

**DR. ABHANG PRABHU'S TUTORIALS**

NEET :2020 Repeat (SOLUTION)



Time: 90 Minutes.

Version X6

Max. Marks: 360

Note:

- * Every correct answer (+4 Mark)
- * Every wrong answer (-1 Mark)

Ch.1. The Living WorldXXXXXXXXXX**Ch.2. Biological Classification**

76. Which of the following is incorrect about Cyanobacteria ?
- 1) They are photoautotrophs
 - 2) **They lack heterocysts**
 - 3) They often form blooms in polluted water bodies
 - 4) They have chlorophyll A similar to green plants

Ch.3. Plant Kingdom

51. Phycoerythrin is the major pigment in :
- | | |
|---------------------|---------------------|
| 1) Red algae | 2) Blue green algae |
| 3) Green algae | 4) Brown algae |
53. Which of the following statements is incorrect about gymnosperms?
- 1) They are heterosporous
 - 2) **Male and female gametophytes are free living**
 - 3) Most of them have narrow leaves with thick cuticle.
 - 4) Their seeds are not covered
88. Male and female gametophytes do not have an independent free living existence in :
- | | |
|-----------------------|---------------|
| 1) Pteridophytes | 2) Algae |
| 3) Angiosperms | 4) Bryophytes |

Ch.4. Animal Kingdom

134. All vertebrates are chordates but all chordates are not vertebrates, why ?

- 1) **Notochord is replaced by vertebral column in adult of some chordates.**
- 2) Ventral hollow nerve cord remains throughout life in some chordates.
- 3) All chordates possess vertebral column.
- 4) All chordates possess notochord throughout their life.

128. Match the following columns and select the correct option :

	Column - I		Column - II
(a)	Aptenodytes	(i)	Flying fox
(b)	Pteropus	(ii)	Angel fish
(c)	Pterophyllum	(iii)	Lamprey
(d)	Petromyzon	(iv)	Penguin

- 1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
- 2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
- 3) **(a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)**
- 4) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)

108. Match the following group of organisms with their respective distinctive characteristics and select the correct option :

	Organisms		Characteristics
(a)	Platyhelminthes	(i)	Cylindrical body with no segmentation
(b)	Echinoderms	(ii)	Warm blooded animals with direct development
(c)	Hemichordates	(iii)	Bilateral symmetry with incomplete digestive system
(d)	Aves	(iv)	Radial symmetry with indirect development

- 1) **(a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)**
- 2) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
- 3) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
- 4) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

99. Which of the following options does correctly represent the characteristic features of phylum Annelida ?

- 1) Triploblastic, unsegmented body and bilaterally symmetrical.
- 2) **Triploblastic, segmented body and bilaterally symmetrical.**
- 3) Triploblastic, flattened body and acoelomate condition.
- 4) Diploblastic, mostly marine and radially symmetrical.

Ch.5. Morphology of Flowering Plants

46. In some plants thalamus contributes to fruit formation. Such fruits are termed as :
- 1) **False fruits**
 - 2) Aggregate fruits
 - 3) True fruits
 - 4) Parthenocarpic fruit
55. Correct position of floral parts over thalamus in mustard plant is :
- 1) **Gynoecium occupies the highest position, while the other parts are situated below it.**
 - 2) Margin of the thalamus grows upward, enclosing the ovary completely, and other parts arise below the ovary.
 - 3) Gynoecium is present in the centre and other parts cover it partially.
 - 4) Gynoecium is situated in the centre, and other parts of the flower are located at the rim of the thalamus, at the same level.
59. Which of the following is the correct floral formula of Liliaceae ?
- 1) $\% \overset{\uparrow}{\text{♀}} C_{1+2+(2)} A_{(9)+1} \underline{G}_1$
 - 2) $\oplus \overset{\uparrow}{\text{♂}} \overset{\uparrow}{\text{♀}} K_{(5)} \overbrace{C_{(5)}} A_5 \underline{G}_2$
 - 3) $\text{Br} \oplus \overset{\uparrow}{\text{♀}} \overbrace{P_{(3+3)}} A_{3+3} \underline{G}_{(3)}$
 - 4) $\oplus \overset{\uparrow}{\text{♀}} K_{(5)} \overbrace{C_{(5)}} A_5 \underline{G}_{(2)}$
86. Identify the correct features of Mango and Coconut fruits.
- (i) In both fruit is a drupe
 - (ii) Endocarp is edible in both
 - (iii) Mesocarp in Coconut is fibrous, and in Mango it is fleshy.
 - (iv) In both, fruit develops from monocarpellary ovary.
- Select the correct option from below :
- 1) **(i), (iii) and (iv) only**
 - 2) (i), (ii) and (iii) only
 - 3) (i) and (iv) only
 - 4) (i) and (ii) only

