



UNIVERSITY OF THE PUNJAB

Roll No.

Second Semester - 2017
Examination: B.S. 4 Years Programme

PAPER: Biology -I
Course Code: BIO-111 / BIO-12116

TIME ALLOWED: 30 mins.
MAX. MARKS: 10

Attempt this Paper on this Question Sheet only.

SECTION I

(OBJECTIVE)

Q. No. 1: Encircle the correct answer. (10)

1. Fungal cell walls contain the polymer -----.
(a). Cellulose (b). Lignin
(c). Chitin (d). Suberin
2. Starch is an example of -----
(a). Monosaccharide (b). Polysaccharides
(c). Oligosaccharide (d). None of these
3. Protein is made up of -----.
(a). DNA (b). Amino acids
(c). DNA & Lipids (d). Chromosomes
4. The duration of mitosis in cell cycle is -----.
(a). 40min (b). 1 hour
(c). 30min (d). None of these
5. Asters and spindles are called -----.
(a). kinetochore (b). Mitotic apparatus
(c). Equatorial plate (d). None of these
6. TMV is a -----.
(a). DNA virus (b). RNA virus
(c). Both a & b (d). None of these
7. A pattern of interlocking food chains is called -----.
(a). Food web (b). Grazing food chains
(c). Trophic level (d). None of these
8. Which is used as a vector in genetic Engineering?
(a). Plants (b). Animals
(c). Plasmids (d). Nematodes
9. A Protein is a ----- ion.
(a). Polyvalent (b). Monovalent
(c). Divalent (d). None
10. Hydra belongs to the Phylum -----.
(a). Coelentrata (b). Planaria
(c). Porifera (d). Protozoa



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TIME ALLOWED: 2 hrs. & 30 mins.
MAX. MARKS: 50

Attempt this Paper on Separate Answer Sheet provided.

SECTION II

Q. No. 2: Give brief answers of following questions. (10 × 2)

1. Differentiate G₁ phase and G₂ phase of Cell cycle.
2. What is difference between Algae and Fungi?
3. Draw and label different stages of Mitosis.
4. How Law of Independent assortment is different from Law of segregation?
5. Write structure of an amino acid.
6. Differentiate between the terms 'Population', 'Community' and 'Ecosystem'.
7. What are Prions?
8. Give different types of chromosomes on the basis of Centromere.
9. Differentiate Gram positive and Gram negative bacteria on the basis of chemical composition of cell wall.
10. What are amphibious plants? Write down their main characteristics.

SECTION III

- Q. No. 3: a). What is meant by β -pleated sheets in protein structure? (5)
b). What are the biological roles of Proteins? (5)
- Q. No. 4: Why meiosis is called reductional division and what is its significance? (5)
- Q. No. 5: Give structure and function of DNA. (5)
- Q. No. 6: Explain structure and function of mitochondria. (10)



UNIVERSITY OF THE PUNJAB

Third Semester 2017
Examination: B.S. 4 Years Programme

Roll No.

PAPER: Biology-II
Course Code: BIO-211/21116

TIME ALLOWED: 2 hrs. & 30 mins.
MAX. MARKS: 50

Attempt this Paper on Separate Answer Sheet provided.

SUBJECTIVE

SECTION II

Q. No. 2: Give brief answers of following questions. (10 × 2)

1. What is difference between diastole and systole?
2. What is speciation and how it is formed?
3. What is protonephridia?
4. What are different modes of nutrition in plants?
5. What is neuron and draw its structure?
6. What are amphibious plants?
7. Draw and label different parts of a flower.
8. What is difference between Plant and animal cell?
9. Differentiate between the terms 'Population', 'Community' and 'Ecosystem'.
10. Give the names of six major ecosystems of world.

SECTION III

Q. No. 3: Explain the pathway of water movement in roots of plants. (5)

Q. No. 4: Define and draw cell cycle. (5)

Q. No. 5: Draw and describe sexual reproductive cycle in Angiospermic plants. (10)

Q. No. 6: What is importance of Homeostasis? (5)

Q. No. 7: Draw and label the L.S. of Heart. (5)



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Roll No.

Third Semester 2017
Examination: B.S. 4 Years Programme

PAPER: Biology
Course Code: BIO-112

TIME ALLOWED: 30 mins.
MAX. MARKS: 10

Attempt this Paper on this Question Sheet only.

OBJECTIVE

- Q. No. 1: Encircle the correct answer. (10)
- Chemical reactions in living cells are accelerated by biological catalysts known as
A). Hormones
B). Enzymes
C). Proteins
 - What is the major component of Plant cell walls?
A). Cellulose
B). Chitin
C). Glucan
D). Both A & B
 - Glucose is an example of
A). Monosaccharide
B). Oligosaccharides
C). Polysaccharides
D). Disaccharides
 - A common neurotransmitter is -----
A). acetyl choline
B). glucose
C). oxygen
D). Thyroid Stimulating Hormone (TSH)
 - are comprised of ----- which are groups of interbreeding individuals of the same species.
A). Communities, Populations
B). None of these
C). Communities, families
D). Families, Populations
 - The non-vascular plants are
A). Bryophytes
B). Pteridophytes
C). Gymnosperms
D). Angiosperms
 - A Pattern of interlocking food chains is called
A). Grazing food chain
B). Food web
C). Trophic level
D). None of these
 - Hormones secreted by posterior pituitary are -----
A). TSH
B). MSH & GH
C). Oxytocin & ADH
D). FSH
 - The science of relationship between organisms and their environment is called
A). Ecology
B). Environmental biology
C). Physiology
D). Bionomics
 - In the human stomach, ----- are digested by the enzyme, pepsin, and most ----- are killed by the low pH from HCl.
A). Proteins, bacteria
B). Starch, amoebas
C). Proteins, fungi
D). starch, fungi



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TIME ALLOWED: 2 hrs. & 30 mins.
MAX. MARKS: 50

Attempt this Paper on Separate Answer Sheet provided.

SUBJECTIVE

SECTION II

Q. No. 2: Give brief answers of following questions. (10 × 2)

1. Differentiate Prophase of mitosis from Prophase of meiosis.
2. What is speciation and how it is formed?
3. What is protonephridia?
4. What are different modes of nutrition in plants?
5. What is neuron and draw its structure?
6. What are amphibious plants?
7. Draw and label different parts of a flower.
8. What is difference between Plant and animal cell?
9. Differentiate between the terms 'Population', 'Community' and 'Ecosystem'.
10. How law of independent assortment is different from law of segregation?

SECTION III

Q. No. 3: Why meiosis is called reductional division and what is its significance? (5)

Q. No. 4: Define and draw cell cycle. (5)

Q. No. 5: Give structure and function of DNA. (10)

Q. No. 6: Explain in detail hormones of pituitary gland. (10)