KCPE REVEALED
NATIONAL EXAMINATIONS

COMPREHENSIVE MARKING SCHEME

CODE: 002 – 2020

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MATHEMATICS COMPREHENSIVE MARKING SCHEME

1. 47 665 210

Forty seven million six hundred and sixty five thousand two hundred and ten.

(C) - knowledge.

2. The largest = 54210
   Smallest = 10245

   $\overline{43965}$

   A - Comprehension

3. $12 - (196 \div 14) \times 2 + 26$
   BODMAS

   $12 - 14 \times 2 + 26$
   $12 - 28 + 26$
   $12 + 26 - 28$
   $38 - 28$
   $10 \times 2 \ \square \ 20$

   B - Synthesis

4. 499.972
   499.99
   $+0.01$

   $\overline{500.00}$

   D - Comprehension

5. GCD of 48, 60, 72

2	48	60	72
2	24	30	36
3	12	15	18
	4	5	6

   GCD = $(2 \times 2 \times 3) = 12$ L
   = 12L - Comprehension

6.
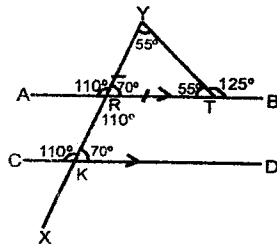
   YTB = $125°$
   A - Analysis

7. 24 workers = 30 days
   1 worker = 24×30 days
   20 workers = $\dfrac{(24 \times 30)}{20}$

   = 36 days
   36 - 30 = 6 more days
   D - Evaluation
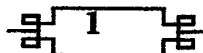
8. P - sh 60000
   T = 2 1/2 years
   I = (68250 - 60000) = 8 250
   I = PRT

   $\overline{100}$
   $8250 = 60000 \times R \times 2.5$

   $\overline{100}$
   $8250 = 600 \times 2 \times R$

   R = $\dfrac{8250}{600 \times 2.5}$
   R = 5 1/2%
   A - Analysis

9. Nj : Mercy
   3 : 1
   Njuguna = 3/4
   $(3/4 \times 20000)$
   sh. 15000
   C - Application

10. Scale = 1 : 50000
    Length = 8 cm
    Width = 5 cm
    Actual = P = 2L + 2W
    = 2 (8+5)
    = 26
    Actual
    $\dfrac{(26 \times 5000)m}{100}$
    = 13 000m
    = 13km
    A - Application

11. No. of poles = $\dfrac{Distance}{Spacing} + 1$

    $\dfrac{3.75 \times 1000}{50} + 1$
    = 76
    B - Evaluation

12. 1/2 of 4 1/2 / 2 1/3 × 7/9 - 2/5
    BODMAS

    $1/2 \times 9/2 = 9/4$
    $9/4 / 21/3 \times 7/9 - 2/5$
    $(9/4 \times 3/7 \times 7/9) \times 3/4$
    $3/4 - 2/5 = \dfrac{15 - 8}{20}$
    = 7/20
    A - Analysis

13. Total = 7354
    Women = X
    Men = X + 1022
    X + X + 1022 = 7354
    2x = 7354 - 1022

    $\dfrac{2x}{2} = \dfrac{6332}{2}$

    Women = 3166
    Men = 3166 + 1022
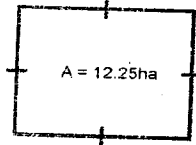
= 4188

C- Analysis.

14. Bars of soap = 120 × 2 1/2 = 300
Sugar = 320 × 11/4 = 600
Flour = 2 × 80 = 160
Rice _____ = 40
Total = sh 900

D - Application

15.

$$A = 12.25ha$$

12.25 * 10000 = 12250m2
Length = 1225000
= 350m
P = 350 *4 = 1400m.
5 strands = (1400×5)m
= 7000m

B - Synthesis

16. Area = 1/2 h (a +b) ×2
= h (a+b)
5(15 + 12)
= 135m2
Area painted (135 *2)
= 270m2

17. M = 12
n = 1/2 × 12 = 6
w = 5
1/2 (2m +nw) n2 + 2m
1/2 (2 ×6+6×5) - 6 + 2 × 12
1/2 (12 +30) - 36 +24

21 36 ÷24
21 + 24 36
= 9

C- Comprehension

18. 70% = 840
30 % = 30 × 840
_____
70
= 360

D - Comprehension

19. Tamara = 1.8min
1 min = 1/8 of the room
Jane = 12 min
1 min = 1/2 of the room
1 min(Both) = 1/2 ×1/8 = 2 + 3
_____
24
1 min = 5 /24 of the room
5/24 = 1min
24 /24 = (24/24 * 1 *24/5
= 4 4/5 min

A - Evaluation

20. Football = 360 - (90 + 36 + 14)
= 360 - 240
=120
120 =18
360 = (360 ×18)
_____
120
= 54 pupils

C - Application

21. 60 km /hr
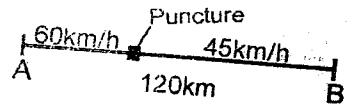
Total Distance = 120 km
Total time = 30 min +30min + time after puncture
Time after puncture = D/S
D = (60 × 1/2) =30km
= 120 -30 = 90km
90 / 45
= 2 hrs
Total time taken = 30min +30min + 2hrs
= 3 hrs
Av. Speed = 120 /3 = 40km/hr

