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| JPK's logo  sldn's logo  **LEARN AND WORK ASIGNMENT**  **(LWA)** | | | |
| **NOSS**  **(CODE NOSS)** | **COMPUTER SYSTEM OPERATION**  **(IT-020-3:2013)** | | |
| **Competency Unit Title**  **(CU CODE)** | **COMPUTER SYSTEM SET-UP**  **(IT-020-3:2013-C01)** | **LEVEL** | **3** |
| **Competency Unit Descriptor** | Computer system set-up which is also known as computer installation, involves the installation of hardware, software and peripherals. As the process varies for each computer and software, programs (including operating systems) often come with an installer, a specialised program responsible for doing whatever is needed for their installation. Computer system set-up aims of making the hardware, software and peripheral ready for execution.  The person who is competent in this competency unit shall be able to assemble computer parts and peripherals, install operating system, configure computer system components making the system connect and communicate each other and perform product activation according to manufacturer instruction manual.  To ensure the performance status of the computer system, functionality test and User Acceptance Test (UAT) are carried out in accordance with manufacturer instruction manual. The computer system set-up task is ended with documentation of the Operating Systems, software, drivers, backup file and warranty cards related to the computer system in accordance with company policy.  The outcome of this competency is to prepare computer and peripherals ready to execute tasks to fulfil user’s requirement. | | |
| **Candidate Name** |  | | |
| **Candidate I/C**  **Number** |  | | |
| **Company’s Name** |  | | |

**CU WORK ACTIVITY STATEMENT**:

PERFORM COMPUTER SYSTEM SET-UP ACTIVITIES

**DURATION:**

**A. SETTING GOAL**

You are required to perform computer system set-up activities based on performance criteria below:

* 1. Define job order /job request and checklist produced in accordance with company

procedure.

* 1. Obtain and confirm user’s needs and requirements
  2. Ensure types of computer to be set-up (e.g: PC, laptop, All-In-One (AIO))
  3. Ensure computer system software and peripheral
  4. Determine work schedule according to company requirement
  5. Check and confirm computer hardware compatibility, condition and quantity
  6. Unpack and arrange computer hardware components according to company work

practice

* 1. Check and prepare computer operating systems and software according to user’s

requirement

* 1. Maintain workplace cleanliness and personal hygiene according to company

guideline

* 1. Install computer hardware components according to manufacturer instruction

manual

* 1. Install computer casing/cover according to manufacturer instruction manual
  2. Check and connect computer cables according to manufacturer instruction manual.
  3. Turn on computer power and analyst computer boot up process status according to

manufacturer instruction manual

* 1. Install computer operating systems according to manufacturer instruction and guidelines
  2. Install computer devices driver according to manufacturer instruction and guidelines
  3. Install and test software application according to manufacturer instruction and

guidelines

* 1. Install and test software patches according to installation procedure
  2. Configure computer security according to manufacturer security setting

instruction/recommendation

* 1. Carry out software back-up.
  2. Identify and connect computer peripherals connection to the correct ports according to

manufacturer instruction and guidelines.

* 1. Check and confirm peripherals functionality and operation status by turn on power

source according to manufacturer instruction and guidelines

* 1. Install and test computer peripherals driver and software according to manufacturer

instruction and guidelines

* 1. Conduct computer unit test according to manufacturer instruction and guidelines
  2. Conduct computer performance test according to manufacturer instruction and

guidelines

* 1. Conduct computer load test according to with manufacturer instruction and guidelines
  2. Check and connect computer cables according to manufacturer instruction manual.
  3. Conduct computer peripherals functional test according to manufacturer instruction and

guidelines

* 1. Check and connect computer cables according to manufacturer instruction manual.

Perform User acceptance test (UAT) .

* 1. Check and connect computer cables according to manufacturer instruction manual.

Record and store CD resources (Operating systems, software, drivers and backup)

according to company policy.

