FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI

School of biological science Time: ½ hr

Department of biological science(Bio102/104) 2013/2014

Rain Semester Test

REG NO: ..... DEPT: .....

NAME: .....

1. Foundation of genetic engineering and modern biotechnology was laid down in the year.....
2. Improved palatability is a character of interest used in the improvement of.....
3. Crystal protein (cry) is a toxic protein obtained from..... and used in pest management.
4. Polygalacturonase is an enzyme which..... Degrades the cell wall of tomato.
5. Pesticides used to prevent the spread of bacteria are called.....
6. A chemical that shows complete resistance to biodegradation is called.....chemical.
7. .....are the keys to the adaptive success of plants on land.
8. The small pore that develops into a male gametophyte is called.....
9. Angiosperms have only one division called.....
10. Among the invertebrates, the true closed blood system is found among.....
11. The excretory organ found in flatworm is called.....
12. Animals with two germ layers are .....
13. The modern binomial naming system of plants and animals is based on the work of.....
14. The student of Aristotle who documented a classification of 480 plants is.....
15. The highest taxon is.....
16. ..... Animals lay shelled amniotic eggs.
17. Animals whose body temperature fluctuate are called.....
18. Plants with undifferentiated bodies are classified as.....
19. In ferns, ovum that clothes itself is known as.....
20. The pioneers of terrestrial ecosystem is.....

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI
School of biological science(Bio102/104) Time: 1 ½ hrs
Department of biological science 2013/2014 rain semester exam

SECTION A

1. Multicellular animals are known as (a) multiple cells (b) metazoan (c) schphozoa (d) hydrozoa
2. Sponges belong to the phylum (a) Porifera (b) Coelenterate (c) Cubozoa (d) Platyhelminthes
3. The cartilaginous fish possess .....Scales (a) cycloid (b) placoid (c) fingerlike (d) homodont
4. The release of energy from substances in all living in all living cell is known as (a) respiration (b) nutrition (c) reproduction (d) irritability
5. Cloning is best described as (a) a process of obtaining colonies of organism (b) a sexual reproduction that yields identical organism (c) a process of obtaining un-identical units from a single parent organism (d) production of offspring that are replica of parents
6. Heirarchical classification system is based on (a) science classification (b) natural classification (c) homologous classification (d) artificial classification
7. Angiosperms produces flowers and fruits both of which help to ensure (a) longevity (b) sustenance of plant (c) pollination (d) reproductive success
8. Angiosperms are often simply called (a) ginkophyta (b) real plant (c) flowering plants (d) none of the above
9. ..... are developed in both gymnosperm and angiosperms for reproduction (a) flower (b) pollen grains (c) roots (d) stamens

10. The outer layer of leaves or epidermis protect the plant from (a) damage (b) loosing colour (c) decay (d) moisture
11. The liverworts belong to ..... Division (a) hepatophyta (b) tillicinophyta (c) anthophyta (d) lilliate
12. Beak is one of the adaptative features of (a) mammals (b) aves (c) insecta (d) pisces
13. Animals with uniform set of teeth are said to have _____dentition (a)heterodont (b)homodont (c)monodont (d)polydont
14. Nucleoside phosphate is equally termed (a)nucleic acid (b)nucleotide (c)chromatid vector
15. The principal characteristics of the fungi is (a)the do not possess chloroplast (b) they are saprophytic (c)they depend on other organisms for nourishment (d)they are parasitic
16. The male organ in bryophyte s (a)archegonium (b)antheridium(c)antherizoid (d)sporophyte
17. In genetics, base sequences often translate to (a)DNA molecules (b) mRNA (c)amino acid sequences
18. Examples of inanimate player in carbon cycle are (a)vehicles and industries (b)decomposer (c)green plant (d)animals
19. _____is an example of positive interaction among microorganisms (a)competition (b)predation (c)mutualism (d)parasitism
20. Commensalism is an example of (a)positive interaction (b)negative interaction (c)neutral interaction (d)complex interaction

Section B

1. _____is the distinguish feature found among vertebrate
2. Bony fishes are called bony because_____
3. _____is an example of an amphibian
4. _____is the annelida are also _____
5. _____is the complementary base of thymine in a mRNA molecule
6. The breakdown of pesticide by a biological unit is known as _____
7. In a DNA molecule, the complementary base of thymine is _____
8. _____is the phase in the dominant plant in bryophytes
9. The angiosperms which make up the vast majority of modern plant species are classified in a division called .....
10. Lower plants are generally called .....
11. The pioneers of terrestrial ecosystem are .....
12. ..... is the structure or chamber that contains megaspores
13. Organism that manufacture their own food are called .....
14. Symmetry in biology is the balanced distribution of .....
15. ..... is the meristematic region along the sides of stems and roots
16. Most seed plants increase their diameter through ..... producing wood and bark
17. Animals with ..... symmetry were classified in the taxon radiate

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI
School of biological science (Bio102/104) Time: 1 ½ hrs
Department of biological science 2015/2016 Rain Semester Exam

1. Crytograms reproduces by _____(a)seeds (b)fruits (c)thallus (d)spores
2. All are members of kingdom except(a)nematode (b)sponge (c)fungi (d)uniramia
3. Organism that can produce its own food are regular members of (a)mycophyta (b)plantae (c)chrodate (d)platyhelminthes
4. Saprophytic adaptation are usually expressed in (a)algae (b)fern (c)fungi (d)mollusca
5. _____are naked seed plants (a)palm trees (b)udara seeds (c)gymnosperms (d)crytograms
6. _____is the apex of plants diversity (a)gymnosperms (b)angiosperms (c)pollen gain (d)algae
7. A student using light microscope observe a cell and correctly decided that it is a plant cell because (a) ribosome are visible (b) golgi apparatus (c)nucleus (d)nucleolus
8. An example of phylum bryophyte is _____(a)flowering plant (b)mosses (c)blue algae (d)red algae
9. Chemicals used for preventing the spread of bacteria are known as(a)insecticides (b)pesticides (c)mulluscocidis (d)disinfectants
10. Gas exchange in all living organism requires (a)gills (b)lungs (c)tracheoles (d)moist membrane
11. In internal structure of a moncot stem the following are present except_____ (a)cortex (b)xylem (c)phloem (d)ray
12. Losing water is major problem for land vertebrates. Which of the following are adaptation to prevent water loss (a)modified kidneys and salt glands (b)having gizzards (c)having elongated caecums (d)having a layer blubber
13. Most seed plants increase their diameter through_____ growth producing wood and bark (a) apical (b)meristimatic (c)secondary (d)primary
14. Thallophyta include all but_____(a)algae (b)fungi (c)mosses (d)lichen
15. The first seed bearing plants to appear in the fossil record were (a)hibiscus (b)gymnosperms (c)mango plants (d) none of above
16. The following are method that invertebrates have employed to escape predators except (a)warning coloration (b)crypsis and camouflage (c)feeding in the daytime (d)chemicals exudates
17. The foreign gene for improved taste which have been introduced into tomato is known as_____(a)gerbalin (b)monellin (c)saccharin (d)fructose
18. The fungi are composed of muticellular filaments called (a)mycelium (b)hyphae (c)spores (d)thallus
19. The wall degrading enzymes involved in the softening fruit are (a)galacturase and fructurase (b)ethylene and lycopene (c)polygalacturoase and pectin methyl esterase (d) none of the above
20. Which of the following cellular processes is coupled with the hydrolysis of ATP (a)facilated diffusion (b)active transport (c)chemiosmosis (d)Na^+ influx into a nerve cell.