B - Comprehension and synthesis

22. 20 (x - 1 + (3x+ 3) 20 = (11) 20
___   ___   ___
5   4   1
4(x-1) + 5(3x+3) =220
4x-4 +15x+15 = 220
4x +15x+15 -14 = 220
19x +11 = 220
19x = 220 -11
19x = 209
___   ___
19   19
x = 11

D - Analysis

23. Amount of litres = (75 ×6)
= 450 litres
Wednesday be x
Monday = x + 5
x+ x+5+73+80+76= 450
2x+312= 450
2x = 138
___   ___
2   2
Monday = 69
Monday = (69 + 5)
= 74 litres

A - Synthesis

24. S.A =
(22/7 ×14 ×14) + 22/7 ×28 ×30
616cm + 2640cm
= 3256cm

B- Comprehension

25. Food - 25%
Rent - 35 %
Fees - 16%
____
66%
Saving = (100% _ 76%)
=24%
34% = 6000
100% = 100 ×6000
_____
24
sh. 25000

C - Application

26. Speed = 72km/hr
Time taken = 1 min = 1/60hr
D = S *T
D = 72 *1/60
=1.2km   **B - Comprehension**

27. **Procedure**
i) draw line EF =6cm
ii) Measure 60 from T then draw a line.
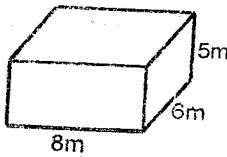iii) Mark point G 7 cm from F
iv) Join G to E
v) Bisect two lines
vi) Using the point of intersection as the centre of the circle, draw a circle touching the vertices.
vii) Measure the radius.
= 3.8cm
D - Synthesis

28. 15 below melting point
= - 15
Rise in temp = 48 -- 15
(48 ÷15)
= 63
C - Comprehension

29.

Area = 5 × 6 × 2 = 60
8 × 5 × 2 = 80
= 140 m
(Exclude the floor and the room)
= 140 -14
= 126m
C - Evaluation

30. Base = 2.5
Area = 2.5 × 2.5
= 6.25
42.25 - 6.25
= 36
height =
= 6 cm
D - Evaluation

31. No of cubes
Cross sectional area height
(21 × 4)
= 84 cubes

32. $\begin{array}{r} 3.20 \\ -8.20 \end{array}$ = $\begin{array}{r} 15.20 \\ -8.20 \end{array}$
$\overline{\quad 7.00 \quad}$
= (7 hrs - 21/2hrs)
= 41/2 hr ÷ 45min
9/2 ÷ 3/4
(9/2 × 4/3) =
6lessons
C - Comprehension

33. Sarah = y
Joseph = 2 y
Hillary = 2y -6
2 years time

Sarah = y +2
Joseph = 2y +2
Hillary = 2y -6+2 = 2y -4
y +2+2y+2+2y-4

y+2y+2y+2+2-4
5y +4-4
=5y
C -Synthesis

34. 45.6 + 0.24 ×7.2 - 4.5
$\overline{\quad 0.36 \times 0.96 \quad}$
45.6 +5 - 4.5 = 46.1
C - Knowledge

35. 2/5 (25x-20) -3 (1/3x +1)
10x -8 -x -3
10x -x -8 -3
9x - 11
C- Comprehension

36. The difference between two consecutive odd numbers is 2
x + x +2 +x +4 = 111
3x +6 = 111
3x = 105
x = 35
B - Analysis

37. Area of the shaded pard = 1/4c - Triangle.
= (1/4 ×22/7 × 14 ×14) - (1/2 ×14 ×14)
= 154cm
A - Comprehension

38. Boys = 2/5
Girls = 3/5
Difference = 1/5
3/5 = 18
1/5 = (1/5 *18*5/3)
= 6
D - Analysis

39. P = sh . 4000
Left = (500-20) = 480
Piles = 480/3 = 160
S.P = (160 *30
sh. 4800
% P = P/B.P ×100
P = 800
= (800 ×100)
$\overline{\quad 4000 \quad}$
=20%
C - Application

40. 1 day = (3 *200) ml = 600ml
January = 31
Feb = 29
Total = 30 days

(60 ×600)L
$\overline{\quad 1000 \quad}$
= 36L   **A - Comprehension**

41. 120% = 10728
100% = (100 *10728)
$\overline{\quad 120 \quad}$
sh. 8940
B - Application

42.