* 1. Check and connect computer cables according to manufacturer instruction manual.

Record Warranty cards according to company policy

* 1. Check and connect computer cables are in according to manufacturer instruction

manual. Record computer set-up checklist in according to company guideline

* 1. Check and connect computer cables according to manufacturer instruction manual.

Prepared and submit User Acceptance Test report (UAT) to superior

* 1. Update computer inventory records according to company inventory procedure
  2. Prepare and close Set-up computer job order or change request report.

**B. PLANNING**

You are required to plan activities in performing computer system set-up to achieve setting goal by using resources listed below:

* 1. Identify tools, equipment & materials.

|  |  |
| --- | --- |
| **ITEMS** | **RATIO (TEM : Trainees)** |
| 1. LCD Projector 2. Laptop/PC   3) Computer hardware components  • Processor  • Mother board  • Network card  • Memory module  • Graphic card  • Sound card  • Power supply  • Cooling Fan  • Hard disk  • Storage media  • Optical drive  • Casing  • Heat sink  • Thermal paste  4) Computer casing:  • Mini tower  • Medium tower  • Desktop casing  5) Computer operating system and  software  6) Types of computer cable connector,  such as:  • Network connector RJ45  • Phone connector RJ11  7) Connector orientation:  • Power cable  • USB (1.1, 2.0, 3.0)  • Monitor cable  • Network cable (RJ45)  8) Computer monitor connector, such  as  • VGA,  • DVI,  • HDMI  9) Plug layout  • Three pins  • Two pins  • International adaptor  10) Electrostatic precaution  11) Computer system set-up tools:  • screw driver,  • multi meter  • anti-electrostatic wristband  • Vacuum cleaner  12) Sample of User Acceptance Test  report  13) Sample of as-built diagram  14) Sample of Electrical schematic  diagram  15) Sample of Computer set-up  checklist  16) Sample of Computer set-up job  order / change request report | 1:25  1:25  1:5  1:5  1:5  1:5  1:5  1:5  1:5  1:5  1:5  1:1  1:1  1:1  1:1  1:1 |

* 1. Perform computer system set-up workflow.
  2. Identify computer system set-up procedures, flow chart and correct sequence.
  3. Plan duration/time of computer system set-up procedures.
  4. Identify manpower in performing computer system set-up activities.
  5. You may review REFERENCES as guidelines in performing this activity.

|  |
| --- |
| REFERENCES |
| 1. Books, Hephaestus (2011) . Computer Peripherals, Including: Computer Monitor,   Fax, Hard Disk Drive, Stored Energy Printer, Peripheral, Plug and Play, Auto-Configuration, Game Port, Hot Swapping, Autodetection, Surge Protector, Remote Terminal Unit,. Western Digital Media Center. Hephaestus Books, Lightning Source Uk Ltd. ISBN-13: 978-1-242-97956-9   1. Jyoti Snehi. (2006). Computer Peripherals and Interfacing. Firewall Media. ISBN-13:   978-81-7008-929-2   1. R.A. Penfold. (2005). How to Set Up Your New Computer. Bernard Babani   Publishing ISBN-13: 978-0-85934-559-0   1. Robert B J Warnar (2012). Computer Peripheral Memory System Forecast (Volume   500-545). General Books. ISBN-13: 978-1-235-71266-1 |

**C. DECISION MAKING**

* 1. You are required to get coach approval before performing computer system set-up activities.

