

071906T4AEN

AGRICULTURAL ENGINEERING TECHNICIAN LEVEL 6

ENG/OS/AGR/CR/06/6/A

Perform Irrigation Activities

Nov/Dec 2024



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICAL ASSESSMENT

OBSERVATION CHECKLIST

Candidate's name & Registration Code			
Assessor's name & Registration Code			
Venue of Assessment			
Date of assessment			
Items to be evaluated: <i>Please award marks as appropriate. Give a brief comment on your observation.</i>	Marks available	Marks obtained	Comments
TASK 1: setting up a centrifugal Pump			
1. Wore the appropriate PPE's. <ul style="list-style-type: none"> • Overall/dustcoat • Gloves • Safety boots / gumboots (Award 1 mark each)	3		

2. Identified the pump model <ul style="list-style-type: none"> Pedrollo <i>(Award 1 mark)</i>	1		
3. Identified pump power rating (horse power) <ul style="list-style-type: none"> 1Hp. <i>(Award 1 mark)</i>	1		
4. Identified pump components <ul style="list-style-type: none"> Impeller Motor Power cables Delivery port Suction port Fans <i>(Award 1 mark each)</i> (Assessor to ask the candidate to identify the pump components)	6		
5. Connected pump as per the SOPs <ul style="list-style-type: none"> To the delivery pipe To the suction pipe Fitted the strainer on the suction pipe Fitted Non-return valve to suction pipe Fitted gate valve on suction pipe <i>(Award 1 mark each)</i>	5		
Subtotal 1	16		
TASK 2: Irrigation Pump priming			
6. Correctly placed the pump at least two meters above the level of the water source <i>(Award 2 marks)</i>	2		

<p>7. Filled the priming port with water until the suction pipe was full.</p> <ul style="list-style-type: none"> • Correctly opened the port • Filled the water in the port • Correctly closed the port <p><i>(Award 1 mark each)</i></p>	3		
<p>8. Connected pump to the power source</p> <ul style="list-style-type: none"> • Correctly fixed the wires • Switched on the power to run the pump • Pump delivered water <p><i>(Award 2 marks each)</i></p>	6		
Subtotal 2	11		
TASK 3: Installing sprinkler System			
<p>9. Gathered all the material needed</p> <ul style="list-style-type: none"> • 4 Sprinkler devices • Pipe fittings • Tool box • Hack saw • Pipes • Pegs • PVC glue • Tape measure <p><i>(Award ½ mark each)</i></p>	4		
<p>10. Assembled the sprinkler</p> <ul style="list-style-type: none"> • Cut riser pipe to the correct length • Fixed sprinkler device on the riser pipe 	2		

(Award 1 mark each)			
<p>11. Determined sprinkler spacing</p> <ul style="list-style-type: none"> • Measured land 6m x 6 m and demarcated with pegs • Determined sprinkler spacing considering overlap of 30cm (5.70m x 5.70m) • Marked on the land the location of the sprinklers <p>(Award 2 marks each)</p>	6		
<p>12. Connected sprinkler to the laterals at an appropriate spacing</p> <ul style="list-style-type: none"> • Cut lateral pipes to the correct length • Correctly laid the lateral pipes on the land • Connected FOUR tee joints to the laterals • Connected the FOUR sprinkler risers to the tee- joints • Supported each sprinkler riser with a post • Tied the sprinkler riser to the post with a rubber band • Closed the ends of the lateral pipes using end plug/cap. <p>(Award 2 marks each)</p>	14		
<p>13. Connected the sub main</p> <ul style="list-style-type: none"> • Measured and cut correct length of submain • Correctly connected the submain to 	6		

the laterals using correct fittings <ul style="list-style-type: none"> • Correctly connected submain to the main line using correct fittings (Award 2 marks each)			
14. Connected the main pipe <ul style="list-style-type: none"> • Measured and cut correct length of the main pipe • Connected the main pipe to the submain pipe using correct fittings • Connected the main pipe to the pump delivery pipe using correct fittings • Connected the pressure gauge using correct fittings (Award 2 marks each)	8		
15. Tested the sprinkler irrigation system <ul style="list-style-type: none"> • Started the pump • Adjusted pressure gauge (Award 1 marks each)	2		
16. Observed safety (Award mark)	1		
Subtotal 3	43		
Total	70		
ASSESSMENT OUTCOME			
The candidate was found to be: <div style="display: flex; justify-content: space-around; align-items: center;"> Competent <input type="checkbox"/> Not yet competent <input type="checkbox"/> </div> (Please tick as appropriate) (The candidate is competent if the candidate obtains at least 70%)			
Feedback from candidate: 			

Feedback to candidate:	
Candidate's Signature	Date
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Assessor's Signature	Date
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