

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN.
OBJECTIVE KEY FOR INTERMEDIATE 2nd ANNUAL EXAMINATION, 2025

Name of Subject: Biology (Paper II) Group: X

Q. Nos	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer	Paper Code	Correct Answer								
	4461		4463		4465		4467									
1	C	Drinks a lot of water	A	Testicular feminization syndrome	A	Homologous organs	C, B	3rd, 2nd								
2	A	Vomer	D	Digesting genome with restriction enzymes	D	Denitrification	C	Gastrulation								
3	B	2, 4-D	B	Chloride Ions	C	Grassland	A	It is same for all the organisms								
4	D	Oxytocin	A	Homologous organs	B	Geothermal energy	B	Aminoacyl-tRNA Synthetase								
5	C, B	3rd, 2nd	D	Denitrification	A	Troponin	C	Prophase								
6	C	Gastrulation	C	Grassland	C	Drinks a lot of water	A	Testicular feminization syndrome								
7	A	It is same for all organisms	B	Geothermal energy	A	Vomer	D	Digesting genome with restriction enzymes								
8	B	Aminoacyl-tRNA Synthetase	A	Troponin	B	2, 4-D	B	Chloride Ions								
9	C	Prophase	C	Drinks a lot of water	D	Oxytocin	A	Homologous organs								
10	A	Testicular feminization syndrome	A	Vomer	C/B	3rd, 2nd	D	Denitrification								
11	D	Digesting genome with restriction enzymes	B	2, 4-D	C	Gastrulation	C	Grassland								
12	B	Chloride Ions	D	Oxytocin	A	It is same for all the organisms	B	Geothermal energy								
13	A	Homologous organs	C, B	3rd, 2nd	B	Aminoacyl-tRNA Synthetase	A	Troponin								
14	D	Denitrification	C	Gastrulation	C	Prophase	C	Drinks a lot of water								
15	C	Grassland	A	It is same for all the organisms	A	Testicular feminization syndrome	A	Vomer								
16	B	Geothermal energy	B	Aminoacyl-tRNA Synthetase	D	Digesting genome with restriction enzymes	B	2, 4-D								
17	A	Troponin	C	Prophase	B	Chloride Ions	D	Oxytocin								
18																
19																
20																
Cross Check	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Total	5	5	5	3	5	5	5	3	5	5	5	3	5	5	5	3

مرثقیلیٹ بابت صحیح سوالیہ پرچہ مارکنگ Key

ہم نے مضمون بیالوجی پرچہ دوسرا گرپ X انٹرمیڈیٹ دوسرا سالانہ امتحان 2025 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر غمیق چیک کر لیا ہے یہ پرچہ Syllabus کے عین مطابق Set کیا گیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے۔ یہ Version آپس میں مطابقت رکھتے ہیں۔ نیز اس پرچہ کی معروضی (MCQs) Key کی بابت تصدیق کی جاتی ہے کہ اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔ مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کر لیا ہے اور ان کی روشنی میں Key بنائی ہے۔ نیز سب ایگزامینرز کیلئے تفصیلی مارکنگ ہدایات / مارکنگ سکیم / Rubrics بھی تیار کر دی گئی ہیں۔

Prepared & Checked By:

Dated: 4-11-25

S.#	Name	Designation	Institution	Mobile No	Signature
1	Dr. Muhammad Zafar Malik	Professor	Govt. Graduate college of Science, Multan	0334-4194053	MZafar
2	M. Mazhar Iqbal	Assoc. Prof.	G.G.C.S. Multan	0302-7493385	Mazhar
3	Torir Mahmood	A.P	G.G. Anjilhot College Multan	03006361448	Torir
4					
5					

Re-Checked By ہم نے درج بالا سوالیہ پرچہ (انشائیہ + معروضی) معروضی "Key" اور ہدایات کے حوالہ سے مکمل طور پر تلی کر لی ہے۔ کسی قسم کی کوئی غلطی نہ ہے۔

1	Muhammad Qamar	Assistant professor	Govt. Graduate college civil lines Multan	03007486871	Qamar
2	Dr. M. Riaz	Asso. prof	Govt. Model Grad. college, Multan	03007356740	Riaz