**D. EXECUTING & MONITORING**

You are required to perform computer system set-up activities according to the steps below:

* 1. Check types of computer, peripheral and software
  2. Check computer system work function
  3. Check computer hardware compatibility:
     1. computer components specification
     2. power supply specification
  4. Check computer operating system and software information
  5. Check computer cable connector
  6. Ensure connector orientation, computer monitor connector type and plug layout type
  7. Prepare computer system set-up tools.
  8. Adhere electrical safety requirements
  9. Ensure work area cleanliness and hygiene
  10. Perform computer hardware components installation
      1. Casing
      2. Power supply
      3. Mother board
      4. Processor
      5. Heat sink come with (c/w) thermal paste
      6. Memory module
      7. Hard disk
      8. Storage media
      9. Optical drive
      10. Network card
      11. Graphic card
      12. Sound card
      13. Cooling Fan
  11. Ensure computer casing/cover are properly install
  12. Interpret computer warning alarm
  13. Check appear messages after Power On Self Test (POST)
  14. Install computer operating system
  15. Execute computer devices driver installation
  16. Check peripheral driver compatibility
  17. Perform software application installation
  18. Carry out computer system software update
  19. Verify computer security verification
  20. Perform software back-up (if applicable)
  21. Ensure types of computer peripheral cables
  22. Carry out computer peripherals connection
      1. Printer
      2. Scanner
      3. Multi function copier (MFC)
      4. Uninterrupted Power Supply (UPS)
      5. Auto Voltage regulator AVR
  23. Execute computer unit test
      1. System process cycle
      2. Continuity Test
  24. Carry out computer performance test
      1. CPU Test
      2. Graphic Test
      3. Sound Test
      4. Hard disk Test
      5. Memory Test
  25. Perform computer peripherals functionality test
  26. Prepare for the handing over of computer and peripherals to the end-user
  27. Perform User Acceptance Test (UAT)
  28. Carry out company asset documentation
  29. Produce User Acceptance Test (UAT) report
  30. Create final as-built diagram
  31. Produce electrical schematic diagram
  32. Record computer set-up checklist
  33. Prepare computer set-up job order / change request report
  34. Comply with attitude, safety and environment listed below when performing this

activity.

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| --- | --- | --- |
| **ATTITUDE** | **SAFETY** | **ENVIRONMENTAL** |
| Detail and precise in interpreting computer system software and peripheral | Adhere to work area safety requirement | Adhere to work area safety requirement |
| Analytical mind in identifying user’s needs and requirements | Adhere to manufacturer instruction manual | Adhere to manufacturer instruction manual |
| Through in determining computer hardware compatibility | Adhere to company confidentiality policy | Adhere to company confidentiality policy |
| Cautious in preparing hardware, software and set-up tools |  |  |
| Detail and systematic in installing computer hardware components and computer casing |  |  |
| Through and details in defining computer warning alarm and Power On Self Test (POST) messages |  |  |
| Accurate and systematic in installing computer operating system and devices driver |  |  |
| Cautious in carrying computer software installation and software back-up |  |  |
| Accurate and cautious in carrying out computer peripheral connection |  |  |
| Detail in checking peripheral driver compatibility |  |  |
| Precise, analytical mind, details and accurate in carrying out computer and peripheral testing |  |  |
| Detail and thorough in preparing the handing over of computer and peripherals to the end-user |  |  |
| Transparent and detail in preparing computer system set-up report |  |  |

