

BUSTA 1

PROVA ORALE - MACRO AREA MECCANICA

Quesito 1

In the design process, there are specified the nominal dimensions and tolerance ranges for various characteristics of the parts. The tolerance range is specified so that the part fulfils its functional role within the assembly which is part of. For manufactured parts, it is checked whether the range of variation of a considered characteristic (linear dimension, angular dimension, etc.) is within the specified range.

IOP Conf. Series: Materials Science and Engineering 1256 (2022) 012003


doi:10.1088/1757-899X/1256/1/012003

Quesito 2

Descrivi le principali funzionalità di Microsoft Word.

Quesito 3

La prova di trazione monoassiale.

The image shows a handwritten signature in black ink, which appears to be 'Man Bus', and a blue mark that looks like the letters 'PC' written in a cursive style.

BUSTA 2

PROVA ORALE - MACRO AREA MECCANICA

Quesito 1

Tolerance analysis is a process of obtaining numerical or statistical information which allows decisions to be made about changes in geometry, dimensions, and tolerances to be applied to components of an assembly, or the manufacturing or assembly process. There is a lot of research in the field of Tolerance and stack-up analysis.

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Quesito 2

Cos'è un sistema di backup e perché è importante per la protezione dei dati?

Quesito 3

Prove distruttive sui materiali metallici.



BUSTA 3

PROVA ORALE - MACRO AREA MECCANICA

Quesito 1

A tolerance stack-up analysis allows to determine the tolerance of an element or a closing dimension, to evaluate the possibility of realization and operation of the assembly for extreme tolerances (Worst Case), and to determine the tolerance yield of the parts if the tolerance of the assembly is known, etc.

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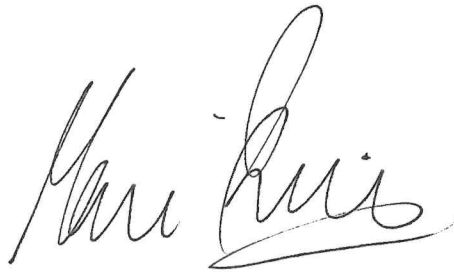
doi:10.1088/1757-899X/1256/1/012003

Quesito 2

Spiega la differenza tra hardware e software con esempi.

Quesito 3

Si descriva un processo di fresatura specificando quali tipi di lavorazioni/operazioni possono essere ottenute con questo tipo di processo.

A handwritten signature in black ink, appearing to read 'Maurizio'.Handwritten initials 'rc' in blue ink.

BUSTA 4

PROVA ORALE - MACRO AREA MECCANICA

Quesito 1

As the part does not require the indication of limiting deviations that would influence the functionality, the first version of the part drawing does not indicate the tolerance for the 35 mm size. For non-tolerated dimensions according to ISO2768 medium tolerance class, the 35mm size has a tolerance of ± 0.3 mm, which is within the tolerance grade IT 14 (0.62mm).

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doi:10.1088/1757-899X/1256/1/012003

Quesito 2

Descrivi il processo di creazione di una presentazione in Microsoft PowerPoint.

Quesito 3

Si descriva il processo di tornitura e le principali lavorazioni meccaniche/operazioni che possono essere eseguite con questa macchina.

The image shows two handwritten signatures. The first is a large, stylized signature in black ink, possibly reading 'Gianluigi'. The second is a smaller, more compact signature in blue ink, possibly reading 'R'.

BUSTA 5

PROVA ORALE - MACRO AREA MECCANICA

Quesito 1

In the context of production, various characteristics of a part (linear dimensions, angular dimensions, mutual position of surfaces, etc.) have certain deviations from the values indicated in the technical drawings due to several influencing factors: manufacturing process, operator, ambient conditions, wear of work equipment, condition of checking instruments, etc.

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doi:10.1088/1757-899X/1256/1/012003

Quesito 2

Come si crea un grafico in Excel e quali tipi di grafici sono disponibili?

Quesito 3

Le tolleranze dimensionali e le tolleranze geometriche.

A handwritten signature in black ink, followed by the initials 'rc' written in blue ink.

BUSTA 1

PROVA ORALE - MACRO AREA ELETTRONICA

Quesito 1

The key component of power converters is the power semiconductor device, also called power electronic device. Different from the semiconductors used in the electronic field, power electronic devices generally have larger rated values of current and voltage.

<https://doi.org/10.1016/B978-0-323-99541-2.00012-0>

Quesito 2

Cos'è Microsoft Office e quali applicazioni principali comprende?

Quesito 3

Il diodo.

The image shows two handwritten signatures. The first is in black ink and appears to be 'G. P. M.'. The second is in blue ink and appears to be 'R. C.'.

BUSTA 2

PROVA ORALE - MACRO AREA ELETTRONICA

Quesito 1

The half-controlled devices mainly refer to thyristors, in which the turn-on event is controllable while the turn-off is not. The fully controlled devices refer to the three-terminal semiconductors in which the control terminal can determine both the turn-on and turn-off states.

<https://doi.org/10.1016/B978-0-323-99541-2.00012-0>

Quesito 2

Descrivi i componenti principali di un computer.

Quesito 3

Condensatori in serie e in parallelo.

Handwritten signature and initials in blue ink. The signature is a cursive name, and the initials are 'PC'.

BUSTA 3

PROVA ORALE - MACRO AREA ELETTRONICA

Quesito 1

Power electronic devices are the key components of power electronic converters. To implement accurate simulation of converters the behaviors of the power electronic devices should be modeled with sufficient accuracy.

<https://doi.org/10.1016/B978-0-323-99541-2.00008-9>

Quesito 2

Descrivi le principali funzionalità di Microsoft Excel.

Quesito 3

Leggi di Kirchhoff.

Handwritten signature in black ink, followed by initials 'PC' in blue ink.

BUSTA 4

PROVA ORALE - MACRO AREA ELETTRONICA

Quesito 1

Diodes can be used for ESD protection in many different ways: either in forward or reverse conduction modes, as well as acting as a single device or diode networks. Naturally, a bipolar junction transistor (BJT) may be considered as a promising candidate for ESD protection[...]

10.1109/EMC-B.2017.8260474

Quesito 2

Come si crea e si formatta un documento in Microsoft Word?

Quesito 3

Generatori ideali e reali di tensione.



BUSTA 5

PROVA ORALE - MACRO AREA ELETTRONICA

Quesito 1

One of the fastest-growing energy generation processes with considerable ecological and economic relevance is the use of solar radiation through the photovoltaic (PV) effect. The core concept operating in conventional solar cells based on semiconductors (SC) uses a collector with a band gap (E_g) of ~ 1.4 eV [...].

<https://doi.org/10.1016/j.apmt.2024.102465>

Quesito 2

Spiega come utilizzare le formule e le funzioni in Microsoft Excel.

Quesito 3

Resistenze in serie e in parallelo.

Handwritten signature in black ink and initials 'RC' in blue ink.