تاریخ 5-11-25

2025 (2 nd -A)		Roll No: _____
INTERMEDIATE PART-II (12 th Class)		
BIOLOGY PAPER-II		
TIME ALLOWED: 2.40 Hours	SUBJECTIVE	MAXIMUM MARKS: 68
NOTE: Write same question number and its parts number on answer book, as given in the question paper.		
SECTION-I		
2. Attempt any eight parts.		8 × 2 = 16
(i)	Write definition of osmoregulation.	
(ii)	What are Malpighian tubules?	
(iii)	How kidney stones are removed from body without surgery?	
(iv)	Compare Hyponasty with Haptonasty.	
(v)	What is structure and chemical composition of Exoskeleton?	
(vi)	What is Spondylosis?	
(vii)	How pollen tube is important for plants?	
(viii)	What are fraternal twins or triplets?	
(ix)	What are the soil conditions in grassland ecosystem?	
(x)	Differentiate between Alpine & Boreal Forest.	
(xi)	How soil plays vital role for organisms?	
(xii)	Acid rain is harmful. Why?	
3. Attempt any eight parts.		8 × 2 = 16
(i)	Describe briefly the role of Hindbrain.	
(ii)	Give chemical classification of Hormones.	
(iii)	What is Latent learning? Give an example.	
(iv)	Describe Testicular feminization syndrome.	
(v)	Write a short note on Over Dominance.	
(vi)	Why was test cross devised by Mendel?	
(vii)	Define Plasmids. How were they discovered?	
(viii)	Discuss advantages of PCR.	
(ix)	How is SCID treated by Ex-vivo gene therapy in humans?	
(x)	Differentiate between hydrosere and xerosere.	
(xi)	What is the importance of Decomposers?	
(xii)	Why secondary succession is rapid than primary succession?	
4. Attempt any six parts.		6 × 2 = 12
(i)	How Apical Meristem differs from intercalary meristem?	
(ii)	What is primitive streak?	
(iii)	Write the structure of a Nucleosome.	
(iv)	What is Alkaptonuria? Write its causes.	
(v)	Is Interphase a resting phase? Why?	
(vi)	Differentiate between Mitosis of animals and plants.	
(vii)	Give events of semi-conservative model.	
(viii)	What is the concept of Neo-Darwinism?	
(ix)	What are hydrothermal vents? How do they support life?	
SECTION-II		
NOTE: Attempt any three questions.		3 × 8 = 24
5.(a)	Describe the structure of Nephron in detail.	4
(b)	Define Meiosis. Explain its significance.	4
6.(a)	What is Locomotion? Explain it with example of Paramecium.	4
(b)	Explain Biogeochemical Cycles with an example of Nitrogen Cycle.	4
7.(a)	Give a flow chart showing classification of Nervous System of Man.	4
(b)	What are Endangered Species? Give your suggestions for their preservation.	4
8.(a)	Discuss the role of Phytochrome in Photoperiodism.	4
(b)	State law of Segregation. Explain it with one suitable example.	4
9.(a)	What are Restriction Endonucleases? Describe their role in Biotechnology.	4
(b)	Discuss the phases of growth in a multicellular plant.	4

Paper Code Number: 4461		2025 (2 nd -A) INTERMEDIATE PART-II (12 th Class)		Roll No:	
BIOLOGY PAPER-II					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	Fish of fresh water environment does not possess one of the given strategy for osmoregulation:	Produces dilute urine	Prefers salty food	Drinks a lot of water	Actively uptakes salts through gills
2	One of the given is not a paired facial bone:	Vomer	Inferior concha	Lacrimial	Nasal
3	You are wishing to eliminate broad leaved weeds from your lawn, which plant hormone be the best option to spray:	NAA	2,4-D	GA	GA ₃
4	Distension of cervix, decrease progesterone level and suckling are the stimuli for the release of which hormone?	Vasopressin	Secretin	Melanophore stimulating hormone	Oxytocin
5	In human females, pregnancy is most likely to occur in the week of menstrual cycle:	1 st	2 nd	3 rd	4 th
6	The stage in the development of animals during which three germinal layers are formed is known as:	Cleavage	Organogenesis	Gastrulation	Blastulation
7	Genetic code is universal, because:	It is same for all the organisms	It is without punctuation	It consists of three nucleotides	It is universally accepted
8	An enzyme which catalyzes the attachment of tRNA with specific amino acid is:	Helicase	Aminoacyl-tRNA synthetase	RNA polymerase	Amino peptidase
9	Considering the events of telophase, this phase appears to be the reverse of:	Anaphase	Metaphase	Prophase	Interphase
10	Androgenic insensitivity is found in one of the x-linked traits:	Testicular feminization syndrome	Haemophilia A	Hypophosphatemic ricket	Red-green blindness
11	During DNA finger printing, a unique collection of various sized DNA fragments are produced by:	Gel electrophoresis	Applying radioactive probe	Performing autoradiography	Digesting genome with restriction enzymes
12	Cystic fibrosis patients lack a gene that codes for trans-membrane carrier of the:	Potassium ions	Chloride ions	Sodium ions	Calcium ions
13	The organs which are functionally different but structurally alike are called:	Homologous organs	Analogous organs	Vestigial organs	Rudimentary organs
14	The process in which soil living bacteria convert soil nitrates back to atmospheric nitrogen is called:	Ammonification	Nitrification	Assimilation	Denitrification
15	Layering is the characteristic of which type of ecosystem?	Tundra	Desert	Grassland	Forests
16	The heat energy which is trapped underground as volcanoes, hot springs and geysers:	Nuclear energy	Geothermal energy	Fossil fuels	Soil energy
17	During contraction of muscles, calcium ions bind with the protein:	Troponin	Tropomyosin	Actin	Myosin