4.35 Apply core activities listed below when performing this activity.

|  |  |  |
| --- | --- | --- |
| **Social Skills** | | **Core Abilities** |
| Communication skills | 02.03 Communicate clearly. | |
| Conceptual skills | 01.02 Document information procedures or processes.  02.04 Prepare brief reports and checklist  using standard forms. | |
| Interpersonal skills | 01.11 Apply thinking skills and creativity.  03.01Apply cultural requirement to the  workplace.  03.07 Resolve interpersonal conflicts  03.15 Liaise to achieve identified outcomes.  03.16 Identify and assess client/customer  needs.  04.02 Set and revise own objectives and  goals. | |
| Leadership skills | 01.01 Identify and gather information.  02.11 Convey information and ideas to people.  03.02 Demonstrate integrity and apply  practical practices.  03.05 Demonstrate safety skills  03.06 Respond appropriately to people and  situations.  04.04 Apply problem solving strategies.  04.05 Demonstrate initiative and flexibility  04.07 Negotiate acceptance and support for  objectives and strategies  06.04 Adapt competencies to new  situations/systems | |
| Learning skills | 01.03 Utilize basic IT applications.  01.04 Analyse information.  01.05 Utilize the Internet to locate and gather  information.  01.06 Utilize word processor to process information  05.01 Implement project/work plans  06.01 Understand systems.  06.03 Identify and highlight problems  06.05 Analyse technical systems.  06.06 Monitor and correct performance of  systems. | |
| Multitasking and prioritizing | 02.10 Prepare reports and instructions.  04.03 Organize and maintain own workplace. | |
| Self-discipline | 02.01 Interpret and follow manuals, instructions and SOP's.  03.03 Accept responsibility for own work and  Work area.  04.01 Organize own work activities.  06.02 Comply with and follow chain of  command. | |
| Teamwork | 03.08 Develop and maintain a cooperation  within work group.  03.13 Develop and maintain team harmony  and resolve conflicts.  03.14 Facilitate and coordinate teams and  ideas. | |