Ch.6. Anatomy of Flowering Plants

74. Large, empty colourless cells of the adaxial epidermis along the veins of grass leaves are:
- 1) Lenticels
 - 2) Guard cells
 - 3) Bundle sheath cells
 - 4) **Bulliform cells**
77. Which of the following statements about cork cambium is incorrect?
- 1) **It forms secondary cortex on its outside**
 - 2) It forms a part of periderm
 - 3) It is responsible for the formation of lenticels
 - 4) It is a couple of layers thick

Ch.7. Structural Organisation in Animals

125. Select the incorrectly matched pair from following:

- 1) **Chondrocytes - Smooth muscle cells**
- 2) Neurons - Nerve cells
- 3) Fibroblast - Areolar tissue
- 4) Osteocytes - Bone cells

113. Match the following columns with reference to cockroach and select the correct option :

	Column - I		Column - II
(a)	Grinding of the food particles	(i)	Hepatic caeca
(b)	Secrete gastric juice	(ii)	10 th segment
(c)	10 pairs	(iii)	Proventriculus
(d)	Anal cerci	(iv)	Spiracles
		(v)	Alary muscles

- 1) **(a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)**
- 2) (a)-(iv), (b)-(iii), (c)-(v), (d)-(ii)
- 3) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)
- 4) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)

97. In cockroach, identify the parts of the foregut in correct sequence :

- 1) Mouth → Oesophagus → Pharynx → Crop → Gizzard
- 2) Mouth → Crop → Pharynx → Oesophagus → Gizzard
- 3) Mouth → Gizzard → Crop → Pharynx → Oesophagus
- 4) **Mouth → Pharynx → Oesophagus → Crop → Gizzard**

Ch.8. Cell : The Unit of Life

73. Inclusion bodies of blue- green, purple and green photosynthetic bacteria are :

- | | |
|-------------------------|------------------------|
| 1) Contractile vacuoles | 2) Gas vacuoles |
| 3) Centrioles | 4) Microtubules |

75. The biosynthesis of ribosomal RNA occurs in :

- | | |
|----------------|---------------------|
| 1) Ribosomes | 2) Golgi apparatus |
| 3) Microbodies | 4) Nucleolus |

121. Match the following columns and select the correct option:

	Column - I		Column - II
(a)	Smooth endoplasmic reticulum	(i)	Protein synthesis
(b)	Rough endoplasmic reticulum	(ii)	Lipid synthesis
(c)	Golgi complex	(iii)	Glycosylation
(d)	Centriole	(iv)	Spindle formation

- | | |
|--|---|
| 1) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv) | 2) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv) |
| 3) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii) | 4) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv) |

106. The size of Pleuropneumonia - like Organism (PPLO) is :

- | | |
|------------------------|--|
| 1) 0.02 μm | 2) 1-2 μm |
| 3) 10-20 μm | 4) 0.1 μm |

Ch.9. Biomolecules

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Ch.10. Cell Cycle & Cell Division

63. Attachment of spindle fibers to kinetochores of chromosomes becomes evident in :
- 1) Anaphase
 - 2) Telophase
 - 3) Prophase
 - 4) **Metaphase**
72. In a mitotic cycle, the correct sequence of phases is:
- 1) S, G₁, G₂, M
 - 2) **G₁, S, G₂, M**
 - 3) M, G₁, G₂, S
 - 4) G₁, G₂, S, M
130. Match the following events that occur in their respective phases of cell cycle and select the correct option :

