

A blue geometric graphic consisting of several overlapping triangles and trapezoids, creating a layered, triangular shape that points to the right.

# **Written Assessment Evidence Guides**

**for**

**“Assistant Digger Operator”**

**Level-4**

**(Formative)**

# **Written Assessment Guide**

## **For**

### **“Assistant Operational Supervisor”**

**Level-4**

**Maintain Electrical System of Equipment**  
**(Formative Assessment)**

*6<sup>th</sup>–10<sup>th</sup> September 2021*



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Maintain Electrical System of Equipment</li> <li>• Establish and Maintain the Occupational Health and Safety System</li> <li>• Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Maintain Electrical System of Equipment</li> <li>• Establish and Maintain the Occupational Health and Safety System</li> <li>• Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. What is the use of multi meter?	A. A multi meter is mainly used to measure voltage, current, and resistance.
2. What is the name of device used in starting system?	A. A starter (also self-starter, cranking motor, or starter motor).
3. What are the four types of starting systems?	A. (1) Electric (2) Hydraulic (3) Air Motor (4) Compressed Air Admission.
4. What are the main components of charging system?	A. The charging system has three main components: the alternator, the voltage regulator, and the batteries.
5. What is the purpose of charging system?	A. The charging system keeps a charge in your battery and provides electrical energy for the starting system, lights and other features.
6. What are the Solenoids?	A. Solenoids are electro-hydraulic valves.
7. Define sensors?	A. A sensor is a device whose purpose is to detect events or changes in its environment and send the information to other electronics.
8. What is confined space?	A. It is a space with limited entry and exit which is not suitable for human inhabitants.
9. What is the preferred order of risk control measures from most to least preferred?	A. Hierarchy of control <ul style="list-style-type: none"> <li>a. Elimination</li> <li>b. Substitution</li> <li>c. Engineering control</li> <li>d. Administrative controls</li> <li>e. And personal protective equipment)</li> </ul>
10. What are the three E's of safety?	A. Evaluation, Education, and Enforcement

Question	Candidate's answer
<b>11.</b> What is clarity in communication?	<b>A.</b> Clarity implies emphasizing on a specific message or goal at a time.
<b>12.</b> What are the professional skills for workplace?	<b>A.</b> 1. Communication · 2. Public Speaking · 3. Teamwork · 4. Time Management · 5. Leadership · 6. Flexibility

**Written Assessment Guide**  
**For**  
**“Assistant Operational  
Supervisor”**

**Level-4**

**Maintain Mechanical System of Equipment**  
**(Formative Assessment)**

*6<sup>th</sup>–10<sup>th</sup> September 2021*



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Maintain Mechanical System of Equipment</li> <li>• Establish and Maintain the Occupational Health and Safety System</li> <li>• Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>Maintain Mechanical System of Equipment</li> <li>Establish and Maintain the Occupational Health and Safety System</li> <li>Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. Define the function of Air filters?	A. The air filter prevents any insects, dust, sand or debris reaching the engine through air.
2. Define the function of Oil filters?	B. The oil filter helps remove contaminants from the engine's oil that can accumulate over time as the oil keeps your engine clean.
3. Define the function of Fuel filters?	C. The fuel filter screens dirt and rust particles from the fuel, keeping them from entering the engine and causing damage.
4. What device measures vacuum pressure?	A. Vacuum Gauge
5. What does EGR stands for?	A. Exhaust Gas Recirculation Valve
6. Define exhaust system?	A. An exhaust system is used to remove harmful gases produced in the engine.
7. Define lubrication system?	A. The job of the lubrication system is to distribute oil to the moving parts to reduce friction between surfaces which rub against each other.
8. Enlist the properties of ethylene glycol?	A. Colorless gas at room temperature and pressure Melting point = -169°C. Boiling point = -104°C. Slightly sweet smell. Flammable.
9. Define Radiator?	A. Radiator is the central component of the vehicle cooling system which monitor and regulate engine's temperature and prevent it from overheating.



Question	Candidate's answer
10. Define SOP?	A. A standard operating procedure (SOP) is a set of step-by-step instructions compiled by an organization to help workers carry out routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance.
11. What does OHS stands for?	A. Occupational Health and Safety
12. What are the 4 major functions of communication?	A. Control. Motivation. Information. Emotional Expression.