Paper Code Number: 4463		2025 (2 nd -A) INTERMEDIATE PART-II (12 th Class)		Roll No: _____	
BIOLOGY PAPER-II					
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM MARKS: 17	
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	Androgenic insensitivity is found in one of the x-linked traits:	Testicular feminization syndrome	Haemophilia A	Hypophosphatemic ricket	Red-green blindness
2	During DNA finger printing, a unique collection of various sized DNA fragments are produced by:	Gel electrophoresis	Applying radioactive probe	Performing autoradiography	Digesting genome with restriction enzymes
3	Cystic fibrosis patients lack a gene that codes for trans-membrane carrier of the:	Potassium ions	Chloride ions	Sodium ions	Calcium ions
4	The organs which are functionally different but structurally alike are called:	Homologous organs	Analogous organs	Vestigial organs	Rudimentary organs
5	The process in which soil living bacteria convert soil nitrates back to atmospheric nitrogen is called:	Ammonification	Nitrification	Assimilation	Denitrification
6	Layering is the characteristic of which type of ecosystem?	Tundra	Desert	Grassland	Forests
7	The heat energy which is trapped underground as volcanoes, hot springs and geysers:	Nuclear energy	Geothermal energy	Fossil fuels	Soil energy
8	During contraction of muscles, calcium ions bind with the protein:	Troponin	Tropomyosin	Actin	Myosin
9	Fish of fresh water environment does not possess one of the given strategy for osmoregulation:	Produces dilute urine	Prefers salty food	Drinks a lot of water	Actively uptakes salts through gills
10	One of the given is not a paired facial bone:	Vomer	Inferior concha	Lacrimal	Nasal
11	You are wishing to eliminate broad leaved weeds from your lawn, which plant hormone be the best option to spray:	NAA	2,4-D	GA	GA ₃
12	Distension of cervix, decrease progesterone level and suckling are the stimuli for the release of which hormone?	Vasopressin	Secretin	Melanophore stimulating hormone	Oxytocin
13	In human females, pregnancy is most likely to occur in the week of menstrual cycle:	1 st	2 nd	3 rd	4 th
14	The stage in the development of animals during which three germinal layers are formed is known as:	Cleavage	Organogenesis	Gastrulation	Blastulation
15	Genetic code is universal, because:	It is same for all the organisms	It is without punctuation	It consists of three nucleotides	It is universally accepted
16	An enzyme which catalyzes the attachment of tRNA with specific amino acid is:	Helicase	Aminoacyl-tRNA synthetase	RNA polymerase	Amino peptidase
17	Considering the events of telophase, this phase appears to be the reverse of:	Anaphase	Metaphase	Prophase	Interphase

