

Read the following text, and then answer the questions.

The Most permanent contribution of an optimization study may well be qualitative rather than quantitative. These problems may be classified based on the nature of the objective function and the system constraints. Optimization problems on the other hand, are classified on the basis of whether or not they involve constraints on the decision variables. Obviously the unconstrained problems are easier to solve than the constrained ones. The unconstrained problems are further classified based on whether the objective function involves one or several design variables. Basically there are two important classes of methods for solving the unconstrained problems. These methods are the direct search and the gradient-based methods. An important class of constrained optimization problem is linear programming which requires both objective function and the constraints to be linear functions. Although the linear programming models are widely used and accepted in practice, the nonlinear programming models are the most general kinds of the optimization problems.

Now choose a, b, c or d which best completes each item.

۱. The most important contribution of an optimization study may be

- | | |
|-----------------|--|
| a. quantitative | b. both quantitative and qualitative |
| c. qualitative | d. neither quantitative, nor qualitative |

۲. The classification of optimization problems may be based on the nature of

- | | |
|-----------------------------|---------------------------|
| a. the direct search method | b. the objective function |
| c. the system constraints | d. both b and c |

۳. The most general optimization problems are generally grouped under

- | | |
|------------------------------|---------------------------|
| a. the nonlinear programming | b. the linear programming |
| c. the analytical forms | d. no analytical forms |

۴.....determines the classification of the unconstrained problems.

- a. the amount of the objective functions
- b.the variables of the objective function
- c.the constraints
- d.the linearity or nonlinearity of the objective function
- ۵.In the linear programming

- a. the objective function is linear
- b. there is no constraints
- c. the constraints are linear
- d. both the objective and constraints are linear

Read the following text, and then answer the questions.

The term 'data' and 'information' are sometimes used interchangeably, although some consider them to be different concepts. In general, data are objective, whereas the nature of information is different and exists only when it is relevant to a recipient. Data processing systems are systems that manipulate data to produce other data or information. In such systems different types of operations like recording, classifying, storing, calculating, summarizing, retrieving, reproducing and distributing may be performed. Encoding data on events or transactions by major types is called classifying, while identifying and transcribing data about events or transactions is named recording. When we arrange transaction data and related calculations into report format, we summarize them and when we hold transaction data temporarily or permanently we are storing them. Retrieving data is another performance in which file searching or scanning of stored data is occurred to perform additional calculations or update data on file. Reproducing is another performance in which printing and developing reports are done and finally moving reports to users of information is called distributing.

Now choose a, b, c or d which best completes each item.

۶.Printing reports such as sales performance reports or materials status reports are identified

as.....

- a. recording
- b. reproducing
- c. summarizing
- d. storing

v. Moving reports to users such as sales performance reports to sales manager is categorized as.....

a. distributing b. retrieving c. calculating d. summarizing

۸. In general data is objective, whereas information is.....

a. interchangeable b. symbolic
c. subjective d. informative

۹. Arranging transaction data into report format for example developing a sales performance report for each sales person is called

a. calculating b. storing c. summarizing d. retrieving

۱۰. When we encode data by major types for example material purchases by type of material, we..... these data.

a. classify b. store c. summarize d. record

Fill in the blanks with the most appropriate word.

Quality control circles were refined and popularized in.....(۱۱)..... to improve product

quality, with raising.....(۱۲)..... a high-order goal. Worker involvement in resolving quality problems and

dedication to solving production difficulties are continually stressed. A commonly

accepted.....(۱۳)..... of a quality control circles is a small group of(۱۴)..... who

perform similar or related work and who meet voluntarily to solve workplace-related problems. Quality

control circles are highly oriented to production and operations, with sharp attention

to.....(۱۵)..... results Quality control circle use(۱۶)..... developed many years ago by

industrial engineers, such as motion.....(۱۷)....., work simplification, and other refined,

analytical methods and(۱۸)..... techniques.

Quality control circles usually highly structured within a(۱۹)..... with committees leaders, and

specialists.

۱۱.

a. England b. Germany c. America d. Japan

۱۲.

a. efficiency b. automation c. effectiveness d. both a and c

۱۳.

a. problem b. definition c. operation d. technique

۱۴.

a. top managers b. suppliers c. middle managers d. employees

۱۵.

a. bottom-line b. corporate level c. company level d. both a and b

۱۶.

a. something b. practices c. routines d. problems

۱۷.

a. study b. management c. strategy d. organization

۱۸.

a. improvement b. improving c. improved d. improves

۱۹.

a. cell b. organization c. company d. both b and c

In this part, you are asked to find appropriate Persian equivalents for given English terms and expressions, and to find appropriate English equivalents for given Persian terms and expressions. For Each question, choose a, b, c or d which corresponds your answer and mark it on your answer sheet.

۲۰. unitary whole

الف. كل واحد ب. واحد كلى ج. كل يکپارچه د. گزينه هاى الف و ج

۲۱. quality assurance

الف. بهبود کيفيت ب. تحليل کيفيت ج. تضمين کيفيت د. سنجش کيفيت

۲۲. hierarchy

الف. تنوع ب. زنجيره ج. سلسله مراتب د. تعامل

۲۳. cyclical influences

الف. اثرات دوره اى ب. تاثير هميشگى ج. دوره هاى تاثير د. تاثيرات کلينىکى

۲۴. unconstrained optimization problems

الف. بهينه سازى مسايل بدون هيچ محدوديتى ب. مسايل بهينه سازى بدون محدوديت

ج. حذف محدوديت مسايل بهينه سازى د. بهينه سازى مسايل محدوديت دار

۲۵. بالا پايين

a. down top b. bottom up c. high down d. top down

۲۶. تغييرات خيلى زياد

a. very variations b. substantial variations
c. much variations d. both a and c

۲۷. پردازش دستى داده ها

a. manual processing data b. manual data processing
c. processing manual data d. data processing manual

تعداد سؤالات: تستی: ۳۰ تشریحی: --

زمان آزمون (دقیقه): تستی: ۶۰ تشریحی: -

نام درس: زبان تخصصی

رشته تحصیلی / کُد درس: مهندسی صنایع «سنتی - چند بخشی» - ۱۲۱۲۱۶۲

۲۸. بخش بددی کردن

- a.segmenting b.screening c.dividing d.distributing

۲۹. تحلیل حساسیت مسئله

- a.problem sensitivity analysis b.analyzing sensitivity problem
c.sensitivity problem analysis d.analyzing problem sensitivity

۳۰. ابتکاری

- a.heuristic b.deterministic c.quadratic d.optimistic

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