YXZ = 105°
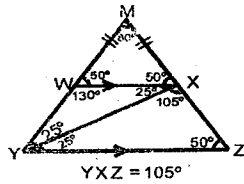
Angle Y ×2 = 105

C - Analysis

43. M.P = 20 000

H.P = (115 ×20000)

$$\overline{100}$$

H.P = sh . 23 000

Total M.I = (1050 *18)

sh. 18900

Deposit = H.P- T.M.I

23000 -18900

=sh. 1100

A - Synthesis

44. 12.5% as a fraction form.

$$12.5 \quad = 125 \quad = 1/8$$

$$\overline{100} \quad \overline{1000}$$

C - Knowledge

45.
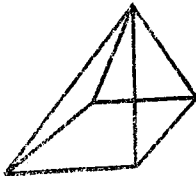
Faces = 5

Vertices = 5

total 10

B- Comprehension

46. 7, 14, 25, 38 , 55, 74

Prime numbers

55 +74 = 129

A - Comprehension

47.
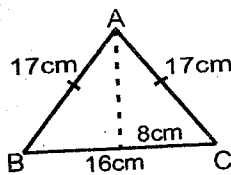
P = 50cm

Base = (50 - 34)cm

= 16cm

area = 1/2 ×b ×h

= (1/2 ×16 ×15)

= 120cm

B - analysis

48. Volume = BA ×height

2 (1/2 ×22/7 × 0.7 × 0.7 × 3)

=2.31m

=2310L

1 L = 10dl

2310L = 2310×10

= 2310dl

D - Synthesis

49. (40bags ×110)

4400kg

Half = 2200

= 2.2t

Lorry = 5.7 - 2.2

3.5t

50. absent pupils

Monday = 5

Tuesday = 2

Wed = 7

Thur = 0

Friday = 5

total 19

Av = 19/5 = 3.8

B - Analysis

No.	Ans	Reasoning and Explaining	Cognitive
1.	D	The determiner 'each' emphasizes every single factor among the many to be considered before deciding, a careerer	Comprehension
2.	C	The question tested opt use of vocabulary play a role means 'contribute to' whereas play a part means 'share in' or 'have a part'.	Evaluation
3.	A	The question tested articles. Since one is choosing one career, 'a' is the most appropriate word to use here.	knowledge
4.	B	Someone is the most correct because it refers to that one person. Somebody is not appropriate because it is informal. Everyone means all. Anyone is used with 'if' and in question and negative sentences.	Analysis
5.	C	Since there is no comparison, we use a positive adverb.	knowledge
6.	A	The person's interest is definitely not going to change, so will is the most appropriate.	Application
7.	D	Here we need a conjunctive adverb that shows results.	knowledge
8.	C	One knows both what they like and what they don't like, not either.	Comprehension
9.	A	It tested apt use of vocabulary. One 'makes' a list.	Evaluation
10.	B	'get into' implies 'get involved in'. One gets involved in an occupation	Application
11.	B	One has no choice but to shorten their list based on nothing but their interests, it is, therefore, obligatory.	Synthesis
12.	A	Of the list one has made, they are advised to pick that occupation which suits them best, that is to say, the most relevant according to their interest.	Comprehension
13.	D	Unlike knowledge that is gained, skills are acquired through training. This tested correct use of vocabulary.	knowledge
14.	C	One is interested 'in' something. Interested 'with' is just a common mistake.	knowledge
15.	D	Since the modal auxiliary verb 'will' has been used in the positive sentence, we form a question tag by negating it.	Analysis
16.	D	Improbably conditions imply that a result has no been got because a condition has not been met. NB: We don't explain improbable conditions using sentences in the past tense.	Comprehension
17.	D	A direct speech in simple past changes to past perfect tense in the reported speech.	knowledge
18.	C	What came first was the blast which was soon after or immediately followed by people scampering to safety. B. is incorrect because of the wrong order of events.	Synthesis
19.	A	'Has' in this case has been used as the main verb. The question tag, therefore, takes the correct form of 'do'	knowledge
20.	B	It was not the case of an accident.	Synthesis
21.	C	Since Daniel made fall, he felled me.	
22.	B	The key is B A. is lacking hyphens in 'hide and seek' C. is lacking an apostrophe in 'it's' D. does not obey the rule of capitalisation of proper nouns.	Analysis
23.	B	The key is B	
	A.	Adjectives are not pluralised, the hyphenated compound adjective hundred -shillings0' should not have an 's' at the end.	
	C.	Reporting verbs/ phrases must start with small letters unless the first word is proper noun.	
	D.	The pronoun 'i' must always be capitalised.	Analysis

Table for question 24 and 25.

Quinter	Miriam	Jacob	Ian		
√	×	×	√	2	English
√	√	√	√	4	SST
×		√	√	2	Maths
×	√	√	×	2	Kiswa
×	√	√	√	3	Science
2	3	4	4		

