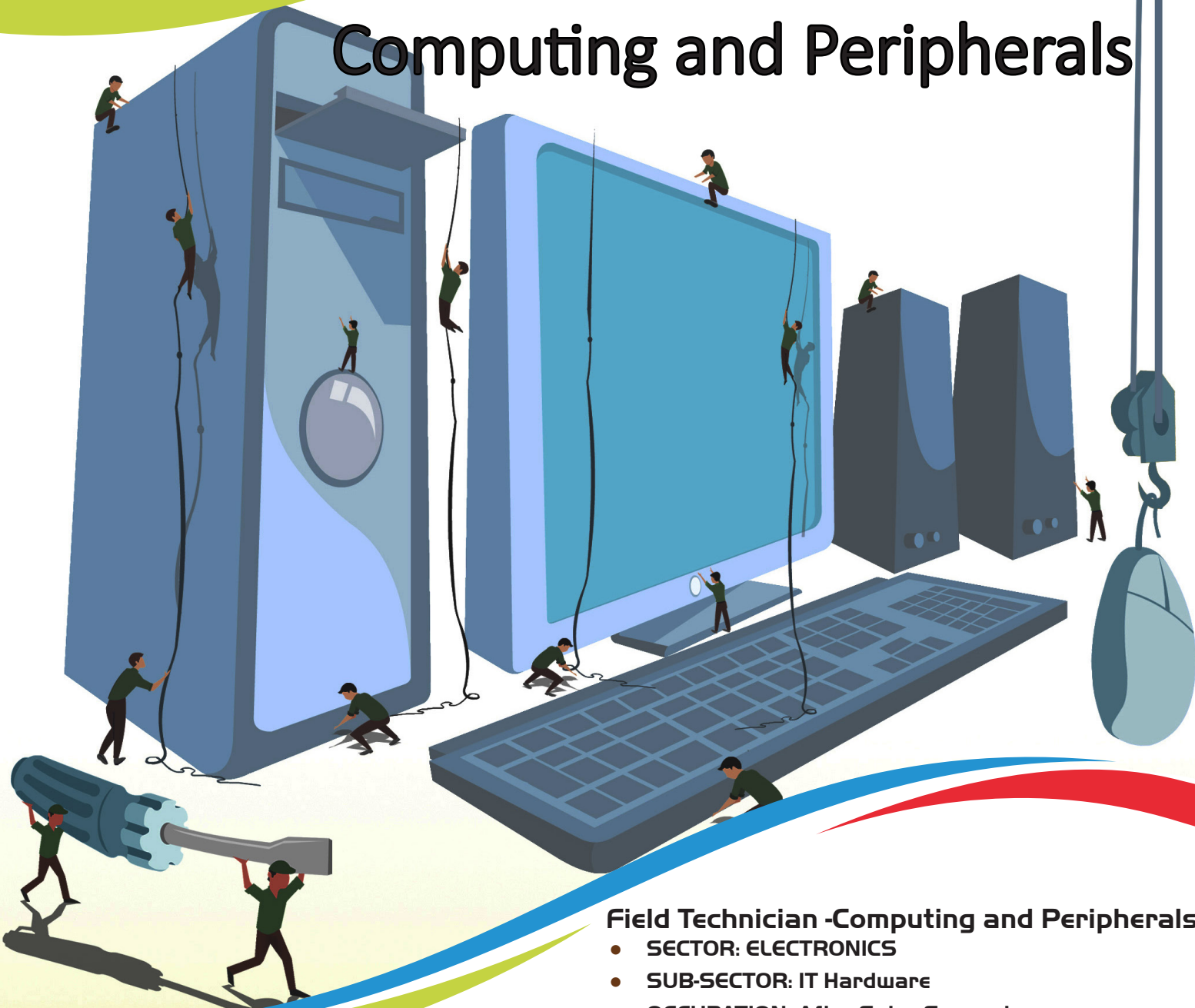


Assessment Guide

Field Technician – Computing and Peripherals



Field Technician -Computing and Peripherals

- SECTOR: ELECTRONICS
- SUB-SECTOR: IT Hardware
- OCCUPATION: After Sales Support
- REFERENCE ID: ELE/Q460I



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Dear Trainer,

As part of the training programme every trainee needs to be evaluated. Read through the assessment structure and methodology adopted.

