

**INTERMEDIATE PART-II (12<sup>th</sup> CLASS)****BIOLOGY PAPER-II (NEW SCHEME) (SESSION 2015-2017) 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 Hyperoxaluria? What are its effects?
- (ii) Write two important functions of Liver.
- (iii) How Osmoregulation takes place in Marine Environment?
- (iv) What is Pulvinus? What is its function?
- (v) What are Paratonic Movements? Name its types.
- (vi) What is the difference between Compact and Spongy Bone?
- (vii) What are Fraternal Twins? What is its function?
- (viii) What is Corpus Luteum? What is its function?
- (ix) What is the location of Desert Ecosystem in Pakistan?
- (x) What is Profundal Zone? What is its source of Nutrition?
- (xi) Differentiate between Population Explosion and Population Pressure.
- (xii) What are Environmental Buffers? What are their effects?

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

- (i) What is the role of Cytokinins?
- (ii) Define Reflex action and Reflex arc.
- (iii) What is the role of Hind-brain?
- (iv) Differentiate between Sex Limited and Sex Influenced Traits.
- (v) Differentiate between Genotype and Phenotype.
- (vi) What is ZW – ZZ mechanism of sex determination?
- (vii) Why urine is preferred to isolate biotechnology products than milk?
- (viii) How to get a gene of interest?
- (ix) When a balloon catheter is used?
- (x) Name the six major terrestrial biomes.
- (xi) Define Autecology.
- (xii) Differentiate between Predator and Prey.

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

- (i) What is Hardy – Weinberg Theorem?
- (ii) What are Hydrothermal Vents?
- (iii) Differentiate between Apoptosis and Necrosis.
- (iv) How Meiosis is important for living individuals?
- (v) Discuss the role of Cytoplasm in development.
- (vi) Differentiate between Gerontology and Teratology.
- (vii) Sketch a Phosphodiester Bond.
- (viii) Discuss three types of RNA.
- (ix) Differentiate between Purines and Pyrimidines.

**SECTION-II****NOTE: - Attempt any three questions.**

- 5.(a) Describe different methods of Excretion in Plants. 4
- (b) Explain the Food chain and Food Web in an Ecosystem. 4
- 6.(a) What are Skeletal Muscles? Discuss their structure in detail. 4
- (b) Define Mutations. Describe point mutations with the help of an example. 4
- 7.(a) Compare Nervous System of Hydra with that of Planaria. 2 + 2
- (b) What are Renewable Resources? Explain any two of them. 1 + 1½ + 1½
- 8.(a) What are the functions of Placenta during Pregnancy? 4
- (b) Define and explain Incomplete Dominance with example. 4
- 9.(a) Explain the process of Aging. 4
- (b) Write a note on Endangered Species. 4

