higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

DRAWING OFFICE PROCEDURES AND TECHNIQUES

(First paper)

NQF LEVEL 4

17 November 2022

This marking guideline consists of 5 pages.

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QUESTION 1: PLANNING AND SCHEDULING WORKFLOW

1.1
1.1.1 True √
1.1.2 True √
1.1.3 True √
1.1.4 False √
1.1.5 True √

(5 × 1) (5)

1.2
- Internal paperwork. √
- Numbering of drawings and contracts. √
- Coding of parts and assemblies. √
- Production planning for component manufacture. √
- Quality control and inspection. √
- Updating, modification and reissuing of drawings. √ (6)

1.3
- To keep track of changes. √
- The drawings also become the foundation for future projects. √
- Future cost savings for customers. √
- To re-use old parts of a drawing. √
- To provide future online historical knowledge. √ (5)

1.4
- Managing. √
- Operating. √
- Supporting. √ (3)

1.5 Work plan – This is a standard format form or chart √ for recoding an agreed listing of the tasks √ to be carried out by an individual or department. √ (3)

1.6 Workflow – Is a repeatable process that consists of a series of tasks√ that generally need to be completed √ in a specific sequence. √ (3)

[25]

QUESTION 2: DRAWING OFFICE PROJECT ESTIMATING AND PLANNING

2.1
2.1.1 C √
2.1.2 A √
2.1.3 E √
2.1.4 B √
2.1.5 D √

(5 × 1) (5)

2.2 Fixed costs are business costs, such as rent, that are constant whatever the amount of goods produced. This is because they are not directly associated with manufacturing or delivering a service. √ As a result, fixed costs are considered to be indirect costs. √ (2)

2.3
- Stationery √
- Entertainment √
- Office refreshments √ (3)

2.4
- To communicate and maintain contact with another person or organization throughout the project. √
- Meeting with clients on various occasions to discuss the needs and views of the design. √ (2)

2.5 2.5.1 Fixed overheads.

2.5.2 Invoices and schedules.

2.5.3 Employees.

2.5.4 Service contracts, time sheets and leave forms.

(4 × 2) (8)

[20]

QUESTION 3: PROJECT MANAGEMENT IN A DRAWING OFFICE ENVIRONMENT

3.1 3.1.1 Measurable deliverables are the output of each development phase √ described in a quantifiable way. √

3.1.2 A milestone is a specific point within a project's life cycle √ used to measure the progress toward the ultimate goal. √

3.1.3 A timeframe is a detailed project management timeline of schedule for a project. √ It spells out all of the tasks involved and a deadline for each. √

3.1.4 An activity is typically one stage of a project management plan. √ Each activity consists of one or more actions that, upon completion, will lead to the next. √

3.1.5 Project time management involves analysing and developing a schedule √ and timeline for project completion. √

3.1.6 In project management resources are required to carry out project tasks. √ These can be people, equipment, facilities, funding or anything else. √

(6 × 2) (12)

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3.2
- Planning √
- Organising √
- Leading √
- Coordinating √
- Controlling√ (5)

3.3
- Time √
- Money√
- People √ (3)

3.4 False √ (2)

3.5 A senior person in the organisation that ensures executive support for the business √ and gets approval for the project to proceed. √ (2)

3.6 Once the budget has been prepared, the next step is to monitor √ and control the budget. √ (2)

3.7
- The first consideration for an effective procurement process is ensuring that procurement is completed in a way to keep costs low √ and within budget. √

- The second consideration for an effective procurement process is that it must be conducted to ensure the quality of the goods purchased is of a sufficient standard √ to guarantee that the expected outcome of the project is achieved. √ (2 × 2) (4)

3.8 The purpose of a project plan is to communicate the project clearly to the various stakeholders. √ (2)

3.9 One of the factors that contributes to the success of a project, no matter how big or small, is ensuring that an accurate budget has been prepared before the project is started. √
To be a success, a project needs careful planning, effective communication, and attention to detail. With proper risk management and strong project closure, organisations can create project success. √ (2)

3.10 Project sponsor; project manager; project administrator; project engineer; steering committee; team members. √ (1)

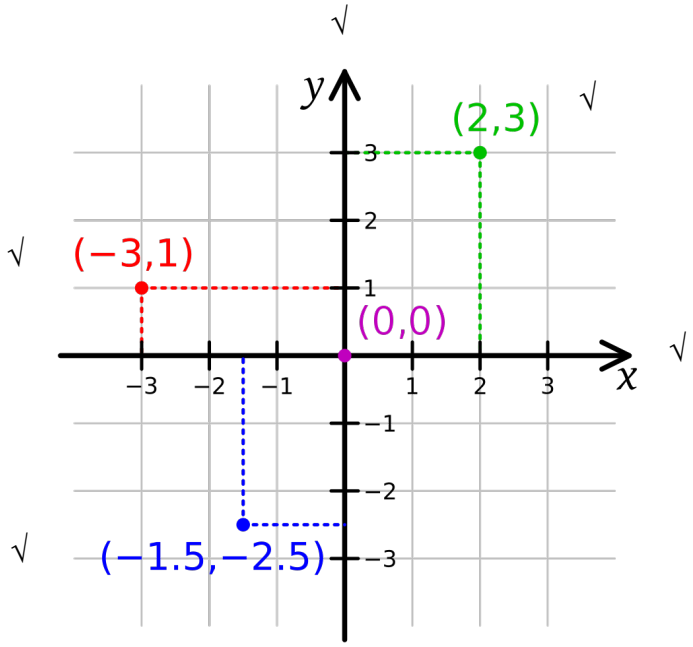
[35]

QUESTION 4: 3D modelling

4.1

- 3D drawing is one of the most commonly used techniques by architects, civil construction professionals, and graphic designers. √
- It allows builders to tackle the geometric elements of height, width, and depth in their 3D projects. √
- 3D drawing relates to or having the three dimensions of length, width, and height. √
- A cube is three-dimensional. √
- It gives the appearance of depth or varying distances. √ (5)

4.2



(5)

4.3

- A 3D workspace consists of a drawing window with a central location ribbon, tool palettes, and other controls that are used to set up an architectural project, create the design, and generate construction documents. √
- The ribbon is the central location for accessing commands in the CAD software. √
- The ribbon is organised into 2 types of tabs that reflect common tasks in the drawing process: √
    - Static tabs are available regardless of which objects are selected in the drawing area. √
    - Contextual tabs display depending on the object selected in the drawing area. √

(5)

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4.4

- It allows builders to tackle the geometric elements of height, width and depth in 3D projects. √
- 3D drawing helps the designers and end users visualise space requirements. √
- It also improves drawing efficiency and accuracy. √
- 3D modelling for design allows the designer to see what they would not see when designing in 2D. √
- Provides for a clear concise communication channel between customer/client/ architect and builder. √ (5)

[20]

TOTAL: 100

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