Section B

1. Animals that kill and devour their prey are called _____
2. Organisms that survive in both land and water are called_____
3. Plants that thrive in desert environment are called _____
4. _____is the group of mammals that lay eggs
5. _____is key to the angiosperms life cycle
6. _____is the most successful of all assembled in a ribosome
7. _____is a process by which a protein is assembled in a ribosome
8. _____is the process that results in the production of DNA from RNA molecule
9. A process called fertilization yield_____ and endosperms
10. Basidomyota belongs to almost all the species that produce a _____
11. Blood enclosed exclusively in blood vessels and heart is termed_____
12. Fruit ripening involve rapid increase in_____ synthesis
13. In plants initiation of flowering in response of photoperiod is triggered by changes in .....
14. On the under surface of the spores of the fern, there are a number of dark brown structures called the .....
15. Pteridophytes are among the vascular plant and leaves called .....
16. The Angiosperms which make up the vast majority of morden plant species are classified organisms is called .....
17. The cycle that led man to manage and recycle waste using natural biodegrading organisms is called .....
18. The multicellular short staked club shaped body of a moss plant is called .....
19. The red pigment are treated by .....
20. The Study of forms through the ultra-structure of the cells known as .....

SECTION C

1. LIST FOUR STRUCTURES OF THE CHORDATA
2. MENTION FOUR EFFECTS CAUSED BY AGROCHEMICALS
3. STATE THREE ADVANCEMENTS OF BRYOPHYTES OVER THALLOPHYTES
4. OUTLINE FOUR IMPORTANCE OF FLOWER IN PLANTS
5. LIST FIVE ADAPTIVE FEATURES OF A MAMMAL

FEDERAL UNIVERSITY OF TECHNOLOGY OWERRI

School of biological science (Bio102/104) Time: 1 ½ hrs

Department of biological science 2014/2015 rain semester exam

SECTION A

1. Which of the following is not a division of the kingdom protista? (a) Protozoa (b) Phaeophyta © Aschelminthe (d) Bacilliarophyta
2. ..... protein helps in resisting certain infectious diseases (a) Tryptophan (b) Carotene (c) Glucanase (d) pathogenesis
3. One of the following is not a nematode parasite on human (a) Ascans lumbricoides

(b)hookworms (c)earthworm (d)pinworms

4. Possession of a complex muscular system with exoskeleton for attachment , stated muscles for rapid action, smooth muscles for visceral organs are characteristics found in (a)echniderms (b)mulluscs (c)arthropods (c)nematodes
5. An important feature of angiosperm reproductive strategy which is a nutrient store that sustains the developing plant embryo is (a)micropyle (b)endosperm (c)pollen grains (d)seed
6. Angiosperm produce flowers and fruits, both of which help ensure (a)photosynthesis (b)reproductive success (c)transpiration (d)continuity
7. The following are examples of positive interaction amongst biological populations (a)neutralism (b)synergism (c)commensalism (d)antagonism
8. _____is an example of control measures adopted in prevention of plant diseases.(a)erosion (b)tapping (c)pollution (d)sanitary practices
9. Bryophytes show an advancement over algae by the development of_____(a)spores (b)antheridia (C)flagella (d)distinct alternation of generation.
10. _____is a free living platyhelminthes (a)tubellaria (b)tapeworm (c)earthworm
11. _____is a structural adaptation for parasitism in termatode(a)possession of skeleton (b)possession of organ for adhesion such as suckers (c)possession of antenna (d)possession of coelom
12. The fore limb of the aves are modified into (a)claws (b)hairs (c)beaks (d)wings
13. Lateral fins are characteristics of the (a) Aves (b) Mammals (c) Pisces
14. Animals with lips modified into beaks are found in the class of (a) Aves (b) Reptiles (c) Amphibians (d) Mammals
15. Arboreal biotic community is dominated by (a) Amphibians (b) Mammals (c) Aves (d) Pisces
16. Botanic garden is an example of (a) in situ conservation strategy (b) convention conservation strategy (c) Ex situ conservation strategy (d) none of the above
17. Which of these is not a condition favoring microbial degradation of pesticides (a) accessibility of toxicant to microbial enzymes (b) Availability of organic matter (c) The nature of the pesticide container (d) Aeration
18. Asexual reproduction in riccia plant consists of (a) the breaking away and sprouting of the bud (b) decay of older portion and subsequent growing into new plant (c) separation into stock and growing into new plant (D) ALL OF THE ABOVE
19. The principal characteristic of the fungi is (a) they do not possess chloroplast (b) they are saprophytic (c) they depend on other organisms for nourishment (d) theyare parasitic
20. The male organ in bryophyte is (a) archegonium (b) antheridium (c) antherizoid (d) sporophyte

SECTION B

1. Metamorphosis and ecdysis are phenomena found among the _____
2. _____and _____ are the character that have successfully been transferred into crops using biotechnological techniques
3. _____ is the role of phytohormone ethylene in fruit

4. Jawless fishes belong to the class_____
5. After_____in bryophyte a zygote result which on germination develop in a_____
6. The septate hyphae is common in the kingdom_____
7. The most primitive multicellular animal with rasially symmetrical body are members of the phylum_____
8. _____gas is responsible for global warming
9. The variety of all forms of life on earth is known as _____
10._____is a stable symbiotic relationship between plants and fungi
11._____can transform nitrogen gas present in the atmosphere into nitrate compound in plant roots.
12._____s an illness resulting from the ingestion of microbial toxins with food.
13._____is a free living platyhelminthes
14.The cartilaginous fish possess_____scales
15._____can transform nitrogen gas present in the atmosphere into compound in plant roots.
16.Metazoans are refer to as _____
17.Biotechnology was introduced by _____in the year_____

Answers

Test

1) Year 1973 2) Agricultural Productivity
3) ICP - Insecticidal Crystalline Protein
4) Degrades 5) Disinfectants
6) Recalcitrant 7) Monocot
8) Microspores 9) Monocot
10) Reptiles 11) Nephridia
12) Diploblastic 13) Carl Linnaeus
14) Theophratus (370-285BC)
15) Domain 16) Amniotes
17) Cold blooded Animals 18) Thallus
19) Oospores 20) The Bryophytes

2015/2016 Exam questions

Section A

1) D 2) C 3) B 4) C 5) C 6) B 7) A
8) B 9) D 10) D 11) D 12) A 13) C
14) C 15) B 16) D 17) B 18) B 19) C
20) B

Section B

1) Predators or carnivores 2) Amphibians
3) Xerophytes 4) Monotremes
5) flowers 6) Anthropod
7) Protein Synthesis 8) Transcription
9) a diploid Zygote
10) Fruiting body 11) Hemolymph
12) ethylene 13) phytochrome / light
14) Sori / Sorus 15) Vascular Cryptograms
16) Dicots 17) Bioremediation
18) Antheridium 19) Dermatologist
20) Morphology

Section C

1) Four structure of a phylum Chordata
a) A dorsal hollow nerve cord ⇒ develops into the Central Nervous system which are the brain and the spine
b) The notochord ⇒ provide skeletal support
c) Pharyngeal slit
d) The Post-anal tail

2) Effects Caused by agrochemicals
a) Inhibition of nitrogen-fixing soil microorganisms such as Rhizobium
b) Suppression of nitrifying bacteria by soil fumigants
c) Adverse effect on soil fertility and crop productivity
d) Alteration of ecological balance of the soil microflora

3) Three advancements of Bryophytes over Thallophytic
a) Development of Archegonia
b) Multicellular antherida
c) Distinct alternation of generation.

4) Four Importance of flower in Plants
a) They aid in plant reproduction
b) They aid in Pollination
c) They protect the reproductive parts of the flower
d) They produce new flowers
e) They are ornamental

5) Adaptive Features of a mammal
a) Endothermy (Warm blooded) → They can raise their body temperature above

that of the environment
b) Protective Coloration
c) Migration d) Mimicry
e) Hibernation
f) Behavioral Adaptation

2014/2015 Exam question

Section A

1) B 2) A 3) C 4) B 5) B 6) B
7) D 8) D 9) B 10) B 11) B 12) D
13) C 14) A 15) C 16) A 17) A
18) B 19) A 20) B

Section B

1) Arthropods
2) Improved Palatability and Improved nutrition
3) Ripening of fruit
4) Class Agnatha in the phylum Chordata
5) Sexual reproduction, Gametophytes
6) Kingdom Fungi 7) Phylum Poriferia
8) CO_2 Carbon dioxide 9) Biodiversity
10) Mycorrhiza 11) Nitrogen fixing bacteria 12) Food Intoxication
13) Flatworm 14) Placoid
15) Nitrogen fixing bacteria
16) Metazoa
17) Karl Freky in the Year 1917

2013/2014 Exam questions

Section A

1) B 2) A 3) B 4) B 5) A 6) B
7) D 8) C 9) A 10) D 11) A 12) B
13) Diphyodont 14) B 15) A
16) B 17) C 18) A 19) C 20) A

Section B

1) Notochord
2) They have a skeleton or bones
3) A Frog 4) Phylum Annelida, Platyhelminthes 5) Adenine
6) Biodegradation 7) Adenine
8) Gametophytic phase
9) Dicot 10) Cryptograms
11) The Bryophytes 12)
12) Megasporocytes
13) Autotrophs
14) Body Parts or shapes
15) Lateral meristem
16) Secondary growth
17) Radial Symmetry

(b) List the four kinds
(c) Comment of the order Galliformes

Question Four:

(a) State three adaptation of birds for survival.
(b) Comment on the order Insectivora.
(c) State the types of Biodiversity.

Question Five:

(a) Enumerate three causes of Biodiversity loss
(b) Define the term Metazoans
(c) Draw the carbon cycle

SOLUTION SET TO BIO 102/104 EXAM: 1999/2000

Question one:

(a) Margulis and Schwartz in 1982 proposed a system which use five kingdom, a procariotic and encaroutic

(b) Metameric segmentation is seen in metazoans which are segmented internally and externally e.g earthworm

(c) Acrania
(d) Cranatia

Question Two

(a) Poikilothermic organism are those that are cold blooded while Homoiethermic are warm blooded e.g aves

(b) Subclass elasmobranchii
Subclass Teleosteioesteichytes

(c) Cartilaginous fish is advanced more than other chordate due to the fact that they:
Possess movable jaws
Possess paired reproductive organs
Possess paired lateral fins

Question three:

(a) They are tailed amphibian like Newt and Salamanda
Frequent evolutionary trend known as Neoteny
Possession of short legs and varying trunk movement, therefore sluggish

(b) Contour
Flight
Down
Filoplume

(c) Order galliformes includes turkeys, peacocks, and fowls. They possess beak, short feather with after shaft feet adapted for scratching.

Question four:

(a) Possession of streamlined bodies which offer minimum resistance
Possession of beak for feeding
Feet are modified for running, climbing and arranging of nest

(b) Order Insectivora are small mammals which live mostly in burrow, it feeds on insects and other small prey e.g. Hedgedogs.

(c) Species diversity Genetic diversity
Ecosystem diversity

Question five:

(a) 1. Deforestation: This normally occurs in the tropics where several actors such as need for fuel, development etc. The worst impact on biodiversity is the loss of habits the destabilization of tropic level.

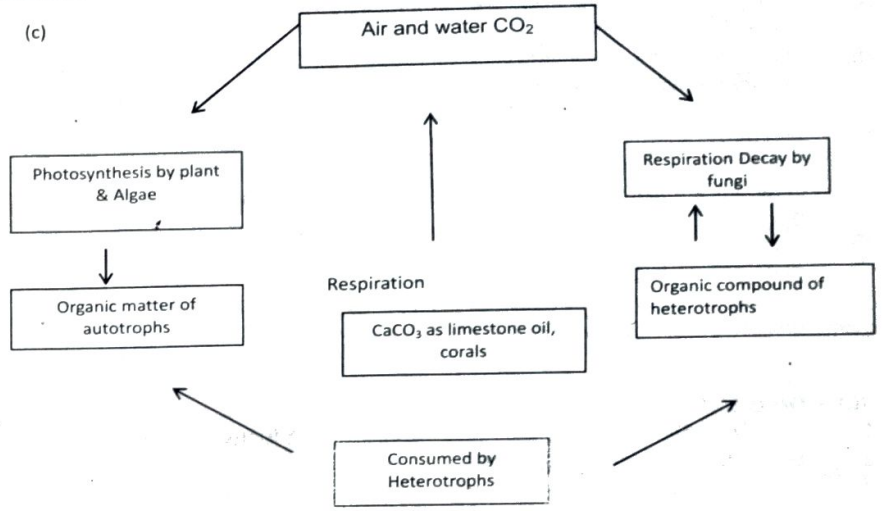
This has led to depletion of man ci of living things. The most affected a those that are used directly as food, by other living things.

tion: This is the destruction of the ecosystem through the mismanagement of waste for

Industries and application of agrochemical which have tremendous traits to both terrestrial and aquatic ecosystem

(b) Metazoans are a term for all animals whose dies are composed of more than one cell i.e. Multicellular

(c)



THE CARBON CYCLE

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI SCHOOL OF SCIENCE
DEPARTMENT OF BIOTECHNOLOGY
2013/2014 RAIN SEMESTER EXAMINATIONS TIME: 1 ½ Hours
COURSE: BIO 102/104: Biology for Agric. and Biological Sciences II
INSTRUCTION: ANSWER ALL QUESTIONS; PART A IS COMPULSORY

PART A

1. Multicellular animal are also known as (A) multiple cell (B) metazoans (C)schphozoa (D) Hydrozoa
2. Sponges belong to the phylum (A) Porifera (B) Coelenterate (C) Cubozoa (D) Platyhelminthes
3. The cartilaginous fish possess ..... scales (A) cycloid (B) placoid (C) fingerlike (D) Homodont
4. The release of energy from substances in all living cell is known as (A) respiration (B) Nutrition (C) reproduction (d) irritability
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6. Hierarchical classification system is based on (A) science classification (B) natural classification (C) homologous classification (D) artificial classification
7. Angiosperms produces flower and fruit both of which help to ensure (A) longevity (B) sustenance of plant (C) pollination (D) reproductive success
8. Angiosperms are often simply called (A) ginkophyta (B)real plant (C) flowering plants

(D) none of the above

9. ---------- are developed in both gymnosperm and angiosperms for reproduction (A) flower (B) pollen grains (C) root (D) stamens
10. The outer layer of leaves or epidermis protect the plant from (A) damage (B) loosing colour (C) decay (D) moisture
11. The liverworts belong to---------- division (A) hepatophyta (B) tillicinophyta (C) anthophyta (D) liliate
12. Beak is one of the adaptive features of (A) mammals (B) Aves (C) insecta (D) Pisces
13. Animals with uniform set of teeth are said to have ..... Dentition (A) Heterodont (B) homodont (C) monodont (D) polydont
14. Nucleoside phosphate is equally termed (A) nucleic acid (B) nucleotide (C) chromatid vector
15. The principal characteristic of the fungi is (A) the do not possess chloroplast (B) they are saprophytic (C) they depend on other organisms for nourishment (D) they are parasitic
16. The male organ in bryophyte is (A) archegonium (B) antheridium (C) antherizoid (D) sporophyte
17. In genetics, base sequences often translate to (A) DNA Molecule (B) mRNA (C) Amino acid sequences
18. Examples of inanimate player in carbon cycle are (A) vehicles and industries (B) decomposer (C) green plant (D) animals
19. ..... is an example of positive interaction among microorganisms (A) Competition (B) Predation (C) Mutualism (D) parasitism
20. Commensalism is an example of (A) positive interaction (B) negative interaction (C) neutral interaction (D) complex interaction

SECTION B

1. ..... is the distinguish feature found among the vertebrate
2. Bony fishes are called bony because.....
3. ..... Is an example of an amphibian
4. ..... Annelida are also called.....
5. ..... is the complementary base of thymine in a mRNA molecule
6. The breakdown of pesticide by a biological unit is known as .....
7. In a DNA molecule, the complementary base of thymine is .....
8. ..... is the phase in the dominant plant in bryophytes
9. The angiosperms which make up the vast majority of modern plant species are classified in a division called.....
10. Lower plant are generally called.....
11. The pioneers of terrestrial ecosystem are.....
12. ..... is the structure or chamber that contains megaspores
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15. ..... is the meristematic region along the sides of stem and roots
16. Most seed plant increase their diameter through..... Producing wood and bark
17. Animals with ..... Symmetry were classified in the taxon radiate

ANSWER FOR 2013/2014 SESSION BIO 102/104 EXAM

PART A

1.A 2A 3B 4A 5B 6B 7D 8C 9D 10A 11A 12B 13B14B
15A 16B 17C 18C 19C 20C

SECTION B ANSWER

1. HAIR 2. OSTEICHTHYES 3. TOAD 4. PLATYHELMINTHES (INVERTEBRATES 5. ADENINE 6. BACILLUS THURNGENISIS 7. ADENINE 8. LIVERWORT 9. FLOWERING PLANT 10. CRYPTOGRAMS 11. PTERDIOPHYTA 12. ARCHEGONIA 13. AUTOTROPHS 14. ORGANISMS 15. APICAL MERISTEM 16. MITOSIS 17. TENTACLES

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI SCHOOL OF SCIENCE
DEPARTMENT OF BIOTECHNOLOGY
2014/2015 RAIN SEMESTER EXAMINATIONS TIME: 1 ½ Hours
COURSE: BIO 102/104: Biology for Agric. and Biological Sciences II
INSTRUCTION: ANSWER ALL QUESTIONS; PART A IS COMPULSORY

1. Which of the following is not a division of the kingdom protista? (A) Protozoa (B)Phaeophyta (C) Aschelminthe (D) Bacilliarophyta
2. _____ protein helps in resisting certain infectious diseases.(A) Tryptophan (B) Carotene (C) glucanase (D) pathogenesis
3. One of the following is not a nematode parasite on human (A) Ascaris lumbricoides (B) Hookworms (C) Earthworms (D) Pinworms
4. Possession of a complex muscular system with exoskeleton for attachment, stated muscles for rapid action, smooth muscles for visceral organs are characteristics found in (A) Echniderms (B) Mulluscs (C) Arthropods (D) Nematodes
5. An important feature of angiosperm reproductive strategy which is a nutrient store that sustains the developing plant embryo is (A) Micropyle (B) Endosperm (C) Pollen grains (D Seed
6. Angiosperms produce flowers and fruits, both of which help ensure (A) Photosynthesis (B) Reproductive success (C) Transpiration (D) Continuity
7. The following are examples of positive interaction amongst biological populations (A) Neutralism (B) Synergism (C) Commensalism (D) Antagonism
8. _____ is an example of control measures adopted in prevention of plant diseases. (A) erosion (B) tapping (C) pollution (D) sanitary practices.
9. Bryophytes show an advancement over algae by the development of_____ (A) spores (B) antheridia (C) flagella (D) distinct alteration of generation.
10. ----------is a free living Platyhelminthes (A)Tubellaria (B)Tapeworm (D) earthworm
11. ----------is a structural adaptation for parasitism in trematode (A) Possession of skeleton (B) possession of organ for adhesion such as suckers (C) Possession of Antenna (D) possession coelom
12. The fore limb of the aves are modified into (A) Claws (B) Hairs (C) Beaks (D) Wings
13. Lateral fin are characteristic of the (A) Aves (B) Mammals (C) Pisces
14. Animal with lips modified into beaks are found in the class of: (A)Aves (B) Reptillia (C) Amphibians (D) Mammals
15. Arboreal biotic community is dominated by (A) The amphibians (B) the Mammals (C) Aves (D) Pisces
16. Botanic garden is an example of: (A) In situ conservation strategy (B)convention conservation strategy (C)Ex situ conservation strategy (D) None of the above
17. Which of these is not a condition favoring microbial degradation of pesticides (A) accessibility of toxicant to microbial enzymes (B) Availability of organic matter (C) The nature of the pesticide container (D) Aeration

18. Asexual reproduction in riccia plant consists of (A) the breaking away and sprouting of the bud (B) Decay of older portion and subsequent growing into new plant (C) separation into stock and growing into new plant (D) all of the above

19. The principal characteristic of the fungi is (A) the do not possess chloroplast (B) they are saprophytic (C) they depend on other organisms for nourishment (D) they are parasitic

20. The male organ in bryophyte is (A) archegonium (B) antheridium (C) antherozoid (D) sporophyte

Section B

1. Metamorphosis and ecdysis are phenomena found among the ..... are character that have successfully been
2. ..... and ..... transferred into crops using biotechnological techniques
3. ..... is the role of phytohormone ethylene in fruit
4. Jawless fishes belong to the class.....
5. After ..... In bryophyte a zygote result which on germination develop in a-----
6. The septate hyphae is common in the kingdom .....
7. The most primitive multicellular animal with radially symmetrical body are members of the phylum.....
8. ..... Gas is responsible for global warming
9. The variety of all forms of life on earth is known as .....
10. .....is a stable symbiotic relationship between plant roots and fungi
11. -----can transform nitrogen gas present in the atmosphere into nitrate compound in plant roots
12. ----- is an illness resulting from the ingestion of microbial toxins with food
13. -----is a free living Platyhelminthes
14. The cartilaginous fish possess ..... scales
15. -----can transform nitrogen gas present in the atmosphere into compound in plant roots.
16. Metazoans are ..... to as.....
17. Biotechnology was first introduced in the year .....

ANSWER FOR 2014/2015 SESSION BIO 102/104 EXAM

PART A

1.B	2A	3D	4D	5D	6D	7D	8D	9D	10D	11D	12D	13D	14A	15C
16A	17A	18B	19A	20B										

SECTION B

1. Arthropod 2.) Nitrogen fixing, yield capacity, extended shelf life 3.) Fruit ripping 4.) Cartilaginous 5.) Sporophate Gametophytes 6.) Mycophta (fungi) 7.) Poriferia 8.) CO3 9.) Biodiversity 10.) Mycorrhizal 11.)Nitrogen fixing bacteria 12.) Food intoxication 13.) Class Turbellaria (e.g. planaria) 14.)Placoid 15.)Nitrogen fixing bacteria 16.)Animalia 17.) Karly Ereky in the year 1917

Federal University of Technology Owerri School of biological sciences
Department of biological science 2015/2016 Rain semester exam

1. Crytograms reproduces by .....(a) seeds (b) fruits (b) thallus (d)spores
2. All are members of kingdom animalia except (a) nematode (b) sponge (c) fungi (d) Uniramia
3. Organisms that can produces its own food are regular members of (a) mycophyta (b) plantae (c) chordate (d) Platyhelminthes
4. Saprophytic adaptation are usually expressed in (a)Algae (b)fern (c)fungi (d) Mollusca
5. ----------- are naked seed plants (a) palm trees (b) Udara seeds (c) Gymnosperms (d)cryptograms

6. ..... Is the apex of plants diversity (a) Gymnosperms (b)Angiosperms (c) pollen grains (d) Alage
7. A student using a light microscope observe a cell and correctly decided that it si a plant cell because (a) ribosome are visible(b)Golgi Apparatus (c) nucleus (d) nucleolus
8. An example of phylum bryophyte is ..... (a) flowering plant (b) mosses (c) blue algae (d) Red algae
9. Chemicals used for preventing the spread of bacteria are known as (a) insecticides (b) pesticides (c) mulluscocidis (d) disinfectants
10. Gas exchange In all living organism requires (a) gills (b) lungs (c) tracheoles (d) moist membrane
11. In internal structure of a moncot stem the following are present except .....(a) cortex (b)xylem (c)Phloem (d)Ray
12. Losing water is a major problem for land vertebrates. Which of the following are adaptations to prevent water loss (a) modified Kidneys and salt glands (b)having gizzards (c) having elongated caecums (d) having a layer of blubber
13. Most seed plants increase their diameter through ---------- growth producing wood and bark (a) apical (b)meristimatic (c) secondary (d)primary
14. Thallophyta include all but..... (a) Algae (b)Fungi (c) mosses (d)lichen
15. The first seed bearing plants to appear in the fossil record were (a) Hibiscus (b)Gymnosperms (c) mango plants (d)none of the above
16. The following are method that invertebrates have employed to escape predators except (a0 warning coloration (b) crypsis and camouflage (c) feeding in the daytime (d) chemical exudates
17. The foreign gene for improved taste which have been introduced into tomato is known as.....(a) Gerbalin (b) Monellin (c) Saccharin (d) fructose
18. The fungi are composed of multicellular filaments called (a) mycelium (b) Hyphae (c) spores (d)thallus
19. The wall degrading enzymes involved in the softening of fruit are (a) Galacturase and fructuraase (b)ethylene and lycopene (c) Polygalacturoase and pectin methyl esterase (d) none of the above
20. Which of the following cellular processes is coupled with the hydrolysis of ATP (a) facilitated diffusion (b) active transport (c) chemiosmosis (d) Na+ influx into a nerve cell

SECTION B

1. Animal that kill and devour their prey are called.....
2. Organisms that survive in both land and water are called.....
3. Plants that thrive in desert environment are called.....
4. .....is the group of mammals that lays eggs
5. .....is key to the Angiosperms life cycle
6. .....is the most successful of all assembled in a ribosome
7. ..... is a process by which a protein is assembled in a ribosome
8. .....is the process that results in the production of DNA from RNA molecule
9. A process called double fertilization yield ..... And endosperms
10. Basidomyota belongs to almost all of the species that produce a ----------
11. Blood enclosed exclusively in blood vessels and heart is termed.....
12. Fruit ripening involve rapid increase in..... synthesis
13. In plants initiation of flowering in response to photoperiod is triggered by changes in.....
14. On the under surface of the spores of the fern there are a number of dark brown structures called the .....
15. Pteridophytes are among the vascular plant and leaves called.....
16. The Angiosperms which make up the vast majority of modern plan species are classified in one.....
17. The cycle that led man to manage and recycle waste using natural biodegrading

organism is called.....

18. The multicellular short staked club shaped body of a moss plant is called .....

19. The red pigment are treated by.....

20. The study of forms through the ultra-structure of the calls known as.....

Section C

1. List four structure of the phylum Chordata
2. Mention four effects caused by agrochemicals
3. State three advancements of bryophytes over thallophytic
4. Outline four importance of flower in plants
5. List five adaptive features of a mammal

SECTION A

1. D 2. C 3. C 4. C 5. C 6. B 7. A 8. B 9. D 10. B 11. A 12. D 13. B 14. A 15. B 16. B 17. A 18. B 19. B 20. B

SECTION B

1. CARNIVOROUS 2. AMPHIBIANS 3. XEROPHYTES 4. OVIPAROUS 5. PTERIDOPHYTES 6. ANTHROPOID 7. PROTEIN SYNTHESIS 8. TRANSCRIPTION 9. EMBRYONIC SPOROPHYTE 10. FUNGI 11..... 12 ETHYLENE 13..... 14. RHIZOPUS 15. COMPOUND LEAVES 16. DICOTYLEDONOUS 17. PHYTOREMEDIATION 18. BASIDOMYCOTA 19. STV 20 CYTOLOGY

SECTION C

1. Four structure of the phylum Chordata

The have pairs of pentactyl limbs
The have teeth
The have skeleton
The have a brain

2. Effect cause by agrochemical

Adverse effect on the soil ferity and crop production
Inhibition of nitrogen fixing soil microorganisms
Alteration in nitrogen balance of the soil
Alternation of ecological balance of the soil

3. Advancements of bryophytes over thallophytic

Bryophytes show advancement over algae by the development of archgonia
Multicellular antheridia
Distinct alternation of generation

4. Importance of flower in plants

Their seed are structurally modified to facilitate seed dispersal
They are dominant vegetation of the world
Flowering plants help to attract insects' bird and man
Flowerings have a rapid growth

5. Adaptive features of a mammal

They are warm blooded animal
Their body is covered with skin and hair
The have different kind of teeth
The have mammary gland

DEPARTMENT OF BIOLOGY
RAIN SEMESTER 2016/2017 EXAMINATION
BIO 102 BIOLOGY FOR AGRIC AND BIOLOGICAL SCIENCE 11(3 UNITS)
TIME ALLOWED I HOUR DATE: 9-1 1-2017 -

Instruction: Answer all the questions. Each carries 2 marks

1. The final stage of decomposition by microorganism is called (a)compost (b)mineralization (c) peat (d)putrefaction
2. The relationship in lichens is an example of (a) microbe &-microbe interaction (b)Microbe-air interaction (c)Air—water interaction (d) Soil water interaction
3. The term given to a compulsory positive relationship is (a) Mutualism (b)Amensalism (c)Protocoporation(d)Partnership
4. Nitrogen fixers have the enzyme..... which helps them to lix atmospheric atmosphere nitrogen.(a) Nitrogen fixase (b)Nitrogenase (c)Deaminase (d)amylase
5. An example of a symbiotic nitrogen fixer is..... (a) Rhizobium (b) michoriza (c)mycelium (d)Viruses
6. The interaction between a parasite and a host is called (a)Parasitism (b)Parasitation (c)paralymphia (d)Paralysis
7. Which of these describes relationship between a predator and a prey? (a)Preyation (b)Predation (c)Predatism (d)Predatorism
8. Neutralism occurs (a)When both parties benefit (b) when the neither party gain not loss (c)when all the parties agrees to benefit,
9. The conversion of sunlight and C02 into carbohydrate is collud (a)Photolysis (b)Photonation(c)Phytation (d) Photosynthesis
10. as..... (a)Biodegration (b)Biostimulation (c)Phytoremediation(d) Augumentation Plants are autotrophs while animals are (a) Heterophs (b)Hetrophs (c)Heterolytes (d)heterotrophs
11. .....The following are microorganisms except (a) virus (b) bacteria (C) fungi (d)algans
12. In the mutualistic association between ruminants and microbes, the microbes gain shelter from the ruminants, while supplying the ruminants with.....(a)Energy(b)water (c) oxygen (d)food
13. The process of converting nitrates back to atmospheric nitrogen in the absence of oxygen is called (a)Densification (b)Deherification (c)Deansylation (d)Denitrogenation
14. Chemicals that show complete
15. A process by which microbial organism transform chemicals in the environment is known as BIODEGRADATION
16. One of the following is not a type of pesticide (a)Fertilizer(b)Fungicide(c)herbicide (d)Acaricide
17. One of the following is an example of an agrochemical (a) Pesticides (b)Liming agent (c)Hydrocarbons (d)soil conditioner
18. ..... And..... are types of bioremediation (a)onsite and offshore (b) in situ and onshore (c)offshore and recycling (d)in situ and Ex situ
19. Fertilizers are grouped into... ....and..... (a)organic and in organic (b)soluble and in soluble (c)organic and soluble (d)inorganic and in soluble
20. Acaricides are..... (a)Pesticides used on arachnids (b) chemicals used of insects (c)chemicals used on snails (d)chemicals used on weeds
21. Unwanted vegetation are are called (a)grass (b)weed (c)herbs (d)shrubs
22. Acid soil are neutralized by adding (a)calcium adding minerals (b)acid sulphates (c)carbonic acid (d)acetic acid
23. Fertilizers are used to (a) Enhance and alleviate nutrient deficiencies in soil (b)Kill microorganisms (c)Neutralize soil (d)increase biodiversity .
24. Chemicals used to control weeds are called (a) Insecticide (b) Weedicides (c) Herbicides (d) Weed killer
25. Which of the following allows you to differentiate lizard and snake? (a) presence and absence of legs (b) presence or absence of eyelids (c) Ectothermic (d) presence or absence hemipenis

