# SRI SAI COACHING CENTRE 

2/25, Raja Mill Road, Madurai - 1.
TRB - P.G. Assistant - Zoology - Model - I
Name: $\qquad$
Roll No.
13.09.19

1. Neo-Lamarckism states that
A) there is enormous fertility in organisms but their number always remains constant
B) like begets like
C) all the acquired characters which influence germplasm are heritable
D) the life cycle of an individuals repeats the characters which were present in its ancestors
2. Which of the following statements are true in regard with three levels of struggle?
I. Intraspecific struggle is among individuals of same species.
II. Interspecific struggle occurs between individuals of different species.
III. Struggle of environment occurs between living forms against environment
IV. Interspecific struggle is more intense than intraspecific struggle.
A) I, II and IV
B) II, III and IV
C) I, II and III
D) I, III and IV
3. Select the option which categorises the statements given below correctly as true (T) and false (F).
I. de Vries gave the mutation theory of evolution
II. He also described the role of genetic drift and genetic flow
III. de Vries believed that evolution was gradual.
IV. He worked on Oenothera lamarckiana for proving his theory
A) I - T, III - T and II $-\mathrm{F}, \mathrm{IV}-\mathrm{F}$
B) II - T, III - T IV - T and I -F
C) $\mathrm{I}-\mathrm{T}, \mathrm{IV}-\mathrm{T}$ and $\mathrm{II}-\mathrm{F}, \mathrm{III}-\mathrm{F}$
D) II - T, III - T and I-F , IV - F
4. Industrial melanism as observed in peppered moth proves that the
A) true black melanic forms raise by a reccurring random mutation
B) melanic form of the moth has no selective advantage over lighter form in industrial area
C) lighter form moth has no selective advantage either in polluted industrial area or nonpolluted area
D) melanism is a pollution generated feature
5. Match the following columns:

| Column - I |  | Column - II | Codes: | a | b | c | d |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| a. Homo habitis | - | 1. Miocene | A) | 1 | 3 | 4 | 2 |
| b. Ramapithecus | - | 2. Oligocene | B) | 1 | 3 | 2 | 4 |
| c. Homo sapiens | - | 3. Pleistocene | C) | 3 | 1 | 2 | 4 |
| d. Parapithecus | - | 4. Holocene | D) | 3 | 1 | 4 | 2 |

6. Forelimbs of cat, lizard used in walking; forelimbs of whale used in swimming and forelimbs of bats used in flying are an example of
A) analogous organs
B) adaptive radiation
C) homologous organs
D) convergent evolution
7. Which of the following species are restricted to an area?
A) Sibling species
B) Endemic species
C) Allopatric species
D) Sympatric species
8. What was the most significant trend in the evolution of modern man (Homo sapiens) from his ancestors?
A) Shortening of jaws