**BIOLOGY PAPER-II (NEW SCHEME) (SESSION 2015-2017) GROUP-I**

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**OBJECTIVE**

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Q.No.1

- (1) Liver also has numerous crucial functions of:-  
 (A) Osmoregulation (B) Homeostasis (C) Excretion (D) Thermoregulation
- (2) Sacrum is formed by the fusion of anterior:-  
 (A) Two bones (B) Three bones (C) Four bones (D) Five bones
- (3) Excess thyroxine produces a disease called:-  
 (A) Addison's (B) Cretinism (C) Graves (D) Epilapsy
- (4) The internal fertilization leads to internal development of embryo which gives birth to young one, such animals are called:-  
 (A) Oviparous (B) Viviparous (C) Ovaviviparous (D) Vivi – Ovaparous
- (5) The head can be regenerated in:-  
 (A) Earthworm (B) Frog (C) Leech (D) Grasshopper
- (6) The scientist who suggested that the information encoded within the DNA of chromosomes acts to specify particular enzymes was:-  
 (A) Griffith (B) Garrod (C) Graham (D) Ghosi
- (7) The chromosomes appear as thin threads having length of:-  
 (A)  $0.25\mu m$  to  $50\mu m$  (B)  $2.5\mu m$  to  $50\mu m$  (C)  $25\mu m$  to  $50\mu m$  (D)  $0.025\mu m$  to  $50\mu m$
- (8) About 20 % suffer from haemophilia B due to disturbance in factor:-  
 (A) ix (B) x (C) xi (D) xii
- (9) Hamilton O Smith isolated the first restriction enzyme in:-  
 (A) 1950 (B) 1960 (C) 1970 (D) 1980
- (10) The scientist who published Principles of Geology was:-  
 (A) Lamarck (B) Linnaeus (C) Myell (D) Lyell
- (11) The study of succession on a dry soil or rock is called:-  
 (A) Hydrosere (B) Xerosere (C) Derosere (D) Terosere
- (12) Felis bengalensis is the Zoological name of:-  
 (A) Leopard Cat (B) Leopard (C) Cat (D) Tiger
- (13) The lead(Pb) poisoning damages the human:-  
 (A) Nervous system (B) Brain (C) Skin (D) Breathing system
- (14) Among the vertebrates hagfishes are isotonic with the surrounding:-  
 (A) Fresh water (B) Sea's water (C) Pond's water (D) River's water
- (15) The membrane that bounds vacuole is called:-  
 (A) Tomoplast (B) Tonoplast (C) Monoplast (D) Tocoplast
- (16) The special condition of rest, which enables an embryo to survive the long periods is:-  
 (A) Root Dormancy (B) Shoot Dormancy (C) seed Dormancy (D) Plant Dormancy
- (17) In human cell, average cell cycle is about:-  
 (A) 14 hours (B) 24 hours (C) 34 hours (D) 44 hours



**BIOLOGY PAPER-II (NEW SCHEME) (SESSION 2015-2017) GROUP-I**

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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 do you mean by Hyperoxaluria?
- (ii) Define Panting.
- (iii) What do you mean by Pyrexia and Pyrogens?
- (iv) Define Appendicular Skeleton.
- (v) Differentiate between Microcephaly and Osteoarthritis.
- (vi) What do you mean by Disc – slip?
- (vii) Define Vernalisation.
- (viii) Differentiate between Oviparous and Viviparous.
- (ix) Name three zones in Lake Ecosystem.
- (x) Give the names of some major ecosystems on land in Pakistan.
- (xi) What do you mean by Nuclear Energy?
- (xii) Define Environmental Buffers.

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

- (i) What are Neurotransmitters? Give example.
- (ii) Give commercial application of Ethene.
- (iii) What is Imprinting?
- (iv) Define Epistasis and Pleiotropy.
- (v) What are Multiple Alleles? Give example.
- (vi) Explain MODY.
- (vii) What are Palindromic Sequences?
- (viii) Give uses of Bioreactors. Name a few products.
- (ix) Explain the importance of Gene Pharming.
- (x) Differentiate between Hydrosere and Xerosere.
- (xi) What is Succession? Name its types.
- (xii) Define Grazing. How Grazers affect the texture of the soil?

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

- (i) What are Inter Calary meristems? Give its function.
- (ii) What do you know about Neoblast Cells?
- (iii) Differentiate between Heterochromatin and Euchromatin.
- (iv) What is Promoter?
- (v) What is meant by Central Dogma? Give its function.
- (vi) What is meant by Non Disjunction?
- (vii) What are the symptoms of Turner's Syndrome?
- (viii) What do you know about Hydrothermal Vents?
- (ix) Define the term Homology. Give example.