All of the following are unique to mammals except (a) Endothermia (b) True mammary gland (c) hair (d) Skull

27. What order of Amphibians do frog and toad belong? (a) Apoda (b) Urodela (c) Anura (d) Salamander

28. Birds feathers are made of versatile protein called (a) Scas (b) Keratin (c) Precous (d) Hollow

29. What skeletal adaptations do birds have to enable flight? (a) Bony tail (b) well developed legs (c) fused bones (d)feathers

30. Flowering plants are known as (a) Gymnosperms (b)"Fruiting plants (c) Cycads (d) Reproductive plants

31. Monocotyledons have (a) Monocot root(b) Fibrous root (c) Tap root (d) None of the above

32. Spermatophytes are known as (a) seed (b) Angion (c) Sperm (di All of the above

33. The name of a plant species consists of two parts, the first refers to (a) division (b)binomial (c genus (d)order

34. The plants that shed their leaves in dry seasons are called (a) Flowering plants (b) Deciduous (c) Pine plants (d) All of the above

35. Plant taxonomy is the branch of Botany that deals with (a) Decoration of the environment (b) different species of plants (c) All of the above (d) None of the above

36. The flower may be regarded as the part of the shoot specialized for (a) Good scent (b) Decoration (c) Reproduction (d) Respiration

37. Gymnosperms are known as (a) Naked seeds (b) Gymnos (c) A and B (d) None

38. Pollination in gymnosperm is only through the agency of (a) Air-current (b) Animals (c) Birds (cl) Snakes

39. The highest taxon in the classification of organisms is the.....(a) Kingdom (b) Phylum (c) Species id) Domain

40. Every organism should in taxonomy have (a) Generic and order names (b) Specific and order names (c) Class and specific names (d) Generic and specific

41. Mushroom in the general classification of organisms can be placed into Taxon (a) Domain (b) Prokaryotes (c) Archae (d) Eukaryotes

42. Systematics and taxonomists has considered number of criteria for the classification of organism (a) 4 (b) 3 (c) 5 (d) 2

43. The father of plant botany is .....(a) Theophrastus (d) Aristotle (c) Andrea Cesalpino (d) Carl Linnaeus

44. Correlative characters decrease from (a) species to kingdom (b) kingdom to species (c) Phylum to Subphylum (d) order to family

45. In the plant kingdom, spermatophytes are (a) Cycadales and ginkgoes (b) Gymnospermae and angiospermae (c) Cryptogamia and angiospermae (d) Pteridophyta and bryophyte

46. The cryptogames are otherwise known as (a) Shrubs (b) Seed bearing and seedless plants (c) Seedless plants (d) Dicotyledons

47. Homo Sapien belong to the order (a) Vertebrata (b) Mammalia (c)Primate (d) Homo

48. The principle which recognizes that organs of common ancestors to show the same basic structures, same general relationship and same pattern of early growth are (a) Homology (b) Analogy (c) Convergence (ci) Phylogeny

49. The principle of the first letter of the epithet being in small letters conveys the rule of (a) Systematics (b) Taxonomy (c) Binomial Nomenclature (d) Carl Linnaeus Nomenclature

50. Organisms with rigid cell wall and photosynthetic pigments are called (a) Plants (b) Animals (c) Bacteria (d) Viruses

51. Systematically, plants belong to the kingdom (a) Animallia (b) Protista (c) Plantae (d) Porifera

52. .....and are lower plants (a) Lichens and Fungi (1) Algae and Moth (c) Algae and Fungi (ci) All of the above

53. On the basis of the various conducting tissues plants are subdivided into (a) 5 (b) 7 (c) 9 (d) 2

54. example of an angiosperm plant (a) Mango plant (h) Cashew plant (c) Ric and co (d) All of the above

55. The leaf is the plant's primary (a) Sunlight collector (b) Shade (c) Shape (d)Power house

56. Seed bearing plants produce (a) Megaspores b) Universal spores (c) Vascular plants (d) Seed Ferns

57. Angiosperms are the most successful plants in terms of (a) Diversity (b) Numbers (c) Distribution (ci) All of the above

58. Double fertilization is a distinctive feature of flowering plant life cycle. (a) false (b) True (c) None of the above (d) All of the above

59. Vascular plants are plants with (a) Vascular tissues/bundles (b) Vascular membrane (c) Food fibre (d) Conducting pores

61. Non Vascular plants are (a) plants with tap root system (b) Seedless plants (c) A and B (d) plants devoid of conducting tissues/vessels

62. ..... is the study of plants. (a) Zoology (b) Biochemistry (c) Botany (ci) Plant science

63 .....The study of biological forms via their internal structures is called' (a Physiology (b) Anatomy (c) Dissection (d) Radiology -

64. .....is the study of various chemical components and their functions (a) Biological science (b) Biochemistry (c) A and B (ci) None of the above

65 .....is an example of Bryophytes except (a) Ferns (b) Mosses (c) Mold (ci) None

66 Lower plants are regarded as (a) Plants of relatively simple and primitive characteristics (b) plants of low origin (c) Plants of low status (d) Unique plants

67. Genetics is the study of (a) Reproduction (b) Safety of offspring (c) Disease control (d) Heredity and variation differences

68. Horn-wort are bryophytes belonging to the class (a)Antheroceae (b) Phacondocea (c) Origoaccae (d) Mycoaceae

69. The outer layer of the epidermis protects the plant from .....(a) Loss of moisture (b) Loss of weight (c) Excess heat and temperature (d) invading microorganisms

7 Some chemical substances secreted by sponges have all except Acclivity (a) Anti-flammatory (b) Antibiotic (c) Anti-tumoral (d) Anti-bacterial.

