Gama (d) Delta

4. When the economic choice of part-presentation method is to be determined, there will usually be only two basic types to consider, i.e Those involving manual handling and loading of individual parts into _____ [ ]
(a) Part trays (b) Magazine (c) Pallet (d) All

5. The maximum feed rate of oriented parts will be given by [ ]
(a) $F_m = vE/l$ (b) $F_m = vE$ (c) $F_m = E/l$ (d) $F_m = v/l$

6. The cost of feeding and orienting parts will depend on the cost of the equipment required and on the time interval between delivery of _____ [ ]
(a) Successive parts (b) Next part (c) Left part (d) Defective parts

7. If apart can only be inserted into the assembly in one direction then it is referred to as [ ]
(a) Not symmetric (b) Symmetric (c) Alpha symmetric (d) Not alpha symmetric

8. In addition to the problems of using the geometric features of the part to orient it automatically, other part characteristics can make feeding particularly_____ [ ]
(a) Un equal (b) Difficult (c) Equal (d) Easy

9. Expand DFA_____ [ ]
(a) Design for Assembly (b) Design for Automation
(c) Design for Arrays (d) Design for Assembly automation

10. An essential ingredient of the DFA method is the use of a measure of the DFA _____ of a proposed design. [ ]
(a) Catalyst (b) Index (c) Gradient (d) Element

Cont.....2

II Fill in the Blanks:

11. There are many ways in which the application of _____ principles can reduce manufacturing and assembly costs.

12. Expand PCB_____

13. Assembly part may require two hands for manipulation when_____

14. When the suitability of products for robot assembly is determined, it is important to consider the available methods of parts presentation. These range from _____

15. If it is assumed that the base, top, and fuse clip are to be assembled manually on an _____ machine, at least two assembly workers will be required.

16. If a part can be sorted from bulk and delivered to a convenient location correctly oriented, a special-purpose mechanism or work head can usually be designed that will place it in the assembly. Such work heads can generally be designed to operate on a cycle as short as_____

17. If a force, comparable to the weight of a nontangling or nonnesting part, is required to separate it from bulk, the part is considered _____

18. _____ Very poor location; does not centralize without Positive control on the outside diameter of the screws.

19. A variety of predetermined time standard systems are currently used to establish assembly times in industry, The two most commonly used systems are _____and _____ systems.

20. For the effect of weight on a part handled using one hand, the total adjustment t_{pw} to handling time can be represented by_____

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Code No: 58107 **Set No. 4**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

PRODUCT DESIGN AND ASSEMBLY AUTOMATION

Objective Exam

Name: _____ Hall Ticket No. | | | | | | A | | | | |

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. _____symmetry, which depends on the angle through which a part must be rotated about an axis perpendicular to the axis of insertion. [ ]
(a) Alpha (b) Beta (c) Gama (d) Delta

2. When the economic choice of part-presentation method is to be determined, there will usually be only two basic types to consider, i.e Those involving manual handling and loading of individual parts into _____ [ ]
(a) Part trays (b) Magazine (c) Pallet (d) All

13. The maximum feed rate of oriented parts will be given by [ ]
(a) $F_m = vE/l$ (b) $F_m = vE$ (c) $F_m = E/l$ (d) $F_m = v/l$

14. The cost of feeding and orienting parts will depend on the cost of the equipment required and on the time interval between delivery of _____ [ ]
(a) Successive parts (b) Next part (c) Left part (d) Defective parts

15. If apart can only be inserted into the assembly in one direction then it is referred to as [ ]
(a) Not symmetric (b) Symmetric (c) Alpha symmetric (d) Not alpha symmetric

16. In addition to the problems of using the geometric features of the part to orient it automatically, other part characteristics can make feeding particularly_____ [ ]
(a) Un equal (b) Difficult (c) Equal (d) Easy

17. Expand DFA_____ [ ]
(a) Design for Assembly (b) Design for Automation
(c) Design for Arrays (d) Design for Assembly automation

18. An essential ingredient of the DFA method is the use of a measure of the DFA _____ of a proposed design. [ ]
(a) Catalyst (b) Index (c) Gradient (d) Element

19. The part features that affect manual handling time significantly are_____ [ ]
(a) Size (b) Thickness (c) Weight (d) All

20. There were _____ code numbers in the original manual insertion and fastening coding system, as in the manual handling coding system. [ ]
(a) 10000 (b) 10 (c) 100 (d)1000

Cont…..2

II Fill in the Blanks:

11. Assembly part may require two hands for manipulation when_____

12. When the suitability of products for robot assembly is determined, it is important to consider the available methods of parts presentation. These range from _____

13. If it is assumed that the base, top, and fuse clip are to be assembled manually on an _____ machine, at least two assembly workers will be required.

14. If a part can be sorted from bulk and delivered to a convenient location correctly oriented, a special-purpose mechanism or work head can usually be designed that will place it in the assembly. Such work heads can generally be designed to operate on a cycle as short as_____

15. If a force, comparable to the weight of a nontangling or nonnesting part, is required to separate it from bulk, the part is considered _____

16. _____ Very poor location; does not centralize without Positive control on the outside diameter of the screws.

17. A variety of predetermined time standard systems are currently used to establish assembly times in industry, The two most commonly used systems are _____and _____ systems.

18. For the effect of weight on a part handled using one hand, the total adjustment t_{pw} to handling time can be represented by_____

19. There are many ways in which the application of _____ principles can reduce manufacturing and assembly costs.

20. Expand PCB_____

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