education

MPUMALANGA PROVINCE

REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

LIFE SCIENCES

EASY TO SCORE

PAPER 1

MARKING GUIDELINE

SEPTEMBER 2021

This marking guideline consists of 14 pages

REPRODUCTIVE STRATEGIES

1.1.1 D√√

1.1.2 A√√

1.1.3 B√√

1.1.4 D√√

HUMAN REPRODUCTION

1.1.1 A√√

1.1.2 A√√

1.1.3 D√√

1.1.4 B√√

1.1.5 C√√

1.1.6 C√√

1.1.7 C√√

1.1.8 A√√

1.1.9 D√√

1.1.10 D√√

1.1.11 B√√

1.1.12 D√√

1.1.13 A√√

1.1.14 B√√

1.1.15 B√√

1.1.16 D√√

1.1.17 B√√

1.1.18 A√√

1.1.19 C√√

1.1.20 B√√

1.1.21 B√√

HUMAN RESPONSE

1.1.1 C√√

1.1.2 D√√

1.1.3 B√√

1.1.4 B√√

1.1.5 B√√

1.1.6 B√√

1.1.7 D√√

1.1.8 B√√

1.1.9 C√√

1.1.10 B√√

1.1.11 D√√

1.1.12 D√√

1.1.13 B√√

1.1.14 C√√

1.1.15 C√√

1.1.16 B√√

1.1.17 C√√

1.1.18 A√√

1.1.19 A√√

1.1.20 D√√

1.1.22 C√√

1.1.23 A√√

1.1.24 B√√

1.1.25 C√√

1.1.26 B√√

1.1.27 C√√

PLANT RESPONSE

1.1.1 C√√

1.1.2 A√√

1.1.3 C√√

1.1.4 C√√

1.1.5 A√√

ENDOCRINE SYSTEM AND HOMEOSTASIS

1.1.1 B√√

1.1.2 B√√

1.1.3 B√√

1.1.4 B√√

1.1.5 C√√

1.1.6 A√√

1.1.7 D√√

1.1.8 B√√

1.1.9 B√√

1.1.10 C√√

1.1.11 C√√

1.1.12 B√√

1.1.13 D√√

BIOLOGICAL TERMS

REPRODUCTIVE STRATEGIES

1.1.1 Amniotic√ egg

1.1.2 Precocial√ development

1.1.3 Allantois√

1.1.4 Vivipary√

1.1.5 Ovipary√

1.1.6 Precocial√ development

1.1.7 Parental care√

1.1.8 External fertilisation√

1.1.9 Amniotic egg√

1.1.10 Altricial√ development

HUMAN REPRODUCTION

1.1.1 Morula√

1.1.2 Chorionic villi√

1.1.3 Vagina√

1.1.4 Gestation√

1.1.5 Fallopian tube√

1.1.6 Puberty√

1.1.7 Luteinising hormone√/LH

1.1.8 Umbilical artery√

1.1.9 Penis√

1.1.10 Corpus luteum√

1.1.11 Oestrogen√

1.1.12 Endometrium√

1.1.13 Testosterone√

1.1.14 Vas deferens√

1.115 Zygote√

1.1.16 Amniotic fluid√

1.1.17 Umbilical vein√

1.1.18 Oogenesis√

1.1.19 Implantation√

1.1.20 Umbilical vein√

1.1.21 Gestation√

1.1.22 Foetus√

1.1.23 Chorion√

1.1.24 Amniotic fluid√

1.1.25 Acrosome√

1.1.26 Ovulation√

1.1.27 Vas deferens√

1.1.28 Prolactin√

1.1.29 Corpus luteum√

1.1.30 Gametogenesis√

1.1.31 Testes√

1.1.32 Semen√

1.1.33 Oogenesis√

1.1.34 Umbilical vein√

1.1.35 Chorion√

1.1.36 Blastocyst/blastula√

1.1.37 Prostate gland√

1.1.38 Oestrogen√

1.1.39 Luteinising hormone√/LH

1.1.40 Puberty√

1.1.41 Testosterone√

1.1.42 Amniotic egg√

1.1.43 Epididymis√

1.1.44 Fallopian tube√

1.1.45 Acrosome√

