

INTERMEDIATE PART-II (12th CLASS)**BIOLOGY PAPER-II (NEW SCHEME) GROUP-I**

TIME ALLOWED: 2.40 Hours

SUBJECTIVE

MAXIMUM MARKS: 68

**NOTE: - Write same question number and its part number on answer book,
as given in the question paper.**

SECTION-I**2. Attempt any eight parts.****8 × 2 = 16**

- (i) What is Lithotripsy?
- (ii) Why temperature of body increases during fever? Explain.
- (iii) Differentiate between fibres and sclereides.
- (iv) What is "All or None response"?
- (v) Define Vernalisation.
- (vi) What is meant by "After birth"?
- (vii) Differentiate between Climate and Weather.
- (viii) Define Productivity of an Ecosystem.
- (ix) What are heat-shock Proteins?
- (x) What is cause and symptoms of Rickets?
- (xi) How forests act as environmental buffers?
- (xii) Define Demography.

3. Attempt any eight parts.**8 × 2 = 16**

- (i) Define Nissl's granules.
- (ii) What are Neurotransmitters? Give examples.
- (iii) Write two functions of Parathyroid gland.
- (iv) Differentiate between gene and allele.
- (v) What is Epistasis? Differentiate it from dominance.
- (vi) Define Crossing Over. Give its importance.
- (vii) Write three methods to get gene of interest.
- (viii) What is Probe? How is it traced?
- (ix) What do you know about the Particle Gun?
- (x) Compare Autecology with Synecology.
- (xi) Differentiate between Primary and Secondary Succession.
- (xii) What are Lichens? Write its significance.

4. Attempt any six parts.**6 × 2 = 12**

- (i) Write practical applications of Apical dominance.
- (ii) Write about cleavage and discoidal cleavage.
- (iii) Write the functions of DNA polymerase III.
- (iv) Differentiate between Pyrimidines and Purines.
- (v) Define Phenylketonuria.
- (vi) Write symptoms of Turner's Syndrome.
- (vii) Define cell cycle. Write its phases.
- (viii) Define Hardy-Weinberg Theorem and also write its formula.
- (ix) What is Endosymbiont hypothesis?

SECTION-II**NOTE: - Attempt any three questions.****3 × 8 = 24**

- 5.(a) Discuss the nature of excretory products in different habitats. 4
- (b) Define Ecosystem. Describe various components of an ecosystem. 4
- 6.(a) Describe Exoskeleton in arthropods. Write its advantages and disadvantages. 4
- (b) Explain one-gene/one-polypeptide hypothesis. 4
- 7.(a) Define nerve impulse. Explain factors responsible for resting membrane potential. 4
- (b) Write a note on Wild life. 4
- 8.(a) Write notes on:- (i) Seed Dormancy (ii) Fruit set and Fruit ripening 4
- (b) Describe genetic basis of ABO blood group system. 4
- 9.(a) Write a note on abnormal development. 4
- (b) Discuss comparative anatomy as an evidence of Evolution. 4

BIOLOGY PAPER-II (NEW SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

Note: 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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) _____ is not Endotherm.

(A) Bird	(B) Amphibian	(C) Flying insect	(D) Some fishes
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- (2) Glomerular filtrate are reabsorbed in:-

(A) Proximal tubule	(B) Bowman's capsule	(C) Loop of Henle	(D) Distal tubule
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- (3) The membrane that bounds vacuole is called:-

(A) Primary cell	(B) Vascular wall	(C) Pelicle	(D) Tonoplast
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- (4) In birds, the sternum is modified to form:-

(A) Keel	(B) Neck	(C) Rib	(D) Clavicle
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- (5) Fruit ripening is often accompanied by a burst of respiratory activity called:-

(A) Biometric	(B) Redox	(C) Climacteric	(D) Photorespiration
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- (6) An example of long-day plants is:-

(A) Tomato	(B) Cabbage	(C) Corn	(D) Soyabean
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- (7) Mongolism is the other name of:-

(A) Klinefelter's Syndrome	(B) Turner's Syndrome	(C) Down's Syndrome	(D) Jacobs
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- (8) The full cell cycle in yeast cells is completed in:-

(A) 24 hours	(B) 4.5 hours	(C) 30 minutes	(D) 90 minutes
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- (9) The cytoplasmic process/fibres which carry impulse towards cell body is called:-

(A) Dendron	(B) Axons	(C) Nissl's granules	(D) Neurofibrils
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- (10) The human life span is judged to be maximum of:-

(A) 60 – 70 years	(B) 70 – 100 years	(C) 120 – 125 years	(D) 130 – 135 years
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- (11) In sickle cell anemia code for glutamic acid is replaced by:-

(A) Leucine	(B) Histidine	(C) Valine	(D) Proline
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- (12) Universal recipient blood group is _____ blood group.

(A) A	(B) B	(C) AB	(D) O
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- (13) An enzyme α – galactosidase that can be used to treat a human lysosome storage disease, is harvested from:-

(A) Soyabeans	(B) Tobacco plants	(C) Sugarcane	(D) Corn plants
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- (14) The first photosynthetic organisms probably used Hydrogen Sulphide as a source of Hydrogen for reducing CO_2 to:-

(A) Sugars	(B) H_2CO_3	(C) RUBP	(D) Malate
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- (15) Primary succession may start in a dry soil or rock is called:-

(A) Hydrosere	(B) Xerosere	(C) Desert	(D) Derosere
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- (16) Cacti and Euphorbia are the desert plants which store water in their:-

(A) Fleshy leaves	(B) Fleshy buds	(C) Fleshy stems	(D) Fleshy roots
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- (17) A single chlorine atom can react with ultraviolet rays and destroy as many as:-

(A) One million O_3 molecules	(B) Three millions O_3 molecules
(C) Four millions O_3 molecules	(D) Six millions O_3 molecules

BIOLOGY PAPER-II (NEW SCHEME) GROUP-I

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- (6) Glomerular filtrate are reabsorbed in:-
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- (7) The membrane that bounds vacuole is called:-
 (A) Primary cell (B) Vascular wall (C) Pelicle (D) Tonoplast
- (8) In birds, the sternum is modified to form:-
 (A) Keel (B) Neck (C) Rib (D) Clavicle
- (9) Fruit ripening is often accompanied by a burst of respiratory activity called:-
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- (12) The full cell cycle in yeast cells is completed in:-
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- (14) The human life span is judged to be maximum of:-
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INTERMEDIATE PART-II (12th CLASS)**BIOLOGY PAPER-II (NEW SCHEME) GROUP-II**

TIME ALLOWED: 2.40 Hours

SUBJECTIVE

MAXIMUM MARKS: 68

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I**2. Attempt any eight parts.****8 × 2 = 16**

- (i) Write a concise note on Hemodialysis.
- (ii) Briefly describe Urea Cycle.
- (iii) What is Uremia? Give its treatment.
- (iv) How does tendon differ from Ligament?
- (v) Differentiate between sapwood and heartwood.
- (vi) Write down disadvantages of Exoskeleton.
- (vii) How do photoperiodism and vernalisation resemble with each other?
- (viii) Write the functions of sertoli cells.
- (ix) Compare weather with climate.
- (x) Write down soil conditions of grassland ecosystem.
- (xi) Differentiate between Pollution and Pollutants.
- (xii) Write any four ways to Conserve Energy.

3. Attempt any eight parts.**8 × 2 = 16**

- (i) What are Effectors?
- (ii) Differentiate between Chemoreceptors and Mechanoreceptors.
- (iii) What is Epilepsy? Write the name of important test in the study of Epilepsy.
- (iv) Differentiate between Gene and Allele.
- (v) What is Law of Segregation?
- (vi) Define Epistasis.
- (vii) Enlist three possible ways to get the gene of interest.
- (viii) What is Gene Therapy? Write names of two methods used for gene therapy.
- (ix) What is Recombinant DNA?
- (x) Differentiate between Population and Community.
- (xi) What are biotic components of an Ecosystem?
- (xii) Differentiate between Autecology and Synecology.

4. Attempt any six parts.**6 × 2 = 12**

- (i) Differentiate between Primary Growth and Secondary Growth.
- (ii) Define Growth Correlation.
- (iii) Differentiate between Heterochromatin and Euchromatin.
- (iv) Define Nucleosome.
- (v) Write two importance of Mitosis.
- (vi) Differentiate between Benign tumour and Malignant tumour.
- (vii) What is Phosphodiester bond?
- (viii) What is Endosymbiont Hypothesis?
- (ix) What are Vestigial organs? Give two examples.

SECTION-II**NOTE: - Attempt any three questions.****3 × 8 = 24**

- 5.(a) Write Homeostatic function of Liver. 4
- (b) Describe various stages of succession in Xerosere. 4
- 6.(a) Write a note on paratonic movements in plants. 4
- (b) Write a note on Transcription. 4
- 7.(a) What are Plant Hormones? Give the effects of Gibberellins and Ethene. 4
- (b) What are Renewable and non-renewable resources? Describe water as a renewable resource. 4
- 8.(a) Describe female reproductive system of humans. 4
- (b) Describe the mechanism of incomplete dominance with an example. 4
- 9.(a) Describe the external factors affecting the rate of growth in plants. 4
- (b) Describe the Hardy-Weinberg Theorem. 4

BIOLOGY PAPER-II (NEW SCHEME) GROUP-II

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Q.No.1

- (1) The human abdominal cavity lined by a thin epithelium is called:-
 (A) Ectoderm (B) Endoderm (C) Peritoneum (D) Epidermis
- (2) In human beings, the homeostatic thermostat is present in a part of the brain called as:-
 (A) Cerebrum (B) Thalamus (C) Hypothalamus (D) cerebellum
- (3) Rickets is a disease in children with bowed legs and deformed _____.
 (A) Head (B) Pelvis (C) Chest (D) Arms
- (4) The folded leaflets of sensitive Mimosa regain their turgidity after:-
 (A) 2 minutes (B) 5 minutes (C) 10 minutes (D) 15 minutes
- (5) Alpha cells of Pancreas secrete:-
 (A) Insulin (B) Pancreatic juice (C) Glucagon (D) Secretin
- (6) Corpus luteum secretes a hormone called:-
 (A) Progesterone (B) Oxytocin (C) Testosterone (D) Estrogen
- (7) Cucumber, tomato, garden pea, maize, cotton are examples of:-
 (A) Short-day plants (B) Long-day plants (C) Day-neutral plants (D) Night-neutral plants
- (8) The discoidal cap of cells above the blastocoele is called:-
 (A) Ectoderm (B) Mesoderm (C) Endoderm (D) Blastoderm
- (9) A sequence of three nucleotides in mRNA is called:-
 (A) Cistron (B) Codon (C) Anticodon (D) Template
- (10) Meiosis II is just like the:-
 (A) Amitosis (B) Regenerations (C) Mitosis (D) Replacement
- (11) The chances of teenage mother having Down's syndrome child is:-
 (A) One in one hundred (B) One in one thousand
 (C) One in many thousands (D) One in ten thousands
- (12) Protanopia is a:-
 (A) Red blindness (B) Green blindness (C) Blue blindness (D) Brown blindness
- (13) Cystic fibrosis patients lack a gene that codes for trans-membrane carrier of the:-
 (A) Sodium ion (B) Chloride ion (C) Potassium ion (D) Calcium ion
- (14) Acquired characteristics of an individual can not be:-
 (A) Inherited (B) Lost (C) Flourished (D) Migrated
- (15) Lichen is a symbiotic association between a fungus and:-
 (A) Gymnosperm (B) Angiosperm (C) An alga (D) Pteridophyta
- (16) Limnetic phytoplankton include the:-
 (A) Bacteria (B) Cyanobacteria (C) Fishes (D) Mosses
- (17) A chemical which kills the weeds in a crop is known as:-
 (A) Insecticides (B) Pesticides (C) Herbicides (D) Germicides

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 (A) Cistron (B) Codon (C) Anticodon (D) Template
- (16) Meiosis II is just like the:-
 (A) Amitosis (B) Regenerations (C) Mitosis (D) Replacement
- (17) The chances of teenage mother having Down's syndrome child is:-
 (A) One in one hundred (B) One in one thousand
 (C) One in many thousands (D) One in ten thousands

BIOLOGY PAPER-II (NEW SCHEME) GROUP-II

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- (16) Rickets is a disease in children with bowed legs and deformed _____.
 (A) Head (B) Pelvis (C) Chest (D) Arms
- (17) The folded leaflets of sensitive Mimosa regain their turgidity after:-
 (A) 2 minutes (B) 5 minutes (C) 10 minutes (D) 15 minutes

BIOLOGY PAPER-II (NEW SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

Note: 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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Acquired characteristics of an individual can not be:-
 (A) Inherited (B) Lost (C) Flourished (D) Migrated
- (2) Lichen is a symbiotic association between a fungus and:-
 (A) Gymnosperm (B) Angiosperm (C) An alga (D) Pteridophyta
- (3) Limnetic phytoplankton include the:-
 (A) Bacteria (B) Cyanobacteria (C) Fishes (D) Mosses
- (4) A chemical which kills the weeds in a crop is known as:-
 (A) Insecticides (B) Pesticides (C) Herbicides (D) Germicides
- (5) The human abdominal cavity lined by a thin epithelium is called:-
 (A) Ectoderm (B) Endoderm (C) Peritoneum (D) Epidermis
- (6) In human beings, the homeostatic thermostat is present in a part of the brain called as:-
 (A) Cerebrum (B) Thalamus (C) Hypothalamus (D) cerebellum
- (7) Rickets is a disease in children with bowed legs and deformed _____.
 (A) Head (B) Pelvis (C) Chest (D) Arms
- (8) The folded leaflets of sensitive Mimosa regain their turgidity after:-
 (A) 2 minutes (B) 5 minutes (C) 10 minutes (D) 15 minutes
- (9) Alpha cells of Pancreas secrete:-
 (A) Insulin (B) Pancreatic juice (C) Glucagon (D) Secretin
- (10) Corpus luteum secretes a hormone called:-
 (A) Progesterone (B) Oxytocin (C) Testosterone (D) Estrogen
- (11) Cucumber, tomato, garden pea, maize, cotton are examples of:-
 (A) Short-day plants (B) Long-day plants (C) Day-neutral plants (D) Night-neutral plants
- (12) The discoidal cap of cells above the blastocoele is called:-
 (A) Ectoderm (B) Mesoderm (C) Endoderm (D) Blastoderm
- (13) A sequence of three nucleotides in mRNA is called:-
 (A) Cistron (B) Codon (C) Anticodon (D) Template
- (14) Meiosis II is just like the:-
 (A) Amitosis (B) Regenerations (C) Mitosis (D) Replacement
- (15) The chances of teenage mother having Down's syndrome child is:-
 (A) One in one hundred (B) One in one thousand
 (C) One in many thousands (D) One in ten thousands
- (16) Protanopia is a:-
 (A) Red blindness (B) Green blindness (C) Blue blindness (D) Brown blindness
- (17) Cystic fibrosis patients lack a gene that codes for trans-membrane carrier of the:-
 (A) Sodium ion (B) Chloride ion (C) Potassium ion (D) Calcium ion

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL/SUPPLY EXAMINATION, 2018

Name of Subject: Biology
 Group: 1st (New Scheme)

Session: 2016-2018
 Group: 2nd (New Scheme)

Q.	Paper Code	Paper Code	Paper Code	Paper Code
Nos	4461	4463	4465	4467
1	B	A	C	C
2	A	B or D	D	B
3	D	C	A	C
4	A	A	C	D
5	C	B	C	A
6	B	A	C	C
7	C	D	B	C
8	D	A	A	C
9	A	C	B or D	B
10	C	B	C	A
11	C	C	A	B or D
12	C	D	B	C
13	B	A	A	A
14	A	C	D	B
15	B or D	C	A	A
16	C	C	C	D
17	A	B	B	A
18				
19				
20				

Q.	Paper Code	Paper Code	Paper Code	Paper Code
Nos	4462	4464	4466	4468
1	C	A	C	A
2	C	B	A	C
3	B	A	C	B
4	C	C	D	C
5	C	B	B	C
6	A	C	C	C
7	C	C	C	B
8	D	C	A	C
9	B	B	B	C
10	C	C	A	A
11	C	C	C	C
12	A	A	B	D
13	B	C	C	B
14	A	D	C	C
15	C	B	C	C
16	B	C	B	A
17	C	C	C	B
18				
19				
20				

پرچہ کیلئے ماریٹ سوالیہ پرچہ امارنگ Key

ہم نے مضمون Biology پرچہ II گروپ IEU سکیم New انٹر میڈیٹ امتحان 2018 کا سوالیہ پرچہ انشائیہ و معروضی (Subjective & Objective) کو بنظر غمیٹ 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: 17/05/2018

S.#	Name	Designation	Institution	Mobile No	Signature
1	M. Zafar Abdullah	Associate Prof.	G.P.G. Burewala	0300-6991686	M. Zafar Abdullah
2	Tamru Aslam	A.P.	Civil Lines College Multan	0301-7443020	Tamru Aslam
3	M. Khalid Baloch	Asst Prof	Govt. Emerson college Multan	033361033	M. Khalid Baloch
4	Tariq Mahmood	Assistant Prof.	Govt. Millat College Multan	03006361448	Tariq Mahmood
5					

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

1	Dr. Nazir Ahmad	A.P.	Govt. College Civil Lines Multan		Dr. Nazir Ahmad
2	Dr. Muhammad Riaz	A.P.	Govt. Millat Degree College, Multan	0300-7356740	Dr. Muhammad Riaz

تاریخ

INTERMEDIATE PART-II (12th CLASS)**BIOLOGY PAPER-II (OLD SCHEME) GROUP-I**

TIME ALLOWED: 3.10 Hours

SUBJECTIVE

MAXIMUM MARKS: 83

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I**2. Attempt any Eight parts.****8 × 2 = 16**

- (i) Differentiate between Ureotelic and Uricotelic animals.
- (ii) How marine mammals regulate their body temperature in cold water?
- (iii) Give structural formulae of urea and uric acid.
- (iv) Differentiate between Hinge joints and ball and socket joints.
- (v) How heartwood differ from sapwood?
- (vi) What are P660 and P730 pigments? How are these interconverted?
- (vii) Define Placenta. Give its functions.
- (viii) Define Antagonism. Give an example.
- (ix) Enlist four adaptations of animals of desert ecosystem.
- (x) Differentiate between Prairies and Savana.
- (xi) Enlist factors which are responsible for greenhouse effect.
- (xii) Name fossil fuels. Why these are called so?

3. Attempt any Eight parts.**8 × 2 = 16**

- (i) Write any two functions of Hypothalamus.
- (ii) Write symptoms and reasons of Myxoedema.
- (iii) Differentiate between Diurnal and Circannual biorythms.
- (iv) What is Punnet Square?
- (v) Define Nullo gamete. Give its example.
- (vi) What is SRY? Give its role.
- (vii) Define PCR.
- (viii) What things are required to produce recombinant DNA?
- (ix) Differentiate between Luciferin and Luciferase.
- (x) How are moderate grazing useful and over-grazing damaging?
- (xi) Differentiate between primary and secondary succession
- (xii) Define Niche.

4. Attempt any Six parts.**6 × 2 = 12**

- (i) Define Innate behaviour. Name the types of innate behaviour.
- (ii) Name the Hormone secreted from Parathyroid gland. Write its function.
- (iii) Define Acro centric and Telo centric chromosome.
- (iv) Define DNA Polymerase and define RNA Polymerase.
- (v) Define Alkaptonuria.
- (vi) Define Benign Tumor.
- (vii) Define Apoptosis.
- (viii) Differentiate between Homologous organs and Analogous organs.
- (ix) Write any two components of preservation plan for endangered species.

SECTION-II

NOTE: - Attempt any three questions.

8 × 3 = 24

- 5.(a) Describe the major homeostatic functions of liver. 4
- (b) Discuss the role of Restriction endonucleases. 4
- 6.(a) Describe major functions of Skeletal System. 4
- (b) Describe the physical and chemical structure of Chromosome. 4
- 7.(a) Discuss the different hormones secreted by the anterior lobe of pituitary gland. 4
- (b) Define afforestation. Discuss the importance of forests. 4
- 8.(a) Discuss human female reproductive cycle. 4
- (b) What is dominance? Name its types and explain only one of them. 4
- 9.(a) Describe the role of nucleus in Development. 4
- (b) State the Hardy – Weinberg theorem. Discuss any two factors affecting gene frequency. 4

SECTION-III (PRACTICAL)**10. Attempt any three parts.****5 × 3 = 15**

- (A) Draw and label female urinogenital system of frog. 5
- (B) Sketch and label the forelimb of frog. 5
- (C) Write down the material & procedure of water content in soil 5
- (D) Write about material, procedure and result of study of phototropism. 5
- (E) Write short answers:- 5
 - (i) What is Food web? (ii) What is Crossing Over?
 - (iii) What is Blastulation? (iv) What are Hydrophytes?
 - (v) Write two characters of cardiac muscles.

BIOLOGY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

Note: 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. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) Earthworm is an ideal example of another type of tubular excretory system called as:-
 (A) Protonephridium (B) Metanephridium (C) Nephron (D) Kidneys
- (2) The animals, which produce metabolic heat at low level and also exchange quickly with environment are called:-
 (A) Endotherms (B) Ectotherms (C) Heterotherms (D) Exotherms
- (3) In synovial joints, a layer of connective tissue that surround it is called:-
 (A) Fibrous capsule (B) Ligament (C) Muscle (D) Cartilage
- (4) Epinasty, Hyponasty and Nutation are the types of:-
 (A) Growth movements (B) Nastic movements (C) Tropic movements (D) Turgor movements
- (5) The total gestation period in human being is usually about:-
 (A) 260 days (B) 280 days (C) 290 days (D) 180 days
- (6) During pregnancy, the hormones stimulate mammary glands development in preparation for lactation are:-
 (A) LTH (B) LH (C) Placental lactogen (D) Both A, C
- (7) The cancer cells, divide rapidly and invade surrounding cells, this spread of tumor cells is called:-
 (A) Epistasis (B) Metastasis (C) Meiosis (D) Movement of cells
- (8) In meiosis, crossing over occurs in:-
 (A) Leptotene (B) Zygotene (C) Pachytene (D) Diplotene
- (9) The neuron net of Hydra lacks:-
 (A) Neurons (B) Dendrites (C) Connections (D) Direction of impulse flow
- (10) The negative physiological changes in our body are called:-
 (A) Degeneration (B) Abnormalities (C) Aging (D) Regeneration
- (11) In Bacteria the newly synthesized mRNA is released in:-
 (A) Nucleus (B) cytoplasm (C) Mitochondria (D) Vacuole
- (12) _____ for the first time found white eye mutant in Drosophila.
 (A) Morgan (B) Correns (C) Mendel (D) Bridges
- (13) Recombinant DNA technology is used to produce bacteria that reproduce in large vats called:-
 (A) Totipotents (B) Biobuffer (C) Bioreactors (D) Biodegradation
- (14) _____ substance is used as source of Hydrogen for reducing CO_2 to sugar by first photosynthetic organisms.
 (A) H_2O (B) H_2S (C) H_2O_2 (D) H_2SO_4
- (15) The study of the relationships of organisms to their environment is called:-
 (A) Environmental science (B) Ecology (C) Biology (D) Mycology
- (16) The soil or terrestrial ecosystem have some adaptations for animals and plants:-
 (A) Supporting tissues (B) Retention of food (C) Temperature (D) Nutrients
- (17) _____ are called environmental buffers.
 (A) Animals (B) Rains (C) Trees (D) Rivers

INTERMEDIATE PART-II (12th CLASS)

BIOLOGY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

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 (A) Leptotene (B) Zygotene (C) Pachytene (D) Diplotene

BIOLOGY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

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BIOLOGY PAPER-II (OLD SCHEME) GROUP-I

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

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INTERMEDIATE PART-II (12th CLASS)**BIOLOGY PAPER-II (OLD SCHEME) GROUP-II**

TIME ALLOWED: 3.10 Hours

SUBJECTIVE

MAXIMUM MARKS: 83

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I**2. Attempt any Eight parts.****8 × 2 = 16**

- (i) What are Hydrophytes? What are their important adaptations?
- (ii) Differentiate between Ureotelic and Uricotelic animals.
- (iii) What is Uremia? Give its permanent treatment.
- (iv) Define Tactic Movements. Give its one type.
- (v) Differentiate between Hyaline Cartilage and Fibro Cartilage.
- (vi) Name unpaired bones of cranium.
- (vii) Define Climacteric.
- (viii) What is Apomixis?
- (ix) Define Hydrospheric Ecosystem.
- (x) Differentiate between Coniferous Alpine and Boreal ecosystem.
- (xi) Give the importance of Ozone layer.
- (xii) What is Tidal Power?

3. Attempt any Eight parts.**8 × 2 = 16**

- (i) Write any two roles of Auxins.
- (ii) Define feedback mechanism. Give one example also.
- (iii) Write down the role of Islets of Langerhans.
- (iv) Define the Jumping genes.
- (v) What is the purpose of test cross? Give an example.
- (vi) Differentiate between codominance and incomplete dominance.
- (vii) Give a brief account on gene sequencing.
- (viii) Define Recombinant DNA Technology. Give its two roles.
- (ix) Define Tissue Culture.
- (x) What is the difference between Population and Community?
- (xi) Define Autecology and Synecology.
- (xii) Define Symbiosis. Give its example.

4. Attempt any Six parts.**6 × 2 = 12**

- (i) What is Intercalary Meristems?
- (ii) What is the role of Gray Crescent in development?
- (iii) Define semi-conservative and conservative mode of DNA replication.
- (iv) What is Transformation?
- (v) What are Okazaki fragment of DNA?
- (vi) Write changes in Anaphase of Mitosis.
- (vii) What is Zygotene stage of Meiosis?
- (viii) What is Hydrothermal vent Hypothesis?
- (ix) What are Fossils? Where are they found?

SECTION-II

NOTE: - Attempt any three questions.

8 × 3 = 24

- 5.(a) Write the adaptations in plants to face high and low temperature.
- (b) What is a genomic library? How would you locate gene of interest?
- 6.(a) Discuss the structure of skeletal muscle.
- (b) Define genetic code. Give its important characteristics.
- 7.(a) Write note on any two Nervous disorders in human.
- (b) Give importance of forests in an area.
- 8.(a) Discuss the role of Phytochrome in flowering.
- (b) Describe genetics of colour – blindness.
- 9.(a) Write a note on Phenomenon of Apical dominance.
- (b) Describe comparative anatomy as an evidence of Evolution.

SECTION-III (PRACTICAL)**10. Attempt any three parts.****5 × 3 = 15**

- (A) Sketch and label of male urinogenital system of frog.
- (B) Draw and label fore limb of frog.
- (C) Write procedure to study muscle twitch.
- (D) Write procedure to determine water contents in soil.
- (E) Write short answers of the following questions:-
 - (i) What is Cloaca?
 - (ii) Name different types of muscle.
 - (iii) Define food web.
 - (iv) What is humus?
 - (v) What is primitive streak?

BIOLOGY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

MAXIMUM MARKS: 17

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Q.No.1

- (1) _____ is Heterotherm.
 (A) Hummingbird (B) Fish (C) Flying insect (D) Bird
- (2) The excretory product that requires minimum water for its elimination compare to others is called:-
 (A) Urea (B) Uric acid (C) Ammonia (D) Creatinine
- (3) The movement shown by the sperm of liver – worts towards archegonia is:-
 (A) Phototactic (B) Chemotactic (C) Haptonastic (D) Thermonastic
- (4) The vertebral column of human consist of:-
 (A) 23 vertebrae (B) 30 vertebrae (C) 33 vertebrae (D) 35 vertebrae
- (5) Pairing of an irrelevant stimulus with a natural primary stimulus that elicits an automatic response involves:- (A) Conditioning (B) Operent conditioning (C) Habituation (D) Imprinting
- (6) _____ hormone promotes closing of stomata under conditions of water stress.
 (A) Ethene (B) Cytokinins (C) Absciscic acid (D) Gibberellins
- (7) A reproductive cycle found in all female mammals except human being is:-
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- (9) The DNA duplex is coiled around a core of eight histone proteins forming a complex known as a:-
 (A) Nucleosome (B) Nucleotide (C) Nucleoside (D) Chromatin
- (10) Individuals have additional sex chromosome shows:-
 (A) Down's Syndrome (B) Klinefelter's Syndrome (C) Turner's Syndrome (D) Edward
- (11) Bivalent or tetrad formation is characterized by:-
 (A) Leptotene (B) Zygotene (C) Pachytene (D) Diplotene
- (12) _____ is the risk of a colour blind child in a family, when father is colour blind but mother is normal.
 (A) Zero % (B) 25 % (C) 50 % (D) 100 %
- (13) pSc101 plasmid has antibiotic resistance gene for:-
 (A) Tetracycline + ampicillin (B) Tetracycline (C) Macrolides (D) Erythromycin
- (14) Endosymbiont Hypothesis was first proposed by:-
 (A) Linnaeus (B) Lamarck (C) Lynn Margulis (D) Cuvier
- (15) The role a species plays in a community including behaviour and influence is called:-
 (A) Niche (B) Habitat (C) Environment (D) Ecosystem
- (16) _____ biome has been increased in area by human activities.
 (A) Savana (B) Grassland (C) Desert (D) Coniferous
- (17) In pure form the colour of Ozone is:-
 (A) Bluish (B) Reddish (C) Pinkish (D) Whitish

BIOLOGY PAPER-II (OLD SCHEME) GROUP-II

TIME ALLOWED: 20 Minutes

OBJECTIVE

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BIOLOGY PAPER-II (OLD SCHEME) GROUP-II

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BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN
OBJECTIVE KEY FOR INTERMEDIATE ANNUAL/SUPPLY EXAMINATION, 2018

Name of Subject: BIOLOGY

Session: _____

Group: 1st (old scheme)

Group: 2nd _____

Q. Nos	Paper Code 8461	Paper Code 8463	Paper Code 8465	Paper Code 8467
1	B	D	B	B
2	B	C	C	D
3	A	B	D	B
4	A	D	C	C
5	B	C	B	D
6	D	B	D	C
7	B	B	C	B
8	C	A	B	D
9	D	C	B	C
10	C	B	A	B
11	B	B	C	B
12	D	A	B	A
13	C	A	B	C
14	B	B	A	B
15	B	D	A	B
16	A	B	B	A
17	C	C	D	A
18				
19				
20				

Q. Nos	Paper Code 8462	Paper Code 8464	Paper Code 8466	Paper Code 8468
1	A	B	B	A
2	B	C	A	C
3	B	A	B	A
4	C	C	B	B
5	A	A	A	A
6	C	A	B	B
7	A	B	C	B
8	B	B	A	A
9	A	C	C	B
10	B	A	A	C
11	B	C	A	A
12	A	A	B	C
13	B	B	B	A
14	C	A	C	A
15	A	B	A	B
16	C	B	C	B
17	A	A	A	C
18				
19				
20				

پرچہ کیسے بایں سوال پرچہ مارکنگ Key

ہم نے مضمون بیالوجی پرچہ II گروپ I سیکم اول انٹر سالانہ امتحان 2018 کا سوالیہ پرچہ (Subjective & Objective) کو بنظر عین 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: 17/5/2018

S.#	Name	Designation	Institution	Mobile No	Signature
1	Dr. Syed Qasim Ali Shah	Assoc. Prof.	Govt. Emerson College Multan	0304-7268831	
2	Dr. M. Riaz	Asst. prof	Govt. Millat Degree College, MTN	0300-7356740	
3					
4					
5					

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

1	Muhammad Aslam Farooqi	Asso-Prof	Govt. Emerson College Multan	0333-76-22407	
2	Tamara Asle	A.P	Govt. College Civil Lines, Multan	03017443020	

19/5/18 تاریخ