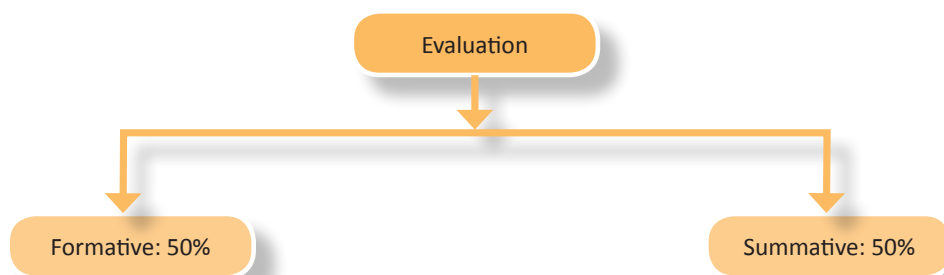
Evaluation Methodology

Evaluation is a systematic, on-going, iterative process of monitoring learning. It is done to determine the trainee's performance and to identify the areas of improvement.

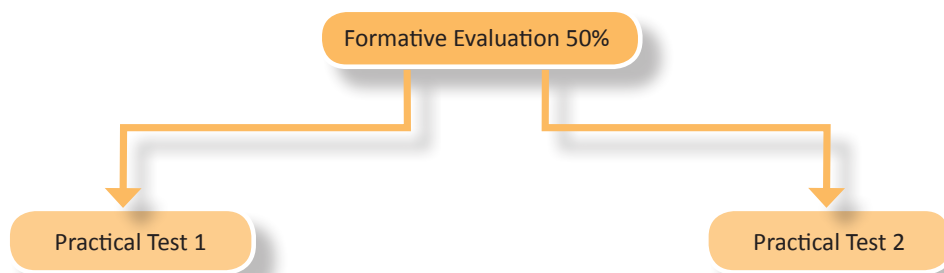
It is of two types: Formative and Summative. Formative evaluation is to check the progress of learning at periodic intervals for timely remediation. It is done by way of practical tests. Practical tests are part of the training programme and are interspersed at logical points in the training programme.

Summative evaluation is meant to grade the trainee. It is conducted at the end of the programme by way of theory and practical tests.

Formative evaluation will carry 50% weightage while summative evaluation will carry the remaining 50%. The final score will be based on both these performances.

**Formative Evaluation**

Formative evaluation will take into account the performance of the trainee in the practical tests. It is recommended that the programme have a total of two practical tests.



Each Practical Test will define the following:

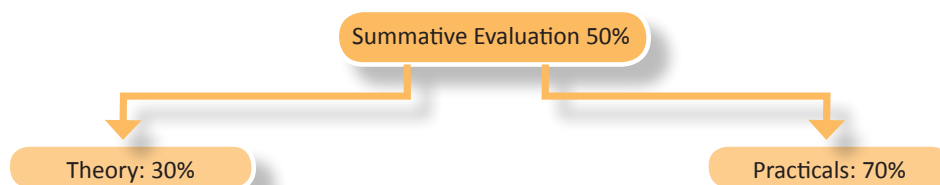
- ◆ Competency to be tested
- ◆ Evaluation parameters (such as speed, productivity norm, behavioural trait)
- ◆ Weightage for each evaluation parameter.

Each trainee's performance will be measured against the evaluation parameters.

The combined weightage for Formative evaluation must total to 50% .

Summative Evaluation

Summative evaluation will comprise of theory and practical tests.



Summative evaluation carries the remaining weightage of 50%,

Enter the marks for each trainee in the **Overall Assessment Sheet** provided for at the end of this booklet.

Grading Methodology

The evaluation will be a combination of two types - Formative evaluation and Summative evaluation. Formative evaluation is an on-going evaluation to check the progress of learning whereas Summative evaluation is for grading purposes.

