

Paper Code Number: 4463	2023 (1 st -A) INTERMEDIATE PART-II (12 th Class)		Roll No: _____		
BIOLOGY PAPER-II GROUP-I <i>MTN-12-1-23</i>					
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	During cell division, nuclear division is called:	Cytokinesis	Karyokinesis	Karyotype	Plasmolysis
2	The gene of blue opsins is present on:	Autosome 9	Autosome 1	Autosome 7	Autosome 3
3	In cystic fibrosis transmission of which is faulty resulting in disease?	Magnesium	Calcium	Fluoride	Chloride
4	During PCR how DNA double helix is separated:	By heat treatment	By use of DNA polymerase	By use of DNA helicase	By use of DNA ligase
5	Organs which are functionally similar but have different structures:	Hypologous	Homologous	Unilogous	Analogous
6	Bacteria and fungi are examples of:	Predators	Consumers	Decomposers	Detritivores
7	Zoological name of Rhesus monkey is:	Felis leo	Macaca mulatta	Solenopros antrianus	Felis bengalensis
8	The decline in thickness of ozone layer is caused by increasing level of:	Chlorofluorocarbon	Nitrogen	Chlorine	CO ₂
9	Which portion of nephron is under control of ADH?	Bowman's capsule	Ascending limb	Distal end and collecting duct	Descending limb
10	How many bones are involved in the formation of each half of the hand?	3 bones	2 bones	4 bones	5 bones
11	What do we call the cell surface membrane of a muscle fiber?	Sarcomere	Twitch fiber	Sarcolemma	Capsule
12	Effectors in human body which respond to stimulus are?	Glands only	Bones	Muscles only	Glands and muscles
13	β - cells of pancreas secrete hormone:	Insulin	ADH	Glucagon	Gastrin
14	Which disease is sexually transmitted?	Tuberculosis	AIDS	Dengue fever	Cholera
15	Primary growth is due to the activity of:	Apical meristem	Intercalary meristem	Lateral meristem	Cork cambium
16	rRNA in eukaryotes is synthesized by:	DNA ligase	RNA polymerase II	RNA polymerase III	RNA polymerase I
17	Start codon AUG represents the amino acid:	Serine	Proline	Methionine	Valine

(7)

2023 (1 st -A)		Roll No: <u>M/TN-12-1-23</u>
INTERMEDIATE PART-II (12 th Class)		
BIOLOGY PAPER-II GROUP-I		
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

Attempt any eight parts.

8 X 2 = 16

- (a) Why leaves are called excretophores?
- (b) How most plants have adapted to survive in heat stress?
- (c) Why does body temperature increase in fever?
- (d) Differentiate between thermonasty and photonasty.
- (e) Name unpaired facial bones.
- (f) What is muscle fatigue? Give its cause.
- (g) In which way does germinating pollen tube help the plant?
- (h) How can you say that water is compulsory for external fertilization?
- (i) Give four examples of desert ecosystems in Pakistan.
- (j) What do you know about plant and animal life in tundra?
- (k) Give four ways by which we can save energy.
- (l) Why forests are important for us?

8 X 2 = 16

Attempt any eight parts.

- (a) Differentiate between Habituation and Imprinting.
- (b) Name the synthetic auxins and describe their commercial applications.
- (c) Why anterior lobe of pituitary gland is called master gland?
- (d) What is sex limited trait? Give an example.
- (e) How Epistasis differ from dominance?
- (f) What do you know about protanopia and deuteranopia?
- (g) How recombinant DNA is formed?
- (h) What are the two primary goals of human genome project?
- (i) Which type of technique is used to replace faulty genes in the body?
- (j) How nitrogen depletion from soil is being overcome in nature?
- (k) Sketch food chain to show various trophic levels?
- (l) How moderate grazing is helpful for ecosystem?

6 X 2 = 12

Attempt any six parts.

- (a) What is Meristem? Names its types.
- (b) Differentiate between Area Pellucida and Area Opaca.
- (c) What are the properties of Genetic code?
- (d) How transcription bubble is formed?
- (e) What is the chemical composition of chromosome?
- (f) What is Down's syndrome? Give their symptoms.
- (g) Can you differentiate between cancerous and normal cells?
- (h) What are vestigial organs? Give example
- (i) What was the peculiar features of Finches of Galapagos?

SECTION-II

Attempt any three questions.

3 X 8 = 24

- (a) What is dialysis? Explain procedures of hemodialysis and peritoneal dialysis. 4
- (b) What is mitosis? How does mitosis take place in animal cell? 4
- (c) How does a fractured bone recover to its normal position after physical trauma? 4
- (d) What is Grazing? Give its significance. 4
- (e) Define Nerve impulse. Explain the mechanism involved by labelled diagram. 4
- (f) How did evolution proceed from Prokaryotes to Eukaryotes? 4
- (g) State the techniques of raising genetically identical plants and animals. 2 + 2 = 4
- (h) How does an allele affect its partner in a gene pair completely and incompletely? 2 + 2 = 4
- (i) Write down the process of development of nervous system from ectoderm in chick. 4
- (j) What is recombinant DNA? Explain the process of expression of Recombinant DNA. 4

