

KAPSABET BOYS TRIAL 1 2025 MARKING SCHEME**BIOLOGY PAPER 3 MS****1. a)****(2mks)**

1b- Organism with exoskeleton

4a – Has fins

b)

Specimen	Steps followed	Identity
A	1a, 3a	Arachnida
B	1a, 2a, 4a	Pisces
C	1b, 3b, 5b, 6b	Chilopoda
D	1a, 2a, 4b, 7b, 8a	Reptilia
E	1a, 2a, 4b, 7a	Aves
F	1b, 3b, 5a	Insecta

c) Arthropoda reject Antropoda or arthropoda.

d) – They all have an exoskeleton

- They all have segmented bodies

- They all have jointed appendages/limbs

e) Scales;

2. a)

Test tube	Observation
A	No effervescence/no bubble production /No foam production
B	High effervescence rate/high rate of bubble formation
C	Little effervescence/ bubble formation/little foam formation.

Reject no reaction

b) No effervescence /bubble formation/form formation because boiling denatured the enzymes (catalase enzyme) hence hydrogen peroxides, was not broken down into water, and oxygen gas.

c) Test tube B, because crushing of the cube increased the surface area for proper enzyme (catalase) action hence a high volume of hydrogen peroxide was broken down into water and oxygen compared to the cube in test tube c which has a small surface area exposed to the hydrogen peroxide solution.

d) PH, enzymes and substrate concentration contraction, enzyme inhibitors, co-enzymes and co-factors.

3. a) - P has one seed while R has many seeds

- P has a thick pericarp while R has thin

- P has distinct epicarp, mesocarp and endo carp while R have the three layer's indistinct suture lines.
 - P has a hollow seed while the seeds of are not hollow.
- b)
- Specimen P – Gynoecium is monocarpous placentation basal.
 - Specimen S – Gynoecium is syncarpous spacentation parietal
 - Specimen V – Gynoecium is syncarpous placentation is axile/central
- c)

Specimen	Mode of dispersal	Adaptive features
P	Water	Hairy mesocarp /air spaces for buoyancy
Q	Wind	Wing-like membranous structure/extensions
R	Self by explosive mechanism	Has lines of weakness/sutures
S	Animals	Fleshy /succulent
T	Wind	Has hair-like projections/parachute of hairs
V	Animals	Fleshy /succulent

d)A plan diagram of specimen V