In brief

Formative Evaluation

Type of Test	Number of Tests	Marks
Practical	2	50
Total Marks		50

Practical	Marks / Test	Weightage / Test	Marks Secured by Trainee
1	100	20	(Marks *20)/100
2	100	30	(Marks *30)/100
Total Marks in Practicals			M1

Marks secured from Formative Evaluation = M1

Summative Evaluation

Type of Test	Number	Marks	Marks Secured
Theory	1	30	X
Practical	1	70	Y
Total Marks		100	(X+Y)*50/100 = M2

Marks secured from Summative Evaluation = M1 + M2

Final Grading

Marks from Formative and Summative Evaluations	Grade
$M1+M2 \geq 85$	A
$M1+M2 \geq 70$ but <85	B
$M1+M2 \geq 50$ but < 70	C
$M1+M2 < 50$	D

Day 10

Time : 7 hours

Practical Test 1

Test Objective

To assemble a Computer and test the assembly.

Notes for Facilitation

Inform the participants about the test at least two days in advance.

Participants will be given the following

Tools	Magnetic Screwdriver
	Normal Screwdriver
	Screws
	Cleaning brush
	Cleaning cloth
Raw Materials	Spike guard with power sockets (as per hardware components)
	Computer cabinet with rear panel
	SMPS
	Monitor
	Keyboard
	Mouse
	Processor
	Motherboard
	CPU fan assembly
	Hard disk drive and cables (preferably SATA)
	CD ROM drive and cables (preferably SATA)
	Speakers
	Webcam
	Printer or Scanner (give each participant any one component)

Competencies to be Tested

Evaluation Parameter	Measurable Norm	Marks/Parameter
Assembling the SMPS	Time taken, Neatness of assembly	5
Attaching CPU and motherboard to the cabinet	Time taken, Neatness of assembly	30
Connecting the optical drives	Time taken, Neatness of assembly	10
Connecting the monitor, keyboard, mouse, speakers, webcam	Time taken	15
Connecting the printer or scanner	Time taken	5
Using the appropriate tool correctly		10
Overall time taken	Time taken	15
Overall neatness (Screws correctly fitted, wires properly tied up, use of silica gel)	Neatness of assembly	10
Total		100

Day 18

Time : 7 hours

Practical Test 2

Test Objective

To assemble a Computer, install OS, install drivers, and test the assembly.

Notes for Facilitation

Inform the participants about the test at least two days in advance.

Participants will be given the following

Tools	Magnetic Screwdriver
	Normal Screwdriver
	Screws
	Cleaning brush
	Cleaning cloth
	Driver CDs for various components
Raw Material	Spike guard with power sockets (as per hardware components)
	Computer cabinet with rear panel
	SMPS
	Monitor
	Keyboard
	Mouse
	Processor
	Motherboard
	CPU fan assembly
	Hard disk drive and cables (preferably SATA)
	CD ROM drive and cables (preferably SATA)
	Speakers
	Webcam
	Printer or Scanner (give each participant any one component)

Competencies to be Tested

Evaluation Parameter	Measurable Norm	Marks / Parameter
Assembling the computer	Time taken, Neatness of assembly	20
Installing of OS	Time taken	30
Installing of drivers	Time taken	15
Testing the assembly	Time taken	10
Using the appropriate tool correctly		5
Overall neatness (Screws correctly fitted, wires properly tied up, use of silica gel)	Neatness of assembly	5
Overall time taken	Time taken	15
Total		100

Summative Evaluation

Time : 45 minutes

Day 27

Theory Test

Test Objective

Theory test

Notes for Facilitation

- ◆ Inform the participants about the test at least two days in advance.
- ◆ Make as many copies of the question paper as the number of participants.
- ◆ Have at least 5 extra copies in case of emergency.
- ◆ The Question Paper has 30 questions to be answered.
- ◆ Each question carries 1 mark; Total marks = 30.
- ◆ The participants must tick against an option to answer the question.

Participants will be given the following

Tools	Assessment Question Paper Assessment Answer Paper Pencil Rubber
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Question Paper 1

1. *What is a CPU?*
 - a. Central and Processing Unit
 - b. Core Processor Unit
 - c. Central Power Unit
 - d. Control and Processing Logic Unit

2. *Which of the following statements is false?*
 - a. The webcam is an audio visual device.
 - b. The webcam must ideally be placed on the table.
 - c. The webcam records videos and images.
 - d. All webcam models can be installed to any computer system.