Synthesis

26.	C	The writer's mother was an embarrassment to him because her mother was handicapped. She was one-eyed. Since her mother donated one of her eyes to him, she has always been one-eyed
27.	B	He asked his mother why she was not having the other eye to show his resentment. Not waiting his mother to go to school is not the main reason being that even after he got a well-paying job his hate for the mother never changed
28.	A	The word 'taunted' as used in the passage means that other pupils were making fun of him. To encourage means to foster, motivate or to give hope.
29.	D	His mother was crying quietly because she never wanted her son to be discover her painful feelings.
30.	D	The phrase ....'there was something pinching at me at the corner of my heart' means that he was feeling guilty of her action.
31.	A	The writer asked the mother she was out of pretence. He knew his mother very well but he was just tying to find a way of keeping her off.
32.	B	He was revealed because he thought that his one-eyed mother could not remember him especially when she said that she might have got the wrong address
33.	C	The writer wanted his wife to know about his background(his one -eyed mother who was embarrassment to him). From this, he decided to lie to his wife that he was going on business trip
34.	C	The writer received the letter when he was still is Seoul
35.	D	When her son lost of his eyes in an accident, out of love, de donated one of her eyes to her son whom she was really proud of.
36.	B	The write was; barbarous - he wished his dead. deceitful - he lied to his wife. intolerant - he could not cope with the condition of the mother. A selfless person is a person who is motivated to help others.
37.	B	The writer's mother wrote a letter to him because she wanted him to know the reason why she was one-eyed. She explains why and how she became one-eyed.
38.	A	The best title for this passage is 'mother's Sacrifice'. Choice D is wrong because the son only deceit his wife.
39.	C	Organisation which is brought about by politics enables a country to work as per specific guidelines
40.	D	The main function of the candidates of the opposition is to question the power. This means that they are policing the government
41.	A	Some of the constituents of dirty politics according to the passage are: i) Spreading fake news (propaganda) ii) Giving provocative speech (incitement)
42.	A	The word 'sexist' as used in the passage means being gender -biased.
43.	B	Ministers usually get away with crime because they feel superior and invincible. They are not actually invincible but it is an act of feeling undefeated.
44.	C	This act of not delivering on the promises is referred to as being dishonest. Disloyal means not demonstrating constant support for someone or something
45.	D	According to the passage the following factors contributes to election of unqualified people into political offices. i) Citizens being gullible - Paragraph 6 ii) Power and money. iii) Insurgent regulations - Minimum education qualifications. Being a citizen is a general factor that is common to all.
46.	D	The word 'badly' has been used in the last paragraph. We needed educated ministers badly in the government. The word 'badly' here means very much.
47.	B	The writer compares uneducated politicians with parasites they are selfish and swindle public resources. They rip where they have not sown
48.	A	The last sentence - All of us must unite to break the wheel and woe for the prosperous future of our country brings out the aspect of optimism.
49.	C	The qualities needed in politicians to spur the grown are being learned and responsible
50.	B	The most appropriate title for this effects of dirty politics . It has severally being mentioned in the passage.

	Jibu	Maelezo	Stadi
1.	A	Neno thatili na dhatili ni vitate.	Ufahamu
2.	D	Mnyambuliko sahihi ni kujitolea, A, B, C, hayajanyambuliwa sahihi.	Matumizi
3.	D	Neno tusiwe hatumika kujamulisha na pia imekanushwa vilivyo.	Ufahamu
4.	B	Bali ni kiunganishi cha kuongeza maelezo zaidi.	Ufahamu
5.	C	Msamiati wa methali huwa haubadiliki kamwe.	Ujuzi
6.	D	Jukumu ni ngeli ya LI –YA , wajibu U-U .	Ufahamu
7.	B	Msamiati sahihi ni imebadilika .	Matumizi
8.	A	Ngeli mwafaka katika wingi ni vielelezo – LI-YA	Ujuzi
9.	A	Msemo tunaolaza damu ndio unaotoa maelezo kamili ya mzungomzaji . B,C,D yana maelezo tofauti.	Ujuzi
10.	C	Matumizi ya ji- mtendaji	Ufahamu
11.	B	Asilani ndilo neon mwafaka linalotilia mkazo wa mneneji. C na D ni viunganishi	Ufahamu.
12.	C	A ni wakati timilifu , B, ni wakati uliopo D ni wakati tegemezi	
13.	D	A – unganifu sahihi ni za inayorejelea wingi katika ngeli husika	Ufahamu
14.	D	Msamiati mbadala B- ni sawa na vitenzi D ni sawa na vihusishi	Ujuzi
15.	A	Alama sahihi ya kuonyesha vitu orodha .	Ujuzi
16.	D	O –rejeshi haikanushwi bali kitenzi kwenye sentensi	Ufahamu
17.	D	A – ni kivumishi cha pekee, B pia ni cha pekee, D haina kivumishi chochote.	Ujuzi
18.	A	Alipika akiimba matumizi ya ki yanaonyesha vitendo viwili vinavyofanyika wakati mmoja.	Matumizi.
19.	B	A- ni wakati uliopita hali ukanusho , B – ni wakati timilifu , D ni wakati wa mazoea	Matumizi.
20.	B	Nomono za wingi mara nyingi huwa ni vitu vioevu/ majimaji.	Ufahamu.
21.	D	Nomino moto huwa tu katika ngeli ya U-U pekee .	Ufahamu
22.	D	A- kitengele pia huitwa kiganja, B, kwapa huwa sehemu ya chini ya bega C, nyongo huwa chini ya kinu wala si juu. .	Ufahamu.
23.	B	A – ni aina ya vimilikishi , C ni viunganishi, D ni vihisishi.	Ufahamu.
24.	C	a e i o u – ni vokali	Ufahamu.
25.	D	Taifa ni neno linalopatikana katika ngeli ya LI-YA	
26.	B	Kinyume mwafaka cha neno chimba ni funika.	Ujuzi.
27.	D	Umeshindaje ni maamkuzi ya wakati wowote	Matumizi.
28.	B	A – kinaashiria mara kwa mara , D pia , licha ya	Ujuzi
29.	C	Uundaji sawa wa maneno . A, cheka nikiteni wala sio sifa , B mwalimu ni nomino , D nyuzi ni nomino.	Ufahamu
30.	A	Vikembe , B ni cha ndege , C na D ni makazi ya wanyama.	Ujuzi
31.	C	Mume hakuwa na nia mbaya kamwe dhidi ya mkewe	Ufahamu
32.	B	Kulingana na mke, wageni watarajiwa walikuwa wa kawaida.	Ufahamu
33.	D	Mkewe hakujali wala kutaka wageni waje kwake.	Ujuzi
34.	A	B – tutendee wenzetu yale tungeweza kutendewa. Matumizi. C – Mabaya tunayowatukia wengine huenda yakatukumba.	
35.	A	A- inamaanisha kuwa ana mtazamo mbadala , yaani akipenda.	Ujuzi
36.	A	A – Kumfumba mtu, B – mfananisho , D- kinyume	Ufahamu
37.	A	Nahau . A – hali ya kujuta	Matumizi.
38.	B	Ukweli ni kuwa mume aliwaheshimu wazazi wa mkewe	Ufahamu.
39.	B	Kisawe cha neno saili ni uliza	Ufahamu
40.	B	Mume alifahamu fika kuwa wazazi wa mke walikuwa wageni	Ufahamu.
41.	C	Kiashi kamili ni ile iliyomo katika jawabu hili kulingana na ufahamu	Ufahamu
42.	C	Kulingana na maelezo ufahamuni maelezo haya ndio sahihi	Ujuzi
43.	D	A B na C ni visawe vya neno fariki	Ufahamu
44.	A	Jawabu hili ndilo lina maelezo sahihi	Ufahamu
45.	C	A – yana maana fiche, B – kutilia chumvi	
46.	B	Tarakimu sahihi kwa herufi ni 22, 473 kulingana na ufahamu.	Ujuzi
47.	D	Methali yenye maelezo sawa na kauli husika	Matumizi.
48.	C	Upungufu wa dawa vipimo visivyofaa ndiyo chanzo kuu cha kifo kulingana na ufahamu.	Ufahamu
49.	B	Kutokana na ufahamu, jawabu hili ndilo lina maelezo ya kweli.	Ufahamu
50.	B	Tunafaa kutafiti kakati kabambwe ya kuzuia maambukizi ya ugonjwa wa nimonia	Ujuzi