**SECTION-II****NOTE: - Attempt any three questions.**

- 5.(a) Discuss Urinary System in Humans. 4
- (b) Draw the Nitrogen Cycle labelling all the steps. 4
- 6.(a) What are the main differences between Exoskeleton and Endoskeleton? Explain. 4
- (b) Describe the experimental work of the Meselson – Stahl about DNA replication. 4
- 7.(a) Explain structure and function of Forebrain in man. 4
- (b) Give an account of Eutrophication or Algal Bloom. 4
- 8.(a) What do you know about Male Reproductive System of Humans? 4
- (b) What is Erythroblastosis Foetalis? Write briefly. 4
- 9.(a) Describe growth Correlations in Plants. 4
- (b) Define Gene Frequency. Describe factors affecting Gene Frequency. 4



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Q.No.1

- (1) Of all the excretory products, the principal one is:-  
(A) Ammonia (B) Urea (C) Uric Acid (D) Bilirubin
- (2) The fishes which drink large amount of seas water and excrete concentrated urine are:-  
(A) Cartilaginous fishes (B) Bony fishes (C) Lung fishes (D) Jawless fishes
- (3) A disease caused by low level of calcium in the blood is called:-  
(A) Cramp (B) Paralysis (C) Tetany (D) Tetanus
- (4) \_\_\_\_\_ is unguligrade.  
(A) Monkey (B) Apes (C) Rabbit (D) Goat
- (5) The simplest form of learning is:-  
(A) Imprinting (B) Habituation (C) Insight learning (D) Latent learning
- (6) When sperms are in the tubules, the protection and nourishment is provided by:-  
(A) Sertoli cells (B) Interstitial cells (C) Epididymis (D) Seminiferous tubules
- (7) Diploid parthenogenesis may occur in:-  
(A) Wasps (B) Honey bee (C) Aphids (D) Ants
- (8) The shell over chick egg is secreted as it passes through:-  
(A) Ovary (B) Oviduct (C) Cloaca (D) Uterus
- (9) Erwin Chargaff showed that the amount of guanine in DNA is always equal to:-  
(A) Cytosine (B) Thymine (C) Adenine (D) Uracil
- (10) Crossing over during meiosis occurs at the stage of:-  
(A) Leptotene (B) Zygotene (C) Diplotene (D) Pachytene
- (11) Cell death due to tissue damage is called:-  
(A) Apoptosis (B) Metastasis (C) Necrosis (D) Suicide
- (12) The gene pairs which contribute to wheat grain colour are:-  
(A) One (B) Two (C) Three (D) Four
- (13) Taq polymerase is obtained from:-  
(A) Fungi (B) Algae (C) Bacteria (D) Virus
- (14) In man the vestigial organ is:-  
(A) Ear muscles (B) Nictitating membrane (C) Nose bone (D) Pelvis and leg bones
- (15) Relationship between Rimoras and Sharks is an example of:-  
(A) Commensalism (B) Mutualism (C) Predation (D) Parasitism
- (16) Desert ecosystem of Bhakkar and Mianwali is called:-  
(A) Thar (B) Thal (C) Cholistan (D) Rohi
- (17) \_\_\_\_\_ acts as environmental buffer.  
(A) Desert (B) Ocean (C) Forest (D) Lakes

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- (14) Erwin Chargaff showed that the amount of guanine in DNA is always equal to:-  
 (A) Cytosine (B) Thymine (C) Adenine (D) Uracil
- (15) Crossing over during meiosis occurs at the stage of:-  
 (A) Leptotene (B) Zygotene (C) Diplotene (D) Pachytene
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 (A) Desert (B) Ocean (C) Forest (D) Lakes
- (11) Of all the excretory products, the principal one is:-  
 (A) Ammonia (B) Urea (C) Uric Acid (D) Bilirubin
- (12) The fishes which drink large amount of seas water and excrete concentrated urine are:-  
 (A) Cartilaginous fishes (B) Bony fishes (C) Lung fishes (D) Jawless fishes
- (13) A disease caused by low level of calcium in the blood is called:-  
 (A) Cramp (B) Paralysis (C) Tetany (D) Tetanus
- (14) \_\_\_\_\_ is unguligrade.  
 (A) Monkey (B) Apes (C) Rabbit (D) Goat
- (15) The simplest form of learning is:-  
 (A) Imprinting (B) Habituation (C) Insight learning (D) Latent learning
- (16) When sperms are in the tubules, the protection and nourishment is provided by:-  
 (A) Sertoli cells (B) Interstitial cells (C) Epididymis (D) Seminiferous tubules
- (17) Diploid parthenogenesis may occur in:-  
 (A) Wasps (B) Honey bee (C) Aphids (D) Ants