3. *How many bits make a byte?*
 - a. 10 bits
 - b. 4 bits
 - c. 8 bits
 - d. 24 bits

4. *Which of the following commands will you follow while using Windows XP Recovery Console?*
 - a. BOOTCGF
 - b. BOOTCCF
 - c. BOOTCFG
 - d. BOOTCFE




5. *Arrange the following ribbons of an RJ 45 connector in the correct sequence. Write your answers in the blank space.*

a. White Brown	<hr style="border: 0.5px solid #0056b3;"/>
b. Solid Green	<hr style="border: 0.5px solid #0056b3;"/>
c. Solid Brown	<hr style="border: 0.5px solid #0056b3;"/>
d. Solid Orange	<hr style="border: 0.5px solid #0056b3;"/>
e. White Orange	<hr style="border: 0.5px solid #0056b3;"/>
f. White Green	<hr style="border: 0.5px solid #0056b3;"/>
g. White Blue	<hr style="border: 0.5px solid #0056b3;"/>
h. Solid Blue	<hr style="border: 0.5px solid #0056b3;"/>

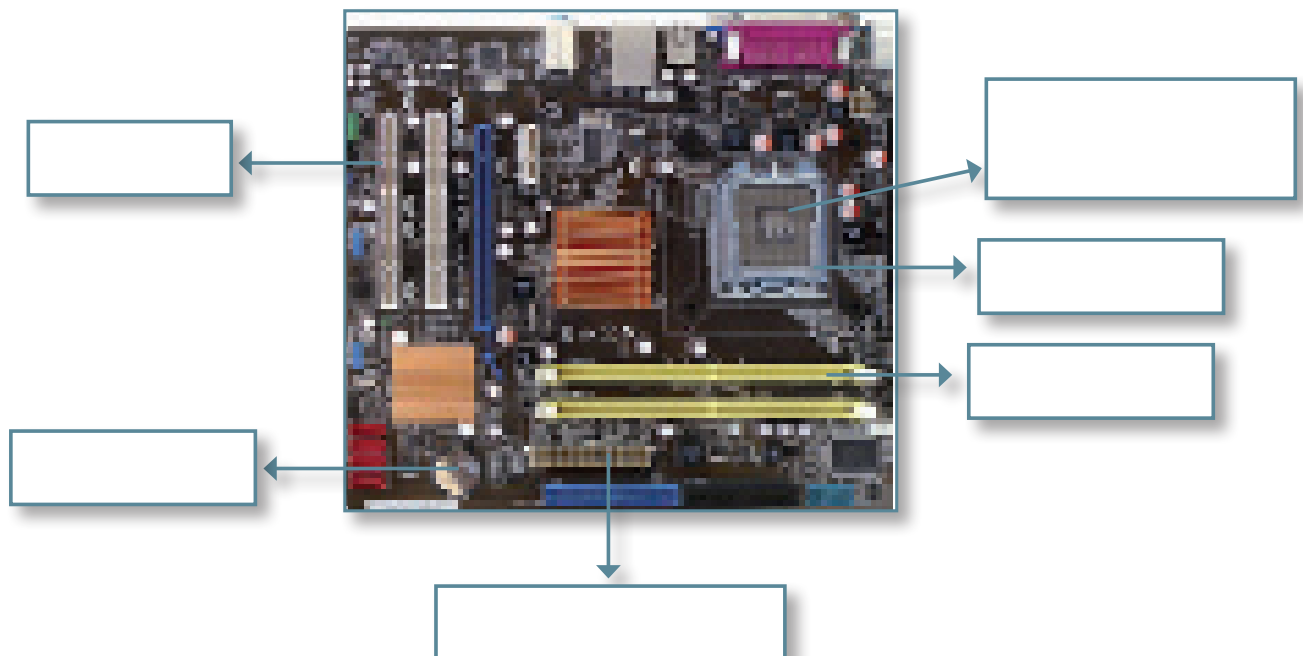
6. *Which architecture is ideal for large databases?*
 - a. Client server architecture
 - b. Peer to peer architecture
 - c. Client to client architecture
 - d. Centralised server architecture
7. *What is BIOS?*
 - a. Basic Input/Output Service
 - b. Basic Input/Output System
 - c. Base Input/Output Service
 - d. Base Input/Output System
8. *Why is partitioning of the hard disk important?*
 - a. To store OS
 - b. For virus protection
 - c. To save user data from getting lost
 - d. To protect OS from viruses
9. *Which of the following is not a driver?*
 - a. Network card driver
 - b. Windows XP driver
 - c. Chipset driver
 - d. Sound driver
10. *At the start of Windows 7 installation, the computer must boot from?*
 - a. Hard Disk drive
 - b. SMPS
 - c. Optical drive
 - d. On/Off Power button
11. *Which of the following softwares is a Word Processor?*
 - a. Internet Explorer
 - b. Microsoft Word
 - c. Microsoft Paint
 - d. Microsoft Excel