No	Ans	Reasoning and Explanation	Cognitive
1.	A	Legal drugs in Kenya includes alcohol, tobacco and khat (miraa). Bhang, cocaine, mandrax and inhalants are illegal drugs in Kenya	Knowledge
2.		**A Incubation stage**	
		A HIV test show positive results.	
		No visible signs	
		The patient can transmit the virus knowingly	
		The patient has no AIDS	
		The patient looks healthy	Synthesis

Symptomatic Stage
A HIV test shows positive results.
Signs begin to show
The patient can transmit the virus
The patient has AIDS
The body's immunity begins to get weaker.

No	Ans	Reasoning and Explanation	Cognitive
3.	D	BCG - At birth only	
		Antipolio at birth, 6, 10 and 14 weeks	
		DPT - 6, 10 and 14 weeks	
		Antimeasles / yellow fever - 9 months	
		Hepatitis	Analysis
4.	D	Interdependence between plants are always in which plants depend on either plants . Plants depend on each other for food, shade, habit and support.	Comprehension
5.	B	**Tap root** legumes like beans, peas, groundnuts abs green grams. Tubers like potatoes, (both sweet and irish) , carrots, cassava and yams. mango, kales, accacia, cabbage and most of the weeds except wandering jew. **Fibrous root** Cereals like maize, millet and sorghum Onions, sugarcane , grass , sisal, banana, coconut and wandering jew.	Evaluation
6.	A	Pollination can still take place even if the anthers are destroyed . This can be through self - pollination (from a different flower with the same plant) or cross pollination. Therefore the ovary will develop into fruit and ovules develop into seeds	Evaluation
7.	C	The above method of separating mixtures is called sieving. It is used to separate solids of different sizes. Rice and sand are of almost the same sizes therefore can be separated by picking	Comprehension
8.	B	The above signs are of typhoid . Water-borne diseases can best be controlled by maintaining high standards of environment and personal hygiene	Synthesis
9.	B	Use of low temperature like freezing and refrigeration make the bacteria inactive	Knowledge
10.	D	Water does not prevent constipation. Constipation is controlled by taking food rich in dietary fibre.	Comprehension
11.	C	Milk pumpkin and kales are rich in vitamins. Mutton (meat) is mainly rich in protein.	Comprehension
12.	D	A blanket is an insulator . It prevents our bodies from losing heat to surrounding . it is in a whichever way not a source of heat from our bodies to provide warmth. Warmth comes from our bodies which needs to be retained by an insulator. (blanket)	Evaluation
13.	A	Heat reaches a boy standing next a burning jiko through radiation . In between there is air but this method of heat transfer does not require the assistance of air. Just like heat from the sun reaches the earth through radiation but it A does not mean that in between is a vacuum.	Evaluation
14.	B	Light does not provide us with warmth.	
15.	A	Cultivating close to a riverbank encourages soil erosion . This soil particles pollute water . Water is conserved through the following ways. a) Harvesting water b) Re -using water c) Recycling water. d) Using water sparingly.	Knowledge
16.	C	A and D - Principle of reflection of light. B - Light travels in a straight line. C- Refraction of light.	Analysis
17.	C	Both ball bearing and a metallic bowl are made of the same material . One Floats and the other one sinks because they are different shaoes.	Comprehension
18.	A	The best procedure is A . D iii, i, ii - When covering the candle with the glass jar, displaced water may topple the burning candle.	
19.	B	Friction force is useful in running, cycling and digging for stability Digging friction improves the grip	Application
20.	D	The diagrams are of a whale(mammal) and a bird. Whales do not lay eggs Both mammals (whale) and birds. a) Breath through lungs. b) have internal fertilisation c) are warm blooded d) Take care of their young ones.	Analysis
21.	C	Both external and internal parasites can be controlled by practicing rotational grazing . It breaks the life cycle of the parasites	Comprehension
22.	A	Dairy cows - mainly milk but also provides us with beef	Comprehension