Paper Code Number: 4466	2023 (1 st -A) INTERMEDIATE PART-II (12 th Class)	Roll No: _____			
BIOLOGY PAPER-II GROUP-II <i>M/TN-12-25-23</i>					
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 plan of new cell wall formation in a dividing cell is determined by:	Endoplasmic reticulum	Ribosomes	Golgi bodies	Microtubules
2	Which one of the following genotypic ratio is observed for cross between heterozygous round and homozygous wrinkled seed in pea?	3 : 1	1 : 1	2 : 1	1 : 3
3	Which one is used to make the animal eggs transgenic?	By agro bacterium	Particle gun	Micro propagation	Vortex mixing
4	Which of the following organisms are used to prevent airborne chemical pollutants?	Transgenic bacteria	Transgenic Plants	Transgenic Animals	Transgenic Fungi
5	The prokaryotes may have arisen more than _____ billion years ago.	6.5	5.5	4.5	3.5
6	Succession is initiated by a few hardy invaders called:	Pioneers	Pioneers	Parasites	Grazers
7	The desert ecosystem of Southern Punjab is:	Thar	Thar	Cholistan	Sahara
8	A good example of environmental buffer is:	Forest	Forest	Lake	Desert
9	Fresh water flatworms excrete very dilute _____.	Plasma	Plasma	Urine	Uric acid
10	Mature bone cells are called _____.	Osteoblast	Osteoclast	Chondrocytes	Osteocytes
11	Each myosin filament is surrounded by _____ actin filaments at each end.	03	06	09	12
12	The number of spinal nerves in humans:	31 pairs	12 pairs	24 pairs	62 pairs
13	The selective weed killer is:	NAA	IPA	2, 4 D	Ethene
14	Menstruation usually lasts for:	3 – 7 days	3 – 9 days	1 – 3 days	4 – 8 days
15	Meristems are growing tissues or group of cells that retain the potential to:	Regeneration	Penetration	Survive	Divide
16	In E. Coli, the true replicating enzyme is:	DNA polymerase I	DNA polymerase II	DNA polymerase III	RNA polymerase III
17	Which does one bear greater molecular mass among following nitrogenous bases of nucleic acid?	Guanine	Cytosine	Thymine	Uracil

SECTION-I

2. Attempt any eight parts.

8 × 2 = 16

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- (ii) How most plants have adapted to survive in heat stress?
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- (iv) Differentiate between thermonasty and photonasty.
- (v) Name unpaired facial bones.
- (vi) What is muscle fatigue? Give its cause.
- (vii) In which way does germinating pollen tube help the plant?
- (viii) How can you say that water is compulsory for external fertilization?
- (ix) Give four examples of desert ecosystems in Pakistan.
- (x) What do you know about plant and animal life in tundra?
- (xi) Give four ways by which we can save energy.
- (xii) Why forests are important for us?

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3. Attempt any eight parts.

- (i) Differentiate between Habituation and Imprinting.
- (ii) Name the synthetic auxins and describe their commercial applications.
- (iii) Why anterior lobe of pituitary gland is called master gland?
- (iv) What is sex limited trait? Give an example.
- (v) How Epistasis differ from dominance?
- (vi) What do you know about protanopia and deuteranopia?
- (vii) How recombinant DNA is formed?
- (viii) What are the two primary goals of human genome project?
- (ix) Which type of technique is used to replace faulty genes in the body?
- (x) How nitrogen depletion from soil is being overcome in nature?
- (xi) Sketch food chain to show various trophic levels?
- (xii) How moderate grazing is helpful for ecosystem?

6 × 2 = 12

4. Attempt any six parts.

- (i) What is Meristem? Names its types.
- (ii) Differentiate between Area Pellucida and Area Opaca.
- (iii) What are the properties of Genetic code?
- (iv) How transcription bubble is formed?
- (v) What is the chemical composition of chromosome?
- (vi) What is Down's syndrome? Give their symptoms.
- (vii) Can you differentiate between cancerous and normal cells?
- (viii) What are vestigial organs? Give example
- (ix) What was the peculiar features of Finches of Galapagos?

SECTION-II

NOTE: Attempt any three questions.

3 × 8 = 24

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|-------|---|-----------|
| 5.(a) | What is dialysis? Explain procedures of hemodialysis and peritoneal dialysis. | 4 |
| (b) | What is mitosis? How does mitosis take place in animal cell? | 4 |
| 6.(a) | How does a fractured bone recover to its normal position after physical trauma? | 4 |
| (b) | What is Grazing? Give its significance. | 4 |
| 7.(a) | Define Nerve impulse. Explain the mechanism involved by labelled diagram. | 4 |
| (b) | How did evolution proceed from Prokaryotes to Eukaryotes? | 4 |
| 8.(a) | State the techniques of raising genetically identical plants and animals. | 2 + 2 = 4 |
| (b) | How does an allele affect its partner in a gene pair completely and incompletely? | 2 + 2 = 4 |
| 9.(a) | Write down the process of development of nervous system from ectoderm in chick. | 4 |
| (b) | What is recombinant DNA? Explain the process of expression of Recombinant DNA. | 4 |