12. *What is a driver?*
- a. A program designed to translate the functions of a particular device installed on the system.
 - b. A program that handles the file system of the computer.
 - c. A program used by the operating system.
 - d. A program that instructs the BIOS to check the CD-ROM as the first option to boot up the computer.
13. *Which component is the deciding factor when you buy a computer?*
- a. Size of the motherboard
 - b. Type and speed of the processor
 - c. Shape of the cabinet
 - d. Number of CPU fans a cabinet can accommodate
14. *Which of these is NOT a HDD type?*
- a. IDE
 - b. SATA
 - c. USB
 - d. BDs
15. *If a UPS battery supplies 2 amperes of power for 7 hours, what will be the battery capacity of the UPS?*
- a. 7AV
 - b. 2 AV
 - c. 14 AV
 - d. 14 Ah
16. *Booting the computer means:*
- a. Starting the computer
 - b. Restarting the computer
 - c. logging on the computer
 - d. Logging off the computer
17. *Which of the following is NOT part of the motherboard?*
- a. Processor socket
 - b. Chipset
 - c. Heat sink
 - d. AGP slots

18. Identify each type of mouse.

<p>a.</p> 	<p>b.</p> 	<p>c.</p> 
<p>_____</p>	<p>_____</p>	<p>_____</p>

19. Identify the marked parts of the motherboard.



20. Which of the following computer problems may NOT be due to the improper functioning of RAM?

- Computer hangs while in use
- Computer does not boot
- Burning smell from the computer cabinet
- Computer randomly shuts down

21. What could be the problem if videos and animations do not work correctly?

- Corrupt graphic controller/Card driver
- Loose data cable
- Faulty power cord
- Loose graphic card

22. *A client complains that his monitor does not switch on. Which of the following could be the possible cause for this problem?*
- a. Wrong display settings
 - b. Faulty graphic card
 - c. Faulty monitor unit
 - d. Faulty driver
23. *What could be the cause, if the printer output is faded, jams on a regular basis or prints a line down the page?*
- a. Ink or toner cartridge problem
 - b. Dirt on printer
 - c. Printer unit could be faulty
 - d. Printer driver
24. *If a drive does not eject the disc, it is due to which of these following problems?*
- a. Driver problem
 - b. Power supply problem
 - c. Disk problem
 - d. CD/DVD lens problem
25. *If the inserted CD is not detected, which of the following options will you check?*
- a. Drive lens
 - b. Power connection
 - c. Optical drive drivers
 - a. Faulty disk
26. *In case of a failed internet connection, you will check for:*
- a. Firewall
 - b. Hub network and adapter
 - c. Registry
 - d. Cable
27. *The possible cause for not being able to access websites is:*
- a. Incorrect workgroup permissions
 - b. Connection problem
 - c. Firewall blocking the browser problem
 - d. Failed Internet connection

28. *Which of the following statements is false?*

- a. A scanner comes along with cables such as a USB cable and a power cord.
- b. One end of the cable is connected to the power port of the scanner and the other end is attached to the USB port of the system unit.
- c. The power cord contains a power adapter which is directly attached to the power port on the scanner.
- d. The scanner can be connected to both the front and back USB ports.