**E. EVALUATING**

You are required to evaluate computer system set-up activities using the checklist below.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A** | **ASSESSMENT CRITERIA**  **(60%)** | **MARKS GIVEN BY APPRENTICE** | | | | | **MARKS GIVEN BY**  **COACH** | | | | |
| **0** | **1-2** | **3-4** | **5-6** | **7** | **0** | **1-2** | **3-4** | **5-6** | **7** |
| 1 | Types of computer, peripheral and its software identified |  |  |  |  |  |  |  |  |  |  |
| 2. | Computer system work function defined |  |  |  |  |  |  |  |  |  |  |
| 3. | Computer hardware compatibility determined |  |  |  |  |  |  |  |  |  |  |
| 4. | Computer Operating System and software information defined |  |  |  |  |  |  |  |  |  |  |
| 5. | Computer cable connector prepared |  |  |  |  |  |  |  |  |  |  |
| 6. | Connector orientation, computer monitor connector and plug layout determined |  |  |  |  |  |  |  |  |  |  |
| 7. | Computer system set-up tool prepared |  |  |  |  |  |  |  |  |  |  |
| 8. | Electrical safety requirements adhered |  |  |  |  |  |  |  |  |  |  |
| 9. | Work area cleanliness and hygiene up-kept |  |  |  |  |  |  |  |  |  |  |
| 10. | Computer hardware components installed |  |  |  |  |  |  |  |  |  |  |
| 11. | Computer casing installed. |  |  |  |  |  |  |  |  |  |  |
| 12. | Computer warning alarm interpreted. |  |  |  |  |  |  |  |  |  |  |
| 13. | Power On Self Test (POST) messages defined. |  |  |  |  |  |  |  |  |  |  |
| 14. | Computer Operating system installed. |  |  |  |  |  |  |  |  |  |  |
| 15. | Computer devices driver installation carried out. |  |  |  |  |  |  |  |  |  |  |
| 16. | Software application installation executed. |  |  |  |  |  |  |  |  |  |  |
| 17. | Computer system software update performed. |  |  |  |  |  |  |  |  |  |  |
| 18. | Computer security verified. |  |  |  |  |  |  |  |  |  |  |
| 19. | Software back-up performed. |  |  |  |  |  |  |  |  |  |  |
| 20. | Types of computer peripheral and cables determined. |  |  |  |  |  |  |  |  |  |  |
| 21. | Peripheral driver compatibility checked. |  |  |  |  |  |  |  |  |  |  |
| 22. | Computer peripherals connection carried out. |  |  |  |  |  |  |  |  |  |  |
| 23. | Computer unit test executed. |  |  |  |  |  |  |  |  |  |  |
| 24. | Computer performance test carried out. |  |  |  |  |  |  |  |  |  |  |
| 25. | Computer peripherals functionality test performed. |  |  |  |  |  |  |  |  |  |  |
| 26. | Handing over of computer and peripherals to the end-user prepared. |  |  |  |  |  |  |  |  |  |  |
| 27. | User Acceptance Test (UAT) carried out. |  |  |  |  |  |  |  |  |  |  |
| 28. | Company asset documentation carried out. |  |  |  |  |  |  |  |  |  |  |
| 29. | User Acceptance Test report prepared. |  |  |  |  |  |  |  |  |  |  |
| 30. | Final as-built diagram created. |  |  |  |  |  |  |  |  |  |  |
| 31. | Electrical schematic diagram produced. |  |  |  |  |  |  |  |  |  |  |
| 32. | Computer set-up checklist recorded. |  |  |  |  |  |  |  |  |  |  |
| 33. | Computer set-up job order / change request report prepared. |  |  |  |  |  |  |  |  |  |  |
|  | **SUBTOTAL** | **A1** | | | | | **A2** | | | | |
|  | **FULL MARKS** | **231** | | | | | **231** | | | | |
| **B** | **ATTITUDE/SAFETY/**  **ENVIRONMENT**  **(20%)** | **MARKS GIVEN BY APPRENTICE** | | | | | **MARKS GIVEN BY**  **COACH** | | | | |
| **0** | **1-2** | **3-4** | **5-6** | **7** | **0** | **1-2** | **3-4** | **5-6** | **7** |
| 1 | Attitude |  |  |  |  |  |  |  |  |  |  |
| 2. | Safety |  |  |  |  |  |  |  |  |  |  |
| 3 | Environmental |  |  |  |  |  |  |  |  |  |  |
|  |  | **B1** | | | | | **B2** | | | | |
|  |  | **21** | | | | | **21** | | | | |
| **C** | **EMPLOYABILITY SKILLS**  **(SOCIAL SKILLS)**  **(20%)** | **MARKS GIVEN BY APPRENTICE** | | | | | **MARKS GIVEN BY**  **COACH** | | | | |
| **0** | **1-2** | **3-4** | **5-6** | **7** | **0** | **1-2** | **3-4** | **5-6** | **7** |
| 1 | Communication skills |  |  |  |  |  |  |  |  |  |  |
| 2 | Conceptual skills |  |  |  |  |  |  |  |  |  |  |
| 3 | Interpersonal skills |  |  |  |  |  |  |  |  |  |  |
| 4 | Multitasking and prioritizing |  |  |  |  |  |  |  |  |  |  |
| 5 | Self-discipline |  |  |  |  |  |  |  |  |  |  |
| 6 | Teamwork |  |  |  |  |  |  |  |  |  |  |
| 7 | Learning skill |  |  |  |  |  |  |  |  |  |  |
| 8 | Leadership skill |  |  |  |  |  |  |  |  |  |  |
|  |  | **C1** | | | | | **C2** | | | | |
|  | **FULL MARKS** | **56** | | | | | **56** | | | | |

**CALCULATION TABLE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MARKS GIVEN BY APPRENTICE | MARKS GIVEN BY COACH | WEIGHTED MARKS GIVEN BY  APPRENTICE | WEIGHTED MARKS GIVEN BY COACH |
| ASSESSMENT CRITERIA | A1 | A2 | A1 / 231X 60 | A2 / 231 X 60 |
| ATTITUDE, SAFETY & ENVIRONMENT | B1 | B2 | B1 / 21X 20 | B2 / 21X 20 |
| EMPLOYABILITY SKILLS (SOCIAL SKILLS) | C1 | C2 | C1 / 56X 20 | C2 / 56X 20 |
| Total | | | X | Y |
| Ratio of Percentage (Apprentice: Coach) | | | P% | Q% |
| Grand Total | | | (P/100 x X) + (Q/100 x Y) | |

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| --- |
| COMMENTS/ RECOMMENDATIONS BY COACH |

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COACH: APPRENTICE:

DATE: DATE: