DGK.

PAPER CODE - 8467
(12th CLASS – 12018)

BIOLOGY
FIRST GROUP (NEW COURSE)
ACADEMIC SESSION: 2015-17 to 2016-18

401348

TIME: 20 MINUTES
MARKS: 17

OBJECTIVE

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.

QUESTION NO. 1

1	The condensation of chromosomes reaches to its maximum during (A) Pachytene (B) Zygotene (C) Diakinesis (D) Leptotene
2	The microtubules are composed of traces of RNA and a protein (A) Actin (B) Myosin (C) Tubulin (D) Actinin
3	Human skin colour is a quantitative trait which is controlled by pairs of genes (A) 5 - 8 (B) 4 - 8 (C) 3 - 6 (D) 4 - 7
4	Patients of cystic fibrosis often die due to numerous infections of the (A) Digestive tract (B) Excretory tract (C) Respiratory tract (D) Reproductive tract
5	A respiratory protein found in all aerobic species is the (A) Cytochrome-a (B) Cytochrome-b (C) Cytochrome-c (D) Cytochrome-d
6	Several bacteria in the soil are able to oxidize ammonia or ammonium ions, this oxidation is known as (A) Ammonification (B) Nitrification (C) Oxidation (D) Denitrification
7	A dominant plant of the deciduous forest is the (A) Cactus (B) Euphorbia (C) Acacia (D) Taxus baccata
8	All of the following diseases are related to nutritional deficiency except (A) Alzheimer (B) Anemia (C) Beriberi (D) Scurvy
9	Uric acid is produced from the metabolism of (A) Nucleic acid (B) Fatty acids (C) Carbohydrates (D) Lipids
10	In each nephron inner end form a cup shaped swelling called (A) Glomerulus (B) Henle's loop (C) Bowman's capsule (D) Pelvis
11	Euglena is able to change its direction by the active contraction of (A) Undulating membrane (B) Myonemes (C) Flagella (D) Cilium
12	Digitigrade mammals tend to walk on their (A) Soles (B) Digits (C) Tips of the toes (D) Tips of the fingers
13	Higher form of learning is the (A) Conditioned reflex type-I (B) Imprinting (C) Insight learning (D) Latent learning
14	Rapid aging and low resistance to environmental stress and disease are limitations for (A) Fragmentation (B) Budding (C) Cloning (D) Regeneration
15	Photoperiod affects flowering when shoot meristem start producing (A)Lateral buds (B) Leaves (C) Lateral roots (D) Floral buds
16	Secondary growth leads to an increase in the diameter of the (A)Stem (B) Root (C) Leaf (D) Stem and Root
17	A combination of three nucleotides of DNA that specifies an amino acid is called (A) Cistron (B) Anticodon (C) Entron (D) Genetic code

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BIOLOGY (12th CLASS - 12018) 2018
FIRST GROUP (NEW COURSE) **SUBJECTIVE** TIME: 2.40 HOURS
ACADEMIC SESSION: 2015 -17 to 2016-18 MARKS: 68

SECTION-I

QUESTION NO. 2 Write short answers any Eight (8) questions of the following 16

1	What is the evolutionary importance of ureotely and uricotely?
2	Write different methods of kidney stone removal.
3	Describe role of aldosteron and anti diuretic hormone in kidney.
4	Describe various stages of ecdysis.
5	What are ball and socket joints? Give one example.
6	Define rickets. Suggest its remedy.
7	How implantation differs from gestation?
8	What is menopause? Which factors affect reproductive cycle in female?
9	Describe role of bacteria in eutrophication.
10	What is productivity of an ecosystem? Write the names of its types..
11	What are the effects of ozone depletion?
12	How energy can be produced from solid wastes ?

QUESTION NO. 3 Write short answers any Eight (8) questions of the following 16

1	Define Biorhythm. Give its types
2	What is reflex arc?
3	Define Acromegaly. Give its causes.
4	What is one-gene one polypeptide hypothesis?
5	Define gene pool.
6	Differentiate between genotype and phenotype.
7	Define molecular scissors. How were they obtained?
8	Name the salt tolerant plants and give its role in future.
9	What is gene pharming?
10	Define mutualism. Give one example.
11	Differentiate between hydrosere and xerosere.
12	Discuss the role of decomposers in an ecosystem.

QUESTION NO. 4 Write short answers any Six (6) questions of the following 12

1	What are neoblasts ?
2	Name the phases of plants growth.
3	Define nucleosome.
4	Difference between purine and pyrimidine,
5	What is difference between area pellucida and area opaca ?
6	Define chromosomal Non-disjunction
7	What is mitotic apparatus ?
8	What is Hardy-Weinberg Theorem? Give its equation.
9	What are hydrothermal vents?

SECTION-II

Note: Attempt any Three questions from this section 8 x 3 = 24

5.(A)	Describe the excretory system of Cockroach
(B)	Write a note on nitrogen cycle
6.(A)	Explain the structure of skeletal muscle.
(B)	What is karyotype? Describe types of chromosomes on the basis of centromere.
7.(A)	Enlist the Gonadotrophic hormones and write function of each.
(B)	What are non-renewable resources and explain its two types only.
8.(A)	Describe the human female reproductive system.
(B)	Describe genetics of Hemophilia.
9.(A)	What is Differentiation? Give the five stages of differentiation in plants.
(B)	Describe the factors which effect on gene frequency.

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OLOGY
OND GROUP (NEW COURSE)
ADEMIC SESSION: 2015 -17 to 2016-18

TIME: 20 MINUTES
MARKS: 17

OBJECTIVE

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.

QUESTION NO. 1

1 Plant hormone Florigen is produced in
(A) Flowers (B) Roots (C) Stem (D) Leaves

2 In plants which light enhances cell division
(A) Infra red (B) Blue (C) Red (D) Ultra violet

3 Okazaki fragments are synthesized by
(A) DNA ligase (B) RNA polymerase (C) DNA polymerase (D) Primase

4 Which one is absent in animal cell
(A) Spindle (B) Centriole (C) Chromatids (D) Phragmoplast

5 Synapsis occurs during
(A) Pachytene (B) Leptotene (C) Zygotene (D) Diplotene

6 ABO blood groups were discovered by
(A) Punnet (B) Landsteiner (C) Bernstein (D) T.H. Morgan

7 Meristem is
(A) Virus free (B) Bacteria free (C) Fungus free (D) Pathogen free

8 Which one of the following believes in theory of special creation?
(A) Linnaeus (B) Darwin (C) Lyell (D) Lamarck

9 In ecosystem ,second trophic level is consisted of
(A) Producer (B) Primary consumer (C) Secondary consumer (D) Tertiary consumer

10 Coniferous forests located at high altitude are
(A) Alpine (B) Boreal (C) Taiga (D) Arctic

11 The cheapest source of energy is
(A) Fossil fuels (B) Geothermal energy (C) Hydroelectric power (D) Nuclear energy

12 Liver acts as a store house for
(A) Bile (B) Albumin (C) R.B.Cs (D) Iron

13 Excretory structures present in cockroach are
(A) Nephridia (B) Malpighian tubules (C) Flame cells (D) Contractile vacuole

14 The earliest form of muscles to evolve is
(A) Cardiac muscles (B) Smooth muscles (C) Skeletal muscles (D)Involuntary muscles

15 Which animal shows Digitigrade mode of locomotion?
(A) Bear (B) Dear (C) Rabbit (D) Horse

16 Excess of which hormone causes Addison's disease.
(A) FSH (B) MSH (C) LTH (D) TSH

17 Corpus luteum starts secreting a hormone called
(A) Oestrogen (B) Progesterone (C) Oxytocin (D) Testosterone

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BIOLOGY

SUBJECTIVE

SECOND GROUP (NEW COURSE)

ACADEMIC SESSION: 2015 -17 to 2016-18

TIME: 2.40 HOURS

MARKS: 68

SECTION-I

QUESTION NO. 2 Write short answers any Eight (8) questions of the following 16

1	Differentiate between re-absorption and secretion in nephron.
2	What is counter current multiplier?
3	Differentiate between shivering and non-shivering thermogenesis
4	What is an exoskeleton? Name its two layers.
5	Differentiate between hyaline and elastic cartilage.
6	What is sliding filament model?
7	Differentiate between lactation and gestation.
8	What is Gonorrhoa and who caused it ?
9	Differentiate between hydrospheric and fresh water ecosystems.
10	What is desertification? Quote one example.
11	What are endangered species? Give examples.
12	What is acid rain? Write its any two effects.

QUESTION NO. 3 Write short answers any Eight (8) questions of the following 16

1	Define reflex arc.
2	What do you know about Gastrin?
3	Define habituation with an example.
4	Write down two methods for solving disputed paternity.
5	Differentiate between linkage and linkage group.
6	How sex is determined in plants?
7	What are palindromic sequences?
8	Define gel electrophoresis.
9	How gene therapy is carried out?
10	Define Biotic and A-biotic factors of an ecosystem.
11	Differentiate between hydrosere and xerosere.
12	Write down two remedies of nitrogen depletion from soil.

QUESTION NO. 4 Write short answers any Six (6) questions of the following 12

1	What is discoidal cleavage?
2	How area opaca differs from area pellucida?
3	What are mutagens? Give one example.
4	Differentiate between conservative and semi-conservative replication of DNA.
5	Write down the structural formulae of Adenine and Guanine.
6	What is metastasis?
7	Differentiate between necrosis and apoptosis.
8	State Hardy-Weinberg Theorem.
9	What are hydrothermal vents?

SECTION-II

Note: Attempt any Three (3) questions from this section 8 x 3 = 24

5.(A)	Explain urinary system in humans.
(B)	What is food web? How it is constructed to show various trophic level.
6.(A)	Define joints. How are they classified ? Explain
(B)	What is mutation ? Describe its types in detail.
7.(A)	Write a note on Auxins. Give its commercial application.
(B)	Discuss importance of Forest.
8.(A)	Define reproduction. Compare asexual reproduction with sexual reproduction.
(B)	Explain incomplete dominance with an example.
9.(A)	What is aging? How will you explain this process?
(B)	What are the endangered species? What measures could be adapted for their preservation?