	Column - I		Column - II
(a)	G ₁ phase	(i)	Cell grows and organelle duplication
(b)	S phase	(ii)	DNA replication and chromosome duplication
(c)	G ₂ phase	(iii)	Cytoplasmic growth
(d)	Metaphase in M-phase	(iv)	Alignment of chromosomes

- 1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
 - 2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
 - 3) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
 - 4) **(a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)**
120. During Meiosis 1, in which stage synapsis takes place ?
- 1) Pachytene
 - 2) **Zygotene**
 - 3) Diplotene
 - 4) Leptotene

Ch.11. Transport in Plants

78. Select the incorrect statement.
- 1) Transport of molecules in phloem can be bidirectional
 - 2) Movement of minerals in xylem is unidirectional.
 - 3) **Unloading of sucrose at sink does not involve the utilization of ATP.**
 - 4) Elements most easily mobilized in plants from one region to another are: phosphorus, sulphur, nitrogen and potassium.

Ch.12. Mineral Nutrition

52. Identify the statement which is incorrect.
- 1) Sulphur is an integral part of cysteine.
 - 2) **Glycine is an example of lipids.**
 - 3) Lecithin contains phosphorus atom in its structure.
 - 4) Tyrosine possesses aromatic ring in its structure.
61. In Glycine max, the product of biological nitrogen fixation is transported from the root nodules to other parts as :
- 1) Ammonia
 - 2) **Glutamate**
 - 3) Nitrates
 - 4) **Ureides**
67. Which of the following elements helps in maintaining the structure of ribosomes ?
- 1) **Magnesium**
 - 2) Zinc
 - 3) Copper
 - 4) Molybdenum
90. Pyruvate dehydrogenase activity during aerobic respiration requires :
- 1) Calcium
 - 2) Iron
 - 3) Iron
 - 4) **Magnesium**

Ch.13. Photosynthesis in Higher Plants

71. During non-cyclic photophosphorylation, when electrons are lost from the reaction centre at PS II, what is the source which replaces these electrons?
- 1) Oxygen
 - 2) **Water**
 - 3) Carbon dioxide
 - 4) Light
82. Which of the following statements is incorrect?
- 1) RuBisCO is a bifunctional enzyme
 - 2) **In C4 plants, the site of RuBisCO activity is mesophyll cell**
 - 3) The substrate molecule for RuBisCO activity is a 5-carbon compound
 - 4) RuBisCO action requires ATP and NADPH

Ch.14. Respiration in Plants

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Ch.15. Plant Growth & Development

66. Match the following :

	Column I		Column II
(a)	Aquaporin	(i)	Amide
(b)	Asparagine	(ii)	Polysaccharide
(c)	Abscisic acid	(iii)	Polypeptide
(d)	Chitin	(iv)	Carotenoids

Select the correct option :

- 1) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii) 2) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
 3) (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii) 4) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)

68. Who coined the term 'Kinetin' ?

- 1) **Skoog and Miller** 2) Darwin
 3) Went 4) Kurosawa

80. Inhibitory substances in dormant seeds cannot be removed by subjecting seeds to :

- 1) Gibberellic acid 2) Nitrate
 3) **Ascorbic acid** 4) Chilling conditions

Ch.16. Digestion & Absorption

107. The proteolytic enzyme rennin is found in :

- 1) Intestinal juice 2) Bile juice
 3) **Gastric juice** 4) Pancreatic juice

101. Intrinsic factor that helps in the absorption of vitamin B12 is secreted by :

- 1) Goblet cells 2) Hepatic cells
 3) **Oxyntic cells** 4) Chief cells

89. Match the following concerning the activity/function and the phytohormone involved :-

	Column I		Column II
(a)	Fruit ripener	(i)	Abscisic acid
(b)	Herbicide	(ii)	GA ₃
(c)	Bolting agent	(iii)	2, 4-D
(d)	Stress hormone	(iv)	Ethephon

Select the correct option from following :

- 1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i) 2) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
 3) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i) 4) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)

Ch.17. Breathing & Exchange of Gases

131. Match the following columns and select the correct option :

	Column - I		Column - II
(a)	Pneumotaxic Centre	(i)	Alveoli
(b)	O ₂ Dissociation curve	(ii)	Pons region of brain
(c)	Carbonic Anhydrase	(iii)	Haemoglobin
(d)	Primary site of exchange of gases	(iv)	R.B.C.