Paper Code Number: 4465		2025 (2 nd -A) INTERMEDIATE PART-II (12 th Class)		Roll No:	
BIOLOGY PAPER-II					
TIME ALLOWED: 20 Minutes			OBJECTIVE		MAXIMUM MARKS: 17
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The organs which are functionally different but structurally alike are called:	Homologous organs	Analogous organs	Vestigial organs	Rudimentary organs
2	The process in which soil living bacteria convert soil nitrates back to atmospheric nitrogen is called:	Ammonification	Nitrification	Assimilation	Denitrification
3	Layering is the characteristic of which type of ecosystem?	Tundra	Desert	Grassland	Forests
4	The heat energy which is trapped underground as volcanoes, hot springs and geysers:	Nuclear energy	Geothermal energy	Fossil fuels	Soil energy
5	During contraction of muscles, calcium ions bind with the protein:	Troponin	Tropomyosin	Actin	Myosin
6	Fish of fresh water environment does not possess one of the given strategy for osmoregulation:	Produces dilute urine	Prefers salty food	Drinks a lot of water	Actively uptakes salts through gills
7	One of the given is not a paired facial bone:	Vomer	Inferior concha	Lacrimial	Nasal
8	You are wishing to eliminate broad leaved weeds from your lawn, which plant hormone be the best option to spray:	NAA	2,4-D	GA	GA ₃
9	Distension of cervix, decrease progesterone level and suckling are the stimuli for the release of which hormone?	Vasopressin	Secretin	Melanophore stimulating hormone	Oxytocin
10	In human females, pregnancy is most likely to occur in the week of menstrual cycle:	1 st	2 nd	3 rd	4 th
11	The stage in the development of animals during which three germinal layers are formed is known as:	Cleavage	Organogenesis	Gastrulation	Blastulation
12	Genetic code is universal, because:	It is same for all the organisms	It is without punctuation	It consists of three nucleotides	It is universally accepted
13	An enzyme which catalyzes the attachment of tRNA with specific amino acid is:	Helicase	Aminoacyl-tRNA synthetase	RNA polymerase	Amino peptidase
14	Considering the events of telophase, this phase appears to be the reverse of:	Anaphase	Metaphase	Prophase	Interphase
15	Androgenic insensitivity is found in one of the x-linked traits:	Testicular feminization syndrome	Haemophilia A	Hypophosphatemic ricket	Red-green blindness
16	During DNA finger printing, a unique collection of various sized DNA fragments are produced by:	Gel electrophoresis	Applying radioactive probe	Performing autoradiography	Digesting genome with restriction enzymes
17	Cystic fibrosis patients lack a gene that codes for trans-membrane carrier of the:	Potassium ions	Chloride ions	Sodium ions	Calcium ions

Paper Code Number: 4467		2025 (2 nd -A) INTERMEDIATE PART-II (12 th Class)		Roll No: _____	
BIOLOGY PAPER-II					
TIME ALLOWED: 20 Minutes			OBJECTIVE		MAXIMUM MARKS: 17
Q.No.1	You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	In human females, pregnancy is most likely to occur in the week of menstrual cycle:	1 st	2 nd	3 rd	4 th
2	The stage in the development of animals during which three germinal layers are formed is known as:	Cleavage	Organogenesis	Gastrulation	Blástulation
3	Genetic code is universal, because:	It is same for all the organisms	It is without punctuation	It consists of three nucleotides	It is universally accepted
4	An enzyme which catalyzes the attachment of tRNA with specific amino acid is:	Helicase	Aminoacyl-tRNA synthetase	RNA polymerase	Amino peptidase
5	Considering the events of telophase, this phase appears to be the reverse of:	Anaphase	Metaphase	Prophase	Interphase
6	Androgenic insensitivity is found in one of the x-linked traits:	Testicular feminization syndrome	Haemophilia A	Hypophosphatemic ricket	Red-green blindness
7	During DNA finger printing, a unique collection of various sized DNA fragments are produced by:	Gel electrophoresis	Applying radioactive probe	Performing autoradiography	Digesting genome with restriction enzymes
8	Cystic fibrosis patients lack a gene that codes for trans-membrane carrier of the:	Potassium ions	Chloride ions	Sodium ions	Calcium ions
9	The organs which are functionally different but structurally alike are called:	Homologous organs	Analogous organs	Vestigial organs	Rudimentary organs
10	The process in which soil living bacteria convert soil nitrates back to atmospheric nitrogen is called:	Ammonification	Nitrification	Assimilation	Denitrification
11	Layering is the characteristic of which type of ecosystem?	Tundra	Desert	Grassland	Forests
12	The heat energy which is trapped underground as volcanoes, hot springs and geysers:	Nuclear energy	Geothermal energy	Fossil fuels	Soil energy
13	During contraction of muscles, calcium ions bind with the protein:	Troponin	Tropomyosin	Actin	Myosin
14	Fish of fresh water environment does not possess one of the given strategy for osmoregulation:	Produces dilute urine	Prefers salty food	Drinks a lot of water	Actively uptakes salts through gills
15	One of the given is not a paired facial bone:	Vomer	Inferior concha	Lacrimal	Nasal
16	You are wishing to eliminate broad leaved weeds from your lawn, which plant hormone be the best option to spray:	NAA	2,4-D	GA	GA ₃
17	Distension of cervix, decrease progesterone level and suckling are the stimuli for the release of which hormone?	Vasopressin	Secretin	Melanophore stimulating hormone	Oxytocin