71. ....were long thought to have diverged from other animals (a) Cnidaria (b) Nematoda (c) Porifera (d) Annelida

72. Terrestrial annelid without parapodia, characterized by a sadddle like clitellum is (a) Leech.(b) Earthworm (c) Nereis (d) Tapeworm

73. Major classes of Echinodennata include the following except (a)Arachnoidea (b) Asteroidea (c) Ophiruroidea (d) Crinoidea

74. Sexual reproduction and gonochoristic or hermaphroditic characteristics is found in all except (a) Earthworm (b) Sandworm (c) Pin worm (d) Leech

75. Where do amphibians lay their eggs? (a) Tree (b) Leaves (c) soil (d) Water

76. To what order do horses, gorillas and koalas belong? a) Mammals (b) reptiles (a) Amphibians (d) Aves

77. Birds carry out gaseous exchange through..... (a) Coacal (b) Lungs (c) Heart (d) Nostril

78. Which of the following is adaptation to prevent water loss in land animals? (a) Modified kidney and slat gland (b) Having a layer of blubber (c) having gizzards (d) having elongated cecum

79. Most amphibians have .....fertilization(a)internal (b)external c)closed (d)extended

80. Mammals retain the heat they produce by.. (a)by panting and sweating (b)hairy gizzards (c)migration (d)having hairs

81. many stomata guarded by guard cells are vital for (a) photorespiration (b) chemosynthesis (c)respiration (d) photosynthesis

82. Body cavity as true coelm is known as (a)lophorate (b)coelomate (c)eucoelomate (d)acoelomate

83. Produce secondary xylem and phloem (a)vascular cambium (b).periderm (c)phellogen (d)dermal tissue

84. internal parts of the leaves in dicot plants include the following except (a)micropyle

(b)mesophyll (c)epidermis (d)vascular bundle

85. Phylum with spiny skinned animal is called (a)arthropod (b). echinodermata (c)chordate (d)mammalian

86. The function of lymphatic system is to (a)absorb food molecules (b)breaking food (c)provide support (d)transport excess fluid

87. Adipose tissues serves primarily for (a)mineral storage (b)muscles attachment (c)insulation (d)absorption

88. .....and bacteria domain contain prokaryotic organisms.(a) fungi (b)achae (e)virus (d)protozoa

89. chemicals used in agriculture are collectively called (a)additives (b)agrochemicals (c)organics (d)fertilizers

90. The use of microorganism in the production of yoghurt from milk is an example of biotechnology (a)new (b)applied (c)modern (d)traditional.

91. rDNA technology is short for (a)ribosomal deoxyribonucleic acid technology (b)random deoxyribonucleic acid technology (c)rapid deoxyribonucleic acid (d)recombinant deoxyribonucleic acid.

92. The transfer of genetic material from one organism to another usually unrelated organism to impart new trait is known as technology (a)cDNA (b)rDNA (c)Gene Transfer(d) r RNA

93. An organism containing genetic materials from another unrelated organism which was introduced through the tools of biotechnology is called (a)Transgenic organism (b)transgene c)genetic organism (d)mutagenic organisms

94. Bacillus thuringiensis is renowned for its production of a protein biotechnologically exploited in (a) control of insects (b)improvement of nutritional value of crops (c)improvement of resistance of abiotic stress (d)improvement of shelf life of crops

95. .Flavrsavr is a genetically mortified tomato variety for (a) improved herbicide resistance (b)improved shelf life (c) improve yield (d)improved resistance to abiotic stress

96. golden rice is genetically improved rice containing genes for the biosynthesis of (a)vitamin A (b)amino acid (c)β-Carotene (d)Vitamin C

97. Monoclonal antibody technology is a biotechnology approach for enhanced (a)animal productivity (b)reproductive rate (c)diagnoses of diseases (d)resistance to abiotic stress

98. Concerns and risk associated with genetically modified organism ten be broadly categorized into the following except a)ethical (b) Environmental (a) Socioeconomic (d) Legal

99. GMO means (a) Genetically marketed organisms (b) generally modified organisms (a) Genetically modified organisms (d) Genome manipulated organism

100. Lack of precision anti predictability is one of the advantages of..... Approach in breeding arid selection of organisms (a) traditional (b) foreign (c) Local (4) Biotechnology

Solution to 2016/2017 Exam

1. (c) 2(a) 3(a) **4(b)** 5(b 6(a 7(b) 8(b) 9(d) 10(d) 11(C) 12(a) 13(a) 14. 15.as BIODEGRADATION
16(a) 17(a) **18(d)** **19**(d) 20 (c) 21(b) 22 (c) 23(a) 24(c) 25(a) 26(a) 27(b) 28(b) 29(d) 30(b) 31(b) 32 (a)
33. (b)34 (b) **35(b)** 36(c) 37(a) 38(a) 39. (b) 40(d) 41(c) 42.(d) 43.(d) 44.(b) 45.(a) 46.© 47.(c) 48.(b) 49.(c)
50 (a) 51(c) **52(c)** 53(d) 54(d) 55.(d) 56.(a) 57.(a) 58(b) 59. stv 60 (a) 61(b) 62(c) 63(b) 64(b)
65.(a) 66.(a) **67.(d)** 68.(a) 69.(d) 70.(d). 71.(c) 72.(b) 73(a) 74.(c) 75. (d) 76. a) 77.(b) 78.(a) 79.(a) 80.(d)
81. (a) 82. **(b)** **83.(a)** 84.(d) 85.(b). 86.(a) 87.(b) 88.(b) 89.(b) 90.(b) 91 (a) 92.(b) 93.(a)
94.(a) 95. (b **96.(b** **97**. (a 98. a) 99. (b) 100.(a)