- 1) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv) 2) **(a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)**
 3) (a)-(iii), (b)-(ii), (c)-(iv), (d)-(i) 4) (a)-(iv), (b)-(i), (c)-(iii), (d)-(ii)

118. The Total Lung Capacity (TLC) is the total volume of air accommodated in the lungs at the end of a forced inspiration. This includes :

- 1) RV; IC (Inspiratory Capacity); EC (Expiratory Capacity); and ERV
 2) RV; ERV; IC and EC
 3) RV; ERV; VC (Vital Capacity) and FRC (Functional Residual Capacity)
 4) **RV (Residual Volume); ERV (Expiratory Reserve Volume); TV (Tidal Volume); and IRV (Inspiratory Reserve Volume)**

Ch.18. Body Fluids & Circulation

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Ch.19. Excretory Products & their Elimination

122. Select the correct statement :

- 1) Atrial Natriuretic Factor increases the blood pressure.
 2) Angiotensin II is a powerful vasodilator.
 3) Counter current pattern of blood flow is not observed in vasa recta.
 4) **Reduction in Glomerular Filtration Rate activates JG cells to release renin.**

111. The increase in osmolarity from outer to inner medullary interstitium is maintained due to :

- (i) Close proximity between Henle's loop and vasa recta
 (ii) Counter current mechanism
 (iii) Selective secretion of HCO₃⁻ and hydrogen ions in PCT
 (iv) Higher blood pressure in glomerular capillaries

- 1) Only(ii) 2) (iii) and (iv)
 3) (i), (ii) and (iii) 4) **(i) and (ii)**

Ch.20. Locomotion & Movement

135. Match the following columns and select the correct option :

	Column - I		Column - II
(a)	Gout	(i)	Decreased levels of estrogen
(b)	Osteoporosis	(ii)	Low Ca^{++} ions in the blood
(c)	Tetany	(iii)	Accumulation of uric acid crystals
(d)	Muscular dystrophy	(iv)	Auto immune disorder
		(v)	Genetic disorder

- 1) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv) 2) **(a)-(iii), (b)-(i), (c)-(ii), (d)-(v)**
 3) (a)-(iv), (b)-(v), (c)-(i), (d)-(ii) 4) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)

Ch.21. Neural Control & Coordination

123. Which of the following is associated with decrease in cardiac output ?

- 1) Sympathetic nerves 2) **Parasympathetic neural signals**
 3) Pneumotaxic centre 4) Adrenal medullary hormones

105. Match the following columns and select the correct option :

	Column I		Column II
(a)	Rods and Cones	(i)	Absence of photoreceptor cells
(b)	Blind Spot	(ii)	Cones are densely packed
(c)	Fovea	(iii)	Photoreceptor cells
(d)	Iris	(iv)	Visible coloured portion of the eye

- 1) **(a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)** 2) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
 3) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i) 4) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

Ch.22. Chemical control& Coordination

102. Hormones stored and released from neurohypophysis are :

- 1) Thyroid stimulating hormone and Oxytocin
- 2) **Oxytocin and Vasopressin**
- 3) Follicle stimulating hormone and Leutinizing hormone
- 4) Prolactin and Vasopressin

98. Match the following columns and select the correct option :

	Column I		Column II
(a)	Pituitary hormone	(i)	Steroid
(b)	Epinephrine	(ii)	Neuropeptides
(c)	Endorphins	(iii)	Peptides, proteins
(d)	Cortisol	(iv)	Biogenic amines

- 1) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
- 2) **(a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)**
- 3) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)
- 4) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)

Ch.1. Reproduction in Organisms

65. Vegetative propagule in Agave is as :

- 1) Rhizome
- 2) **Bulbil**
- 3) Offset
- 4) Eye

Ch.2. Sexual Reproduction in Flowering Plants

58. Which of the following is incorrect for wind-pollinated plants ?

- 1) Well exposed stamens and stigma
- 2) **Many ovules in each ovary**
- 3) Flowers are small and not brightly coloured
- 4) Pollen grains are light and non-sticky