1.1.46 Amniotic fluid√

1.1.47 Fallopian tube√

1.1.48 Foetus√

1.1.49 Implantation

1.1.50 Mitosis√

1.1.51 Progesterone√

1.1.52 Vivipary√

1.1.53 Placenta√

1.1.54 Oogenesis√

1.1.55 Placenta√

HUMAN RESPONSE IN THE ENVIRONMENT

1.1.1 Axons√

1.1.2 Synapse√

1.1.3 Multiple sclerosis√

1.1.4 Meninges√

1.1.5 Peripheral√ nervous system

1.1.6 Parasympathetic√ nervous system

1.1.7 Cones√

1.1.8 Eustachian tube√

1.1.9 Cataracts√

1.1.10 Reflex action√

1.1.11 Organ of Corti√

1.1.12 Synapse√

1.1.13 Peripheral√ nervous system

1.1.14 Sensory√ neurons

1.115 Cristae√

1.1.16 Accommodation√

1.1.17 Grommets√

1.1.18 Pinna√

1.1.19 Medulla oblongata√

1.1.20 Autonomous√ nervous system

1.1.21 Astigmatism√

1.1.22 Blind spot√

1.1.23 Corpus callosum√

1.1.24 Receptors√

1.1.25 Corpus callosum√

1.1.26 Optic nerve√

1.1.27 Meninges√

1.1.28 Reflex arc√

1.1.29 Choroid√

1.1.30 Pupillary mechanism√

1.1.31 Connector√ neuron/ Interneuron

1.1.32 Accommodation√

1.1.33 Eustachian tube√

1.1.34 Neuron√

1.1.35 Longitudinal muscle√

PLANT RESPONSE TO THE ENVIRONMENT

1.1.1 Giberellins√

1.1.2 Geotropism√/Gravitropism

1.1.3 Abscisic acid√

1.1.4 Abscisic acid√

1.1.5 Tropism√

1.1.6 Apical dominance√

1.1.7 Giberellins√

1.1.8 Photptropism√

1.1.9 Giberellins√

ENDOCRINE SYSTEM AND HOMEOSTASIS

1.1.1 Negative feedback mechanism√

1.1.2 Diabetes mellitus√

1.1.3 Vasodilation√

1.1.4 Aldosterone√

1.1.5 Homeostasis√

1.1.6 Thyroid stimulating hormone√

1.1.7 Homeostasis√

1.1.8 Anti-diuretic hormone√

1.1.9 Anti-diuretic hormone√

1.1.10 Thyroxin√

1.1.11 Pancrease√

1.1.12 Growth hormone√

1.1.13 Thyroxin√

1.1.14 Endocrine system√

1.1.15 Thyroid stimulating hormone√

1.1.16 Endocrine glands√

1.1.17 Kidney√

1.1.18 Glucagon√

MATCH COLUMNS (ALL PAPER 1 TOPICS)

1.1.1 A only√√

1.1.2 A only√√

1.1.3 A only√√

1.1.4 A only√√

1.1.5 B only√√

1.1.6 None√√

1.1.7 Both A and B√√

1.1.8 B only√√

1.1.9 None√√

1.1.10 A only√√

1.1.11 B only√√

1.1.12 Both A and B√√

1.1.13 B only√√

1.1.14 A only√√

1.1.15 B only√√

1.1.16 Both A and B√√

1.1.17 None√√

1.1.18 Both A and B√√

1.1.19 A only√√

DIAGRAMS (SHORT QUESTIONS)

REPRODUCTIVE STRATEGIES

1.1.1
- The hatchling's eyes are closed√
- The hatchling can't move (√away from predators)
- The hatchling can't feed on its own √
- The hatchling has no feathers√/The wings are not developed