23.	B	A person who is already infected can best prevent himself from spreading the disease by being isolated and given immediate treatment.	Application
24.	D	It is a fact that HIV/AIDS weakens the body's immunity.	Knowledge
25.	A	Sunflower, cotton, coconut, groundnuts, maize, macadia are some of the oil crops.	Comprehension
26.	B	Physical changes adolescent girls.	

Hips broadens
Hair grows in pubic areas
Breasts enlarge
Pimples may appear on the faces
Production of mature female sex cells
Rapid body growth.

Analysis

27. A Urine is produced in the liver.
The part marked W
Y - (Bladder) Temporarily stores urine.
X - (Ureter) - Transports urine to the bladder
z - (Urethra) - Allows for the passage of urine to the outside.

Knowledge
Comprehension

28. A Pulmonary vein transports oxygenated blood from the lungs to the heart.
29. A When eating sugarcane
Canines - are used for tearing.
Molars and pre molars are used for chewing to extract juice.
Incisors are not used

Comprehension

30. C Compost manure is prepared from any form of organic waste. Farmyard manure - Animal waste and beddings.

Comprehension

31. B The above method tethering - a method of rotational grazing.
Livestock can be fed on any type of feed.

Evaluation
Knowledge

32. C Water and mineral salts are absorbed in the large intestine (colon)
33. A Only solids have definite shape

Knowledge

34. B The mass of an object is measured using a beam balance.
35. D Weight is the gravitational pull experienced by an object.
36. D The two liquids are immiscible

Comprehension

E - Petrol, kerosene, cooking oil or diesel
F - Water, milk, methylated spirit, ink
F is denser than E.

Synthesis
Comprehension

37. Nitrogen gas is used by leguminous plants to make protein.
38. C Major components of the environment are air, water, soil, plants and animals.
39. C Signs and Symptoms of marasmus

Knowledge

Muscles wastage
wrinkles on the skin
Severe loss of weight
The child looks like an old person.
Sores at the corner of the month is a sign of Kwashiokor

Analysis

40. A Materials required when modelling the solar system are
i) Clay /plasticine / candle/ papier mache
ii) Soft board
iii) Manila paper
iv) Name tags
v) Glue
v) Pins / thorns/ pieces of barbed wire.

Synthesis

41. C Direction of sunset -West
The arrow of a windvane point where the wind is blowing from.

Comprehension
Analysis

42. D Clay soil cracks when dry and Sandy soil has best drainage.
43. B Ants, millipedes, snails, slugs and centipede are some of the small animals that live in soil.
44. B Storage pests attack stored crops

Knowledge

Examples are weevils, mite, rodents, weaverbird is a field pest.

Comprehension

45. A Functions of the amniotic fluid.
Prevent the foetus from accidental injuries.
Moistens the foetus.
Allows for free movement
Act as shock absorber.

Analysis

46. A Bicycles dynamo, wind - driven turbines and petrol -driven generators are all types os generator
47. D Spade and fishing road have effort between the load and the fulcrum.
48. B Cooling parts of machine is a use of water in industries.
49. A Rubber band does not allow the electric current to pass through it. It is a poor conductor of electricity.