**BIOLOGY PAPER-II (NEW SCHEME) (SESSION 2015-2017) 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 circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles 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 question on this sheet of OBJECTIVE PAPER.

Q.No.1

- (1) The simplest form of learning is:-  
(A) Imprinting (B) Habituation (C) Insight learning (D) Latent learning
- (2) When sperms are in the tubules, the protection and nourishment is provided by:-  
(A) Sertoli cells (B) Interstitial cells (C) Epididymis (D) Seminiferous tubules
- (3) Diploid parthenogenesis may occur in:-  
(A) Wasps (B) Honey bee (C) Aphids (D) Ants
- (4) The shell over chick egg is secreted as it passes through:-  
(A) Ovary (B) Oviduct (C) Cloaca (D) Uterus
- (5) Erwin Chargaff showed that the amount of guanine in DNA is always equal to:-  
(A) Cytosine (B) Thymine (C) Adenine (D) Uracil
- (6) Crossing over during meiosis occurs at the stage of:-  
(A) Leptotene (B) Zygotene (C) Diplotene (D) Pachytene
- (7) Cell death due to tissue damage is called:-  
(A) Apoptosis (B) Metastasis (C) Necrosis (D) Suicide
- (8) The gene pairs which contribute to wheat grain colour are:-  
(A) One (B) Two (C) Three (D) Four
- (9) Taq polymerase is obtained from:-  
(A) Fungi (B) Algae (C) Bacteria (D) Virus
- (10) In man the vestigial organ is:-  
(A) Ear muscles (B) Nictitating membrane (C) Nose bone (D) Pelvis and leg bones
- (11) Relationship between Rimoras and Sharks is an example of:-  
(A) Commensalism (B) Mutualism (C) Predation (D) Parasitism
- (12) Desert ecosystem of Bhakkar and Mianwali is called:-  
(A) Thar (B) Thal (C) Cholistan (D) Rohi
- (13) \_\_\_\_\_ acts as environmental buffer.  
(A) Desert (B) Ocean (C) Forest (D) Lakes
- (14) Of all the excretory products, the principal one is:-  
(A) Ammonia (B) Urea (C) Uric Acid (D) Bilirubin
- (15) The fishes which drink large amount of seas water and excrete concentrated urine are:-  
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- (17) \_\_\_\_\_ is unguligrade.  
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**BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,  
MULTAN**

**OBJECTIVE KEY FOR INTER (PART-I / II) Annual Examination, 2017.**

Name of Subject 2015-2017

Session 2015-2017

Group: 1st (New)

Group: 2nd (New)

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

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

**سرٹیفیکیٹ بابت تصحیح سوالیہ پرچہ/مارکنگ Key**

ہم نے مندرجہ ذیل پرچہ II گروپ Inter سیم New انٹر میڈیٹ 2017 کا سوالیہ پرچہ جانچ کر تصدیق کر دیا ہے۔ اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہیں ہے۔ ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کر لیا ہے یہ Version آپس میں مطابقت رکھتے ہیں اور سلیبس (Syllabus) کے مطابق بھی ہیں۔ نیز اس پرچہ کی Key کی بابت بھی تصدیق کی جاتی ہے کہ یہ بھی درست بنائی گئی ہے اس میں بھی کسی قسم کی کوئی غلطی نہیں 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۔

PREPARED & CHECKED BY

Sr.No Name

Designation Institution

Mobile No.

Signature.