# **Written Assessment Guide**

**For**

**“Assistant Operational  
Supervisor”**

**Level-4**

**Maintain Hydraulic System of Equipment  
(Formative Assessment)**

*6<sup>th</sup>–10<sup>th</sup> September 2021*



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation Supervisor) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Maintain Hydraulic System of Equipment</li> <li>• Establish and Maintain the Occupational Health and Safety System</li> <li>• Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation Supervisor) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Maintain Hydraulic System of Equipment</li> <li>• Establish and Maintain the Occupational Health and Safety System</li> <li>• Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. What does OLSS stands for?	A. Open Load Sensing System
2. Enlist atleast 5 properties of Hydraulic oil?	A. Viscosity Compressibility Good lubricity Compatibility with system material Fire resistant Heat dissipation capability, etc.
3. What does EDM stands for?	A. Electric Discharge Machining
4. What does TVC Valve stands for?	A. Torque Variable Control Valve
5. What does CO Valve stands for?	A. Cut Off Valve
6. What does NC Valve stands for?	A. Negative Control Valve
7. What does Pascal law state?	A. Pascal's law states that pressure applied anywhere any confined and incompressible fluid is transmitted equally in all directions throughout the fluid.
8. Define Hydraulic circiut?	A. A hydraulic circuit is a system comprising an interconnected set of discrete components that transport liquid.
9. What is a positive health and safety culture?	A. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures

Question	Candidate's answer
10. What are PPE requirements?	A. PPE is equipment that will protect the user against health or safety risks at work. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses
11. What are the 5 good communication skills?	A. Listening Complimenting. Delegating Tasks Clearly. Managing Meetings Positive Verbal and Non-Verbal Communication.
12. What are the 3 A's of fire fighting?	A. Activate, Assist and Attempt

# **Written Assessment Guide**

## **For**

### **“Assistant Operational Supervisor”**

**Level-4**

**Develop a Project Plan**  
**(Formative Assessment)**

*6<sup>th</sup>–10<sup>th</sup> September 2021*



**National Vocational & Technical**  
**Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Develop Preliminary Project Plan</li> <li>• Analyse with Workplace Policy and Procedures</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>Develop Preliminary Project Plan</li> <li>Analyse with Workplace Policy and Procedures</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. Define topographical survey?	A. It measures and identifies the exact location and specifications of natural and human made features within an area of land.
2. What are the contours?	A. Contours are a collection of lines found on maps that show mountains, valleys and landforms
3. If contours are closely spaced what does it mean?	A. Very steep
4. What are the purpose of Reconnaissance survey?	A. To explore site conditions and availability of infrastructures.
5. What is the simplest method of surveying?	A. Chain survey
6. What are the types of feasibility study?	A. Technical Feasibility. Economic Feasibility. Legal Feasibility. Operational Feasibility. Scheduling Feasibility
7. What is technical feasibility?	A. This assessment focuses on the technical resources available to the organization.
8. Define project report?	A. A Project Report is a document which provides details on the overall picture of the proposed business.
9. What is the objective of pre-feasibility study?	A. Pre-feasibility studies investigate whether a concept satisfies the client's objectives.
10. What is cost for contingencies?	A. Take cost for contingencies of total cost (about 3%)
11. What is confined space?	A. A confined space is a space with limited entry and egress and not suitable for human inhabitants



Question	Candidate's answer
<b>12.</b> What are the five key areas of a feasibility study?	<b>A.</b> Technical, economic, legal, operational and scheduling
<b>13.</b> What are the three E's of safety?	<b>A.</b> Evaluation, Education, and Enforcement
<b>14.</b> What is clarity in communication?	<b>A.</b> Clarity implies emphasizing on a specific message or goal at a time.
<b>15.</b> What are the professional skills for workplace?	<b>A.</b> 1. Communication · 2. Public Speaking · 3. Teamwork · 4. Time Management · 5. Leadership · 6. Flexibility

