



THE KENYA NATIONAL EXAMINATIONS COUNCIL

SBA ELECTRICITY GRADE 10 SCORING GUIDE

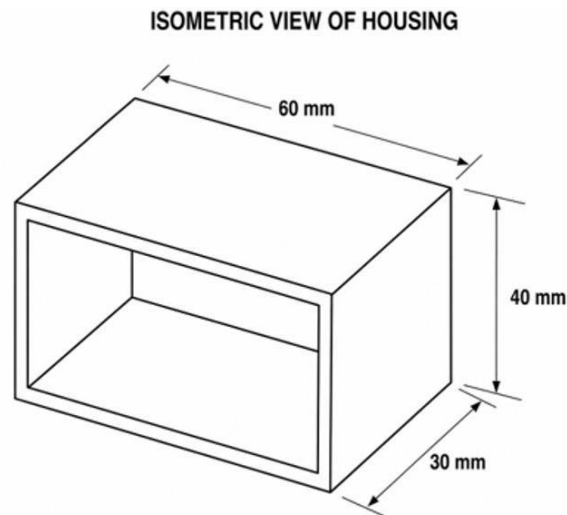
SECTION A

1.B 2.B 3.C 4.A 5.C 6.A 7.B 8.C 9.B 10.C 11.C 12.C 13.A 14.B 15.D 16.A 17.C 18.C 19.C 20.A

SECTION B

No.	Correct Response	Score	Comments
21(a)	Correct isometric sketch showing overall shape, proportions and isometric axes	3	Award 1 mark each for shape, proportions and neat isometric presentation
21(b)	Any two correct visible dimensions labelled	2	1 mark for each correctly labelled dimension
21(c)	Isometric drawing shows the object in three dimensions, making visualization easier	1	Accept any valid advantage
22(a)(i)	Power = $VI = 12 \times 1.2 = 14.4 \text{ W}$	2	1 mark formula, 1 mark answer
22(a)(ii)	Ensures correct component selection and safe, efficient circuit design	1	Accept equivalent response
22(b)(i)	Capacitor Y because it stores more charge	1	Correct capacitor and reason
22(b)(ii)	Capacitor stores charge and discharges gradually to keep the lamp ON longer	2	1 mark storage, 1 mark gradual discharge
23(a)	Measures all electrical energy consumed by the installation; ensures accurate billing by the supply authority	2	1 mark each point
23(b)	Lighting circuit: 1.5 mm^2 ; Socket outlet circuit: 2.5 mm^2	2	1 mark each
23(c)	Service cut-out fuse; provides first protection against excessive current faults	2	1 mark identification, 1 mark reason
24(a)	Provides a low-resistance path for fault current and enables operation of protective devices	2	1 mark each point
24(b)	Any one danger: electric shock, fire hazard, equipment remaining live, failure of protective devices	2	Award full marks for one valid explanation
24(c)	Any two: hammer, screwdriver, hand drill, masonry bit, spanner	2	1 mark each

25(a)	Push-button switch	1	Common source of open-circuit faults
25(b)	Contacts fail to close properly; current cannot flow; bell does not ring	2	1 mark each point
25(c)	Install a second push-button switch in parallel	1	Accept equivalent modification
25(d)	Fuse protects wiring/components and disconnects supply during excessive current	2	1 mark each point



ASSESSMENT RUBRICS-GRADE 10

S/N	Tasks	Maximum Score	Score's Range	Performance Level	Description
1	Fundamentals of Electricity	21	18-21	4	Exceeding Expectation
			10-17	3	Meeting Expectation
			7-9	2	Approaching Expectation
			0-6	1	Below Expectation
2	Electrical Machines	4	4	4	Exceeding Expectation
			3	3	Meeting Expectation
			2	2	Approaching Expectation
			0-1	1	Below Expectation
3	Electrical Installation	22	18-22	4	Exceeding Expectation
			11-17	3	Meeting Expectation
			7-10	2	Approaching Expectation
			0-6	1	Below Expectation
4	Electronics	3	3	4	Exceeding Expectation

			2	3	Meeting Expectation
			1	2	Approaching Expectation
			0	1	Below Expectation

GRADE 10 ELECTRICITY SCORE SHEET

S/ N	Assessment Number	Learner's Name	Task 1	Task 2	Task 3	Task 4
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