Ch.3. Human Reproduction

127. Match the following columns and select the correct option :

	Column - I		Column - II
(a)	Ovary	(i)	Human chorionic Gonadotropin
(b)	Placenta	(ii)	Estrogen & Progesterone
(c)	Corpus luteum	(iii)	Androgens
(d)	Leydig cells	(iv)	Progesterone only

- 1) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i) 2) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)
 3) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv) 4) **(a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)**

119. Select the correct option of haploid cells from the following groups :

- 1) Primary oocyte, Secondary oocyte, Spermatid
 2) **Secondary spermatocyte, First polar body, Ovum**
 3) Spermatogonia, Primary spermatocyte, Spermatid
 4) Primary spermatocyte, Secondary spermatocyte, Second polar body

104. In human beings, at the end of 12 weeks (first trimester) of pregnancy, the following is observed :

- 1) Eyelids and eyelashes are formed
 2) **Most of the major organ systems are formed**
 3) The head is covered with fine hair
 4) Movement of the foetus

Ch.4. Reproductive Health

116. Progestogens alone or in combination with estrogens can be used as a contraceptive in the form of –

- 1) Implants only 2) Injections only
 3) **Pills, injections and implants** 4) Pills only

93. Which of the following STDs are not curable ?

- 1) **Genital herpes, Hepatitis B, HIV infection**
 2) Chlamydia, Syphilis, Genital warts
 3) HIV, Gonorrhoea, Trichomoniasis
 4) Gonorrhoea, Trichomoniasis, Hepatitis B

Ch.5. Principles of Inheritance & Variation

50. Chromosomal theory of inheritance was proposed by:
- 1) **Sutton and Boveri**
 - 2) Bateson and Punnet
 - 3) T. H. Morgan
 - 4) Watson and Crick
62. The number of contrasting characters studied by Mendel for his experiments was :
- 1) **14**
 - 2) 4
 - 3) 2
 - 4) 7
96. The best example for pleiotropy is :
- 1) Skin colour
 - 2) **Phenylketoneuria**
 - 3) Colour Blindness
 - 4) ABO Blood group

Ch.6. Molecular basis

49. The term 'Nuclein' for the genetic material was used by:
- 1) Franklin
 - 2) **Meischer**
 - 3) Chargaff
 - 4) Mendel
60. In the polynucleotide chain of DNA, a nitrogenous base is linked to the –OH of:
- 1) 2'C pentose sugar
 - 2) 3'C pentose sugar
 - 3) 5'C pentose sugar
 - 4) **1'C pentose sugar**
132. Which is the basis of genetic mapping of human genome as well as DNA finger printing ?
- 1) **Polymorphism in DNA sequence**
 - 2) Single nucleotide polymorphism
 - 3) Polymorphism in hnRNA sequence
 - 4) Polymorphism in RNA sequence
115. E.coli has only 4.6×10^6 base pairs and completes the process of replication within 18 minutes; then the average rate of polymerisation is approximately-
- 1) **2000 base pairs/second**
 - 2) 3000 base pairs/second
 - 3) 4000 base pairs/second
 - 4) 1000 base pairs/second

Ch.7. Evolution

70. Embryological support for evolution was proposed by :
- 1) **Ernst Heckel**
 - 2) Karl Ernst von Baer
 - 3) Charles Darwin
 - 4) Alfred Wallace
129. A Hominid fossil discovered in Java in 1891, now extinct, having cranial capacity of about 900 cc was:
- 1) **Homo erectus**
 - 2) Neanderthal man
 - 3) Homo sapiens
 - 4) Australopithecus
95. The phenomenon of evolution of different species in a given geographical area starting from a point and spreading to other habitats is called :
- 1) Saltation
 - 2) Co-evolution
 - 3) Natural selection
 - 4) **Adaptive radiation**
84. After about how many years of formation of earth, life appeared on this planet ?
- 1) 500 billion years
 - 2) 50 million years
 - 3) **500 million years**
 - 4) 50 billion years

Ch.8. Human Health

133. Which of the following conditions cause erythroblastosis foetalis ?
- 1) Mother Rh^{+ve} and foetus Rh^{-ve}
 - 2) **Mother Rh^{-ve} and foetus Rh^{+ve}**
 - 3) Both mother and foetus Rh^{-ve}
 - 4) Both mother and foetus Rh^{+ve}
112. The yellowish fluid "colostrum" secreted by mammary glands of mother during the initial days of lactation has abundant antibodies (IgA) to protect the infant. This type of immunity is called as :
- 1) **Passive immunity**
 - 2) Active immunity
 - 3) Acquired immunity
 - 4) Autoimmunity
103. Match the following columns and select the correct option :