# **Written Assessment Guide**

## **For**

### **“Assistant Operational Supervisor”**

**Level-4**

**Perform Advance Digging/Excavation Operations**  
(Formative Assessment)

*6<sup>th</sup>–10<sup>th</sup> September 2021*



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>Perform Advance Digging/Excavation Operations</li> <li>Analyse with Workplace Policy and Procedures</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>Perform Advance Digging/Excavation Operations</li> <li>Analyse with Workplace Policy and Procedures</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. Define digging/Excavation?	A. The action of excavating or digging in the ground at any site.
2. Define Trenches?	A. A trench is a type of excavation or depression in the ground that is generally long, narrow and deeper.
3. Define Barrow excavation?	A. In this type of excavation, materials like soil or gravel are taken from a “borrow” pit (sometimes called a sandbox) to be used in another location
4. Define Channel excavation?	A. It consists of removing materials from channels, drainage ditches, and so on for one of several purposes, but often to change the flow of water or increase capacity
5. Define Top Soil excavation?	A. This type of excavation is specific to the material, topsoil, consisting of vegetation and the uppermost level of soil.
6. Define Bridge excavation?	A. It typically involves the removal of materials for the footing and abutments of bridges.
7. Define Drainage excavation?	A. It is related to carrying water away from areas and could include ditches, trenches, storm drains, etc.
8. Define SOP?	A. A standard operating procedure (SOP) is a set of step-by-step instructions compiled by an organization to help workers carry out routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance.
9. Define Rock excavation?	A. This type of excavation is often considered more challenging than other types and may require specialised equipment to break up or remove rocks before a project can proceed.

Question	Candidate's answer
10. What are the 4 major functions of communication?	A. Control. Motivation. Information. Emotional Expression.
11. What is Benchmarking?	A. A benchmark is a stake or sign in an out-of-the-way spot that denotes the exact height of the top of the foundation.
12. Define Muck Excavation?	A. This is a type of excavation based on muck (combination of water and soil) which makes an area impassable.

# **Written Assessment Guide**

**For**

**“Assistant Operational  
Supervisor”**

**Level-4**

**Perform 2D &3D Engineering Drawings using  
CAD Software**

**(Formative Assessment)**

**6<sup>th</sup>–10<sup>th</sup> September 2021**



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <ul style="list-style-type: none"> <li>• Perform 2D &amp;3D Engineering Drawings using CAD Software</li> <li>• Establish and Maintain the Occupational Health and Safety System</li> <li>• Perform Advance Communication</li> </ul>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation Supervisor) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time: 30 min</b>		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. Short keys: H O	A. Hatch Offset
2. Short keys: E M	A. Erase Move
3. Short keys: G F	A. Group Fillet
4. Short key: D J	A. Dim style Join
5. Enlist any three types of 3D CAD software?	A. Solid works Auto CAD CATIA Del Cam Auto Desk Inventor Pro Engineer
6. What is file extension of Auto CAD file?	A. DWG file



Question	Candidate's answer
7. What is the difference between 2D and 3D drawings?	A. X and Y axes are use in 2D drawing and X, Y & Z axes are used for 3D drawings.
8. Enlist most common workplace accidents?	A. Slips, trips and falls Being caught in or struck by moving machinery. Transportation and vehicle-related accidents. Fire and explosions. Overexertion and repetitive stress injuries.
9. What is occupational health and hygiene?	A. The definition used by IOHA is: 'Occupational Hygiene is the discipline of anticipating, recognizing, evaluating and controlling health hazards in the working environment with the objective of protecting worker health and well-being and safeguarding the community at large.
10. Enlist the any four types of communication?	A. Verbal Communication. Non-verbal / Interpersonal communication. Written Communications. Formal & Informal. Visual Communication

A blue geometric graphic consisting of several overlapping triangles and trapezoids, creating a layered, triangular shape that points to the right.

# **Written Assessment Evidence Guides**

**for**

**“Assistant Digger Operator”**

**Level-4**

**(Summative)**

# **Written Assessment Guide**

**For**

**“Assistant Operational  
Supervisor”**

**Level-4**

**(Summative Assessment)**

*6<sup>th</sup>–10<sup>th</sup> September 2021*



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) "Assistant Operational Supervisor"	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <b>A-</b> Establish and maintain the occupational Health and safety system <b>B-</b> Perform Advance communication <b>C-</b> Analyse Workplace Policies and Procedures <b>D-</b> Maintain Electrical System of Equipment <b>E-</b> Maintain Mechanical System of Equipment <b>F-</b> Maintain Hydraulic System of Equipment <b>G-</b> Develop Preliminary Project Plan <b>H-</b> Perform Advance Digging/Excavation Operations <b>I-</b> Perform 2D – 3D Engineering Drawings using CAD Software	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
------------------------	--