29. *Which two details are displayed in the starting screen during boot?*

- a. RAM speed
- b. Storage capacity
- c. Monitor resolution
- d. Operating system details

30. *What is the function of the silica gel?*

- a. Unclutter the wires
- b. Absorb dust
- c. Absorb heat
- d. Absorb moisture

Answer Paper 1

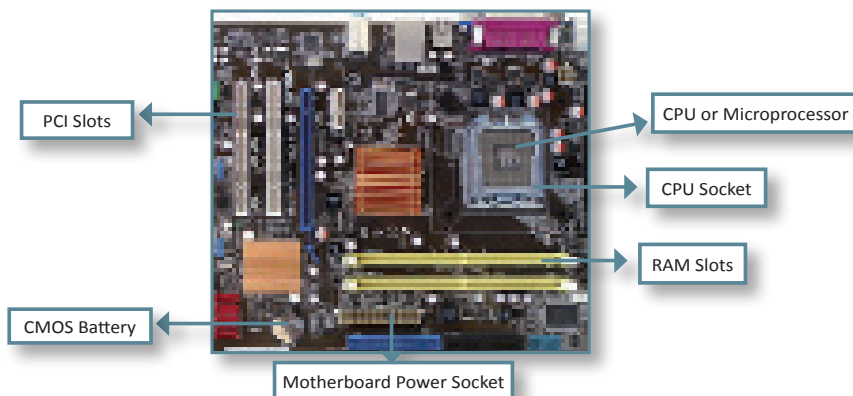
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 - c. **White Green**
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 - e. **White Blue**
 - f. **Solid Green**
 - g. **White Brown**
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 - Chipset
 - Heat sink**
 - AGP slots
18. *Identify each type of mouse.*

a.		b.		b.	
	Wireless Mouse		USB Mouse		PS/2 Mouse

19. *Identify the marked parts of the motherboard.*



20. *Which of the following computer problems may NOT be due to the improper functioning of RAM?*
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 - b. **Power connection**
 - c. **Optical drive drivers**
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- a. **RAM speed**
 - b. **Storage capacity**
 - c. Monitor resolution
 - d. Operating system details
30. *What is the function of the silica gel?*
- a. Unclutter the wires
 - b. Absorb dust
 - c. Absorb heat
 - d. **Absorb moisture**

Day 27

Final Practical Test

Assemble a Computer as per the requirement.

Test Objective

To test whether the participant is able to identify and assemble the correct components according to the specified requirements.

Notes for Facilitation

You will have to prepare a requirement list for each participant. The requirement list will contain both hardware and software specifications.

The test can be made complex, wherein the you will act as a client and the participant will ask you questions to get the correct specifications list. The list can contain constraints like price, availability of components.

Participants will be given by default

Tools	Magnetic Screwdriver Normal Screwdriver Screws Cleaning brush Cleaning cloth Driver CDs for various components
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Participants will have to procure the following raw material from a hardware pool.

Raw Material	Spike guard with power sockets (as per hardware components) Computer cabinet with rear panel SMPS Monitor Keyboard Mouse Processor Motherboard CPU fan assembly Hard disk drive and cables CD ROM drive and cables Speakers Webcam Printer or Scanner Software CDs
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Competencies to be Tested		
Evaluation Parameter	Measurable Norm	Marks / Parameter
Gathering the correct components		10
Assembling the computer	Neatness of assembly, Time taken	15
Software installation (OS, drivers, specified softwares)	Time taken	10
Used the appropriate tool correctly		5
Overall neatness (Screws correctly fitted, wires properly tied up, use of silica gel)	Neatness of assembly	5
Neatness of workplace where the assembly was performed.	Neatness	5
Testing the assembly	Accuracy	10
Overall time taken	Time taken	10
Total		70

Overall Assessment Sheet

Time : 6 hours

Tr. no	Name of the Participant	Formative Evaluation		Summative Evaluation		Total Marks	Grade
		Practical 1 (20 marks)	Practical 2 (30 marks)	Final Theory (30 marks)	Final Practical (70 marks)		
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IL&FS Skills Development Corporation Limited

(A Joint Initiative with National Skill Development Corporation)

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