	Column I		Column II
(i)	Typhoid	(a)	Haemophilus influenzae
(ii)	Malaria	(b)	Wuchereria bancrofti
(iii)	Pneumonia	(c)	Plasmodium vivax
(iv)	Filariasis	(d)	Salmonella typhi

- 1) **(i)-(d), (ii)-(c), (iii)-(a), (iv)-(b)**
- 2) (i)-(c), (ii)-(d), (iii)-(b), (iv)-(a)
- 3) (i)-(a), (ii)-(c), (iii)-(b), (iv)-(d)
- 4) (i)-(a), (ii)-(b), (iii)-(d), (iv)-(c)

Ch.9. Strategies for Enhancement in Food Production

124. Inbreeding depression is –

- 1) Reduced motility and immunity due to close inbreeding
- 2) Decreased productivity due to mating of superior male and inferior female
- 3) Decrease in body mass of progeny due to continued close inbreeding
- 4) **Reduced fertility and productivity due to continued close inbreeding**

Ch.10 Microbes

109. Cyclosporin A, used as immuno suppression agent, is produced from :

- 1) *Monascus purpureus*
- 2) *Saccharomyces cerevisiae*
- 3) *Penicillium notatum*
- 4) ***Trichoderma polysporum***

100. Match the following columns and select the correct option:

	Column I		Column II
(a)	Dragonflies	(i)	Biocontrol agents of several plant pathogens
(b)	<i>Bacillus thuringiensis</i>	(ii)	Get rid of Aphids and mosquitoes
(c)	<i>Glomus</i>	(iii)	Narrow spectrum insecticidal applications
(d)	Baculoviruses	(iv)	Biocontrol agents of lepidopteran plant pests
		(v)	Absorb phosphorus from soil

- 1) (a)-(iii), (b)-(v), (c)-(iv), (d)-(i)
- 2) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)
- 3) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(v)
- 4) **(a)-(ii), (b)-(iv), (c)-(v), (d)-(iii)**

92. For the commercial and industrial production of Citric Acid, which of the following microbes is used ?

- 1) ***Aspergillus niger***
- 2) *Lactobacillus* sp
- 3) *Saccharomyces cerevisiae*
- 4) *Clostridium butylicum*

Ch.11. Biotechnology : Principles and Processes

47. First discovered restriction endonuclease that always cuts DNA molecule at a particular point by recognizing a specific sequence of six base pairs is:
- 1) EcoR1
 - 2) Adenosine deaminase
 - 3) Thermostable DNA polymerase
 - 4) **Hind II**
56. In Recombinant DNA technology antibiotics are used:
- 1) to keep medium bacteria-free
 - 2) to detect alien DNA
 - 3) to impart disease-resistance to the host plant
 - 4) **as selectable markers**
110. Select the correct statement from the following :
- 1) Gel electrophoresis is used for amplification of a DNA segment.
 - 2) The polymerase enzyme joins the gene of interest and the vector DNA.
 - 3) **Restriction enzyme digestions are performed by incubating purified DNA molecules with the restriction enzymes of optimum conditions.**
 - 4) PCR is used for isolation and separation of gene of interest.
94. Spooling is :
- 1) Amplification of DNA
 - 2) Cutting of separated DNA bands from the agarose gel
 - 3) Transfer of separated DNA fragments to synthetic membranes
 - 4) **Collection of isolated DNA**
85. In a mixture, DNA fragments are separated by :
- 1) Bioprocess engineering
 - 2) Restriction digestion
 - 3) **Electrophoresis**
 - 4) Polymerase chain reaction
81. Match the following techniques or instruments with their usage :

	Column I		Column II
(a)	Bioreactor	(i)	Separation of DNA fragments
(b)	Electrophoresis	(ii)	Production of large quantities of products
(c)	PCR	(iii)	Detection of pathogen, based on antigen – antibody reaction
(d)	ELISA	(iv)	Amplification of nucleic acids