**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

<b>Title of Qualification:</b> National Vocational Certificate Level 4, in (Digging Operation/Technology) “Assistant Operational Supervisor”	CS Code:	Level: 04	Version: 01
<b>Competency Standard Title:</b> <b>A-</b> Establish and maintain the occupational Health and safety system <b>B-</b> Perform Advance communication <b>C-</b> Analyse Workplace Policies and Procedures <b>D-</b> Maintain Electrical System of Equipment <b>E-</b> Maintain Mechanical System of Equipment <b>F-</b> Maintain Hydraulic System of Equipment <b>G-</b> Develop Preliminary Project Plan <b>H-</b> Perform Advance Digging/Excavation Operations <b>I-</b> Perform 2D – 3D Engineering Drawings using CAD Software	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

#### WRITTEN ASSESSMENT

Question	Candidate's answer
1. Define digging/Excavation?	<b>A.</b> The action of excavating or digging something, especially an archaeological site.
2. Define trenches?	<b>A.</b> A trench is a type of excavation or depression in the ground that is generally deeper than it is wide (as opposed to a wider gully, or ditch), and narrow compared with its length (as opposed to a simple hole or pit)
3. Define barrow excavation?	<b>A.</b> In this type of excavation, materials like soil or gravel are taken from a “borrow” pit (sometimes called a sandbox) to be used in another location
4. Define channel excavation?	<b>A.</b> Channel excavation consists of removing materials from channels, drainage ditches, and so on for one of several purposes, but often to change the flow of water or increase capacity
5. Define SOP?	<b>A.</b> A standard operating procedure (SOP) is a set of step-by-step instructions compiled by an organization to help workers carry out routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance.
6. Define rock excavation?	<b>A.</b> This type of excavation is often considered more challenging than other types and may require specialized equipment to break up and/or remove rocks before a project can proceed.

Question	Candidate's answer
7. What are the 4 major functions of communication?	A. Control. Motivation. Information. Emotional Expression.
8. What is benchmarking?	A. A benchmark is a stake or sign in an out-of-the-way spot that denotes the exact height of the top of the foundation.
9. Define the function of Air filters?	A. Its basic function is to clean the air that circulates through your heating and cooling system.
10. Define exhaust system?	A. An exhaust system is used to guide reaction exhaust gases away from a controlled combustion inside an engine or stove. The entire system conveys burnt gases from the engine and includes one or more exhaust pipes.
11. Enlist the properties of Hydraulic oil?	A. Viscosity Compressibility Wear Resistance Oxidation Stability Thermal Stability Filterability Rust and Corrosion Protection. Foam Resistance
12. What does CO valve stands for?	A. Cut Off Valve
13. Define top soil excavation?	B. This type of excavation is specific to the material, topsoil, consisting of vegetation and the uppermost level of soil.
14. Define bridge excavation?	B. This type of excavation is related to the construction of bridges and centers on removing any materials that might impede the construction of the foundations, substructures, and so on required to support the bridge.
15. Define drainage excavation?	B. Drainage is related to carrying water away from areas and could include ditches, trenches, storm drains, agricultural drainage, drainage for runoff, and so on, as well as any structures related to such drainage.

Question	Candidate's answer
<b>16.</b> Define Muck Excavation?	<b>B.</b> This is a type of excavation based on material, in this case muck, or a combination of water and soil. Specifically, muck includes water and/or soil that is somehow undesirable, perhaps due to contamination of some sort, or maybe just because of the water content, which makes an area impassable.
<b>17.</b> What does Pascal law state?	<b>A.</b> Pascal's law says that pressure applied to an enclosed fluid will be transmitted without a change in magnitude to every point of the fluid and to the walls of the container. The pressure at any point in the fluid is equal in all directions.
<b>18.</b> What are the four types of starting systems?	a. electric, (2) hydraulic, (3) air motor, and (4) compressed air admission
<b>19.</b> What are the main components of charging system?	<b>A.</b> The charging system has three main components: the alternator, the voltage regulator, and the batteries
<b>20.</b> Define sensors?	<b>A.</b> A sensor is a device whose purpose is to detect events or changes in its environment and send the information to other electronics
<b>21.</b> What is the simplest method of surveying?	<b>A.</b> Chain survey
<b>22.</b> What are the three E's of safety?	<b>A.</b> Evaluation, Education, and Enforcement