Comprehension
Comprehension
Knowledge
Knowledge

50. D Desmodium is a leguminous plant that mainly provide the livestock with protein.
It is not a commercial feed.

Comprehension

No	Ans	Reasons and Explanation
1	A	Land slopes from a highland to a low land. Hence South to North East
2	C	Near the saw mill, highland, also presence of tea - Red volcanic soil i.e Tea, Coffee and Pyre thrum.
3	D	The highest point is the place with the highest altitude. This is shown in the map by the source of their River(Near the saw mill)
4	C	Approximate area of the cattle ranch . Draw squares of 1 cm each to cover the area. Count the number of complete squares Make the incomplete squares and add to the previous complete their multiply - (10km)
5	D	Crop farming - Tea Transport - road Trade - Market and Shops Fishing - No fishing evidence.
6	C	The main factor that has influenced the location and growth of Katana town transport activities . It is located at cross roads (junction_
7	C	Saw mills are located near the source of raw materials due to nature /bulkiness of the raw materials . (Near the forest)
8	C	Congo Basin - Bantu Horn of Africa - Cushites Bahrel -Ghazal - Nilotes (Nile valley) Arabian Peninsula - Semites
9	A	Ngwenyama -King (lion) Ndovukazi - The Queen mother Sikhulu - The Chief Lusendro - Royal family
10	C	The maasai practices traumance They grow food crops around their shelters. They mainly keep large herds of animals for prestige. They don't keep their animals in ranches.
11	B	Headteacher - supervises activities Write minutes during committee meeting Receives school funds Handles school finances. Admits new pupils. Chair staff meeting.
12	A	Winds R - South West trade winds.
13	B	Winds of Accra blow parallel to the coastline hence not enough rainfall. At Axim blow across the coastline bringing alot of rainfall.
14	D	Ameru - Council of elders Maasai - Council of elders Abawanga - Kings
15	C	Kenyan citizen by registration a foreigner must live in the country for atleast 7 years. Child adopted by a citizen.
16	D	Phases of the moon. a) New moon - rain season b) Full moon - Dry season
17	C	Vasco Da Gama - Earliest explorer to E.A coast. Looking for a shorter sea route to India. Was a soldier. Defended Sultan at Kuria.
18	B	Aswan - Nile Kamba - Zambezi Akosombo - Volta Masinga - Tana
19	C	Deserts - High temperatures during the day due to clear skies. Low temperatures at night due to clear skies(absence of clouds)
20	A	Haile Selassie - Founder member of OAU Defeated Italians (1934 - 1941) Abolished slave trade and slavery. First chairman of AU Modernized his country Promoted education
21	C	According to the population pyramid, majority of the people are old or aging . There are few young people. People above 35 years are more.
22	A	The population pyramid represents a developed country German y

23	A	Africa lies to the south of
		East of the Atlantic Ocean
		West of Indian Ocean.
		South West of Asia.
		South of Mediterranean sea
24	C	Importance of temperatures of Kenyan Constitution
		shows the rules and regulations
		Promotes National Unity
		Protects human rights.
		Upholds the rule of law.
		Shows the structures of the government.
25	D	Most widespread means of communication in rural area is the radio because it can reach many people for the shorter time possible.
26	D	Main problem facing road transport is Inadequate funds to build mordern roads It is expensive to construct roads.
27	A	Ntemi – Nyamwezi chiefs
		Kabaka – Buganda kins
		Minulo – Tax collector in Nyamwezi chiefdom.
28	A	Copper – gas pipes
		coins
		Alloys
		Tv screens
		Jewelries
		Electric wires
		Telephone wires.
29	C	Samori Toure – resisted
		Mekatilili – Resisted
		Kabaka Mwanga – Resisted
		Lewanika – Collaborated
30	B	The senate assembly discusses all matters related to the counties
		They do overnight role.
		Approves by -laws mode by the counties.
31	B	Cameroon – Younde
		Zimbabwe – Harare
		Angola – Luanda
		Gabon – Libriville
31	D	Effects of deforestation
		Climate
		Soil erosion
		Drought
		Reduced volume of water(main)
		Affects the water and carbon cycle.
33	D	Trading blocks were formed to promote trade by eliminating trade barriers.
		Main problem facing them is production of similar goods.
34	C	Assimilation – France Senegal
		Association – Alternative used after assimilation failed.
		Direct rules – Belgian-
		British
		Germans
		DRC
		Kenya
		Tanganyika
		Mozambique
		Indirect rule – British
		Northern Nigeria
35	B	Rill erosion
		Splash erosion
		Sheet erosion
		Galley erosion – gabions /check dams
36	C	R -chal – Downwarping(VKCBMC)
37	C	Ngoni – insecurity – last community to migrate into Eastern Africa from the South.
38	B	S – horn of Africa – affected by -shape of the land, winds and ocean currents.
39	B	Q – rainforest – Tall trees close together forming a canopy.
		Little or no undergrowth.
		Huge trunks
		Creepers and Lianas
40	A	Amara – Sudan
		Lalibera – Ethiopia

Kiobo Fora - Kenya
Njongezi - Uganda

41 D Eliud Mathu was the first Africa to be nominated to legco in 1954.

42 C Ways of promoting peace
Forgiveness
Reconciliation
Fair distribution of resources.
Fair application of the law
Equal job opportunities.

42 C 20 -26, shelter from strong winds
Bananas 150 -21 - high altitudes
Slightly acidic soil - Tea
-19-26 - Coffee.
Over 24 variety of soil, low rainfall - sisal.

44 D The best way to curb drug and substance abuse is by increasing public awareness on the dangers of abusing drugs (education on the effects of drugs.

45 B Civil manages - government officials eg the A.G, magistrate DC etc
Customary - Clan elders
Religious - Religious leaders.