Select the correct option from following:

- 1) (a)-(iii), (b)-(ii), (c)-(iv), (d)-(i)
- 2) **(a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)**
- 3) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
- 4) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)

Ch.12 Biotechnology and its Applications

126. The laws and rules to prevent unauthorized exploitation of bio-resources are termed as –
- 1) **Biopatenting**
 - 2) Bioethics
 - 3) Bioengineering
 - 4) Biopiracy
114. RNA interference is used for which of the following purposes in the field of biotechnology ?
- 1) to develop a plant tolerant to abiotic stresses
 - 2) **to develop a pest resistant plant against infestation by nematode**
 - 3) to enhance the mineral usage by the plant
 - 4) to reduce post harvest losses

Ch.13. Organisms & Populations

57. According to Alexander von Humboldt :
- 1) Species richness decreases with increasing area of exploration.
 - 2) **Species richness increases with increasing area, but only up to limit.**
 - 3) There is no relationship between species richness and area explored.
 - 4) Species richness goes on increasing with increasing area of exploration.
64. Match the items in Column-I with those in Column-II :

	Column I		Column II
(a)	Herbivores-Plants	(i)	Commensalism
(b)	Mycorrhiza-Plants	(ii)	Mutualism
(c)	Sheep-Cattle	(iii)	Predation
(d)	Orchid-Tree	(iv)	Competition

Select the correct option from following :

- 1) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)
 - 2) **(a)-(iii), (b)-(ii), (c)-(iv), (d)-(i)**
 - 3) (a)-(ii), (b)-(i), (c)-(iii), (d)-(iv)
 - 4) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)
87. The impact of immigration on population density is:
- 1) Negative
 - 2) Both positive and negative
 - 3) Neutralized by natality
 - 4) **Positive**

Ch.14. Ecosystem

48. Which of the following statements is incorrect?
- 1) Biomass decreases from first to fourth trophic level
 - 2) **Energy content gradually increases from first to fourth trophic level**
 - 3) Number of individuals decreases from first trophic level to fourth trophic level
 - 4) Energy content gradually decreases from first to fourth trophic level
91. The rate of decomposition is faster in the ecosystem due to following factors EXCEPT :
- 1) Detritus rich in sugars
 - 2) Warm and moist environment
 - 3) Presence of aerobic soil microbes
 - 4) **Detritus richer in lignin and chitin**
83. Which of the following statements is incorrect regarding the phosphorus cycle?
- 1) Phosphates are the major form of phosphorus reservoir.
 - 2) Phosphorus solubilising bacteria facilitate the release of phosphorus from organic remains
 - 3) **There is appreciable respiratory release of phosphorus into atmosphere**
 - 4) It is sedimentary cycle

Ch.15. Biodiversity and Conservation

69. In the following in each set a conservation approach and an example of method of conservation are given:
- | | |
|--|---|
| (a) In situ conservation - Biosphere Reserve | (b) Ex situ conservation - Sacred groves |
| (c) In situ conservation - Seed bank | (d) Ex situ conservation – Cryopreservation |

Select the option with correct match of approach and method :

- | | |
|----------------|-----------------------|
| 1) (a) and (c) | 2) (a) and (d) |
| 3) (b) and (d) | 4) (a) and (b) |

Ch.16. Environmental Issues

54. A species which was introduced for ornamentation but has become a trouble-some weed in India :
- | | |
|-----------------------------|--------------------------------|
| 1) Parthenium hysterophorus | 2) Eichhornia crassipes |
| 3) Prosopis juliflora | 4) Trapa spinosa |
79. Air (Prevention and Control of Pollution) Act was amended in 1987 to include among pollutants:
- | | |
|----------------------|---|
| 1) Vehicular exhaust | 2) Allergy causing pollen |
| 3) Noise | 4) Particulates of size 2.5 micrometer or below |
117. According to Central Pollution Control Board [CPCB] what size (in diameter) of particulate is responsible for causing greater harm to human health ?
- | | |
|--------------------|---------------------------|
| 1) 3.5 micrometers | 2) 2.5 micrometers |
| 3) 4.0 micrometers | 4) 3.0 micrometers |