1.1.2
- Foetus develops inside the uterus or greater protection√
- Food is supplied by the mother√ and is therefore supplied for a longer period. √

1.1.3
- More yolk allows for greater development√ of the chick
- so that it can be more independent so that it can be more independent√ after hatching

1.2.1 Internal√ fertilisation

1.2.2 -Sperm are deposited inside the female body√
thereby increasing the chances of fertilisation√
-Gametes/zygote are inside the body√
therefore protected from the predators√/environmental dangers

1.2.3 - The eggs hatch inside the female's body√
-and the young are born alive√

1.3.1 (a) Diagram 1√

(b) Diagram 2√and Diagram 3√

(c) Diagram I√ and Diagram 2√

1.3.2 Amniotic egg√

HUMAN REPRODUCTION

1.4.1 Fertilisation√

1.4.2 Mitosis√

1.4.3 - Chorion√
- Amnion√

1.4.4 (a) Zygote√
(b) Morula√
(c) Blastocyst√/blastula

1.4.5 Fallopian tube√ /oviduct

1.4.6 47√

1.5.1 (a) Jelly layer√//Zona pellucida
(b) Cytoplasm√ /cytosol
(c) Acrosome√

1.5.2 Oogenesis√

1.5.3 C√

1.5.4 E√
F√

1.6.1 Acrosome√

1.6.2 Mitochondria√

1.6.3 (a) 3√
(b) 1√
(c) 1√

1.6.4 B√- Nucleus√

1.6.5 Mitosis√

1.7.1 (a) Jelly layer√/ Zona Pellucida
(b) Cell membrane√/ plasma-lemma/plasma membrane
(c) Cytoplasm√/cytosol
(d) Nucleus√

1.7.2 (a) G√- Middle piece√
(b) E√- Acrosome√
(c) D- nucleus

1.8.1 (a) B√- Penis√
(b) E√- Testes√

1.8.2 (a) D√ and E√
(b) B√ and C√

1.9.1 (a) Zygote√
(b) Morula√
(c) Placenta√

1.9.2 (a) Fertilisation√
(b) Implantation√

1.9.3 (a) 46√
(b) 23√

HUMAN RESPONSE TO THE ENVIRONMENT

1.1.1 B√- Cerebrum√

1.1.2 D√- Cerebellum√

1.1.3 A√- Pituitary gland√/ Hypophysis

1.1.4 C√- Corpus callosum√

1.1.5 E√- Spinal cord√

1.2.1 (a) Spinal cord√
(b) Corpus callosum√

1.2.2 (a) D√- Cerebrum√
(b) B√- Medulla oblongata√
(c) E√- Cerebellum√

1.3.1 1√ and 4√

1.3.2 1√ and 3√

1.3.3 2√ and 3√

1.4.1 (a) Semi- circular canals√
(b) auditory nerve√

1.4.2 (a) C√- Cochlea√
(b) D√- Round window√

1.4.3 (a) Cerebellum√
(b) Organ of Corti√

1.5.1 Reflex arc√

1.5.2 To minimise injury√

1.5.3 (a) Interneuron√/connector
(b) Ventral root√
(c) Effector√/ muscle

1.5.4 A√- Sensory neuron√

1.6.1 (a) E√
(b) A√
(c) C√

1.6.2 F√- Motor neuron√

1.6.3 D to E√

1.7.1 (a) A√- Sensory neuron√
(b) C√- Interneuron√/connector
(c) A√ – Sensory neuron√

1.7.2 (a) E√
(b) F√

1.8.1 (a) Sclera√
(b)Cornea√
(c) Iris√

1.8.2 (a) C√- Iris√
(b) G√- Choroid√
(c) E√- Retina√

ENDOCRINE SYSTEM AND HOMEOSTASIS

1.1.1 (a) Pituitary√/hypophysis
(b) Thyroxin√

1.1.2 Negative feedback mechanism√

1.1.3 - Less hormone B√/ thyroxin will be secreted
More hormone A√/ TSH will be secreted