46 B Maasai , Njemps - Plain Nilotes.
Rendile, Borana, Sanya, Galla - Cushites - Gabbia
Kipsigis , Sabaot - Highland Nilotes
Turgen, Burji, Somali - Cushites

47 C Zimbabwe - armed struggle Guerilla warfare

48 C Salting , smoking, sundrying -traditional
Canning, freezing - Modern

49 B MP-minimum age -21 years
MCA - minimum age - 18 years
Voter - minimum age - 18 years
President - minimum age - 21 years.

50 B Ways of managing rapid population growth
Best - Family planning
National population policy
Discouraging culture practices
Discouraging immigration.

51 D Effects of revolution
Position of overhead sun.
Varying length of day and night
Eclipses
Rotation - effects - day and night
Sea tides
Difference in time.
Rising and setting of the sun

52 B Senegal, Cunene, Orange, Niger, Antlatinc Ocean,
Limpopo, Zambezi, Shibeili, Runema, Indian Ocean

53 C Trade -(main)
Social media
Inter marriage
games and sports
Workshops and seminars
Education.

54 B OAU - Promote unity
Liberate African countries. (2nd main)
HIV /AIDS - AU
Fighting corruption - AU
Greater unity - AU

55 B Problems facing tourism
Insecurity - (terrorism)
Poor transport
High taxes
Travel advisers
Poaching

56 B

57 B 1st June 1963 - Self internal government
12th Dec 1963 - Independence day
20th Dec - 1964 - Freedom fighters arrested
12th Dec - 1964 - Kenya became a republic

58 A School routine system of planned activities intended to take place in a school.

		It helps to manage time which promotes order in the school.
59	D	Nsami - Controlled trade
		Settled only cases of murder
		Commanded inchief of the armed forces.
		Chief Prest - offered sacrifices to the Gods
60	A	Navigation - Taking the matter court
		Arbitration - Inviting a third party who is an official to solve a dispute.
		Conciliation - Forming an independent conversion to investigate.
		Negotiation - Discussing the matter with one another.

CRE

No	Ans	Reasoning and Explanation
61	A	Pain dung Laban
		Subject to man and desire for man.
		enemity with the snake.
62	D	Abraham is known as a friend of God because he obeyed and trusted in God
		Noah -relief
63	C	Moses - Midian
		Abraham - Haran
64	C	Bethel - dreamt
		Peniel - wrestled
65	C	Make no images or bow down to idols was a command broken by the Israelites when they worshipped golden calf into the wilderness (2nd commandment)
66	B	David - annoyed God he:
		Killed Uriah
		Committed adultery
		Coveted.
67	D	Passover - remember God's saving plan
68	C	Jeremiah – Complained that he was too young and he didn't know how to speak.
69	B	Saul -Samuel
		David - Samuel
		Solomon - Nathan and priest Zadock.
70	A	According to the story of David played the harp which could send away evil spirits disturbing Saul. Leisure time should be used to others.
71	D	Mary - Nazareth
		Joseph - Jerusalem
72	A	B,C,D are Beatitudes taught from the sermon on the mountain. is not a beatitude Mathew
73	C	Baptism - This is my own dean Sove with who am pleased with
		Transfiguration - This is my own dear with whom i am pleased. Listen to him.
74	B	Widow and judge
		Pharisees and tax collectors.
		Friend at midnight about prayers.
		Prodigal son - Acceptance.
		Forgiveness and repentance.
75	B	Paralysed man - Power to forgive sin
		Walking on water - Power on nature .
		Blind Btimaeus - Light of the God
		Raising Lazarus daughter - Seek help / Jesus had power over death.
76	B	Cleopas and others disciples were on the way from Jerusalem to Emmaus .
77		Matthew - tax collector
		Peter, John and James - Fisherman.
78		Before Pontius Pilate (Roman governor) claiming to be the king
		Misleading people and subverting the nation
		Inciting people not to pay taxes.
		Claiming to be the son of God (blasphemy) and destroying the temple and rebuilding in 3 years - religious -carphas (Sanhedrin)
79	A	Pentecost - God's presence - sand like a mighty wind, tongues of fire.
80		Tax collector - not collect more than legal
		Honest
		Soldiers - Content with pay
		Not rob people with violence
		Not accuse anyone falsely.
81	D	Simon of Cyrene - Carried the cross
		Joseph of Armathea - Offered his tomb for Jesus to be burried.
82	A	In both ATR and Christianity - God is the creator, our father , omnipotent, omnipresent.
83		Religious leaders in ATR - priests , prophets and diviners.
		Bishops are found in Christianity.

84		Children in ATs - mainly taught respect and obedience.
85		Christians should obey their leaders because there is authority one chosen by God when they obey.
86	A	Patience - fruit Faith , wisdom, preaching - gifts
87	B	Children must practice chastity - remain pure and resist any sexual temptations.
88	B	Best use of Christian wealth - help the community or the less fortunate in the society.
89	B	Last Supper - Passover feast became in both , there is redemption (saving)
90	D	The church missionary Society *CMC) - Sent Dr Ludwig Kraft and Johanns Rebman to spread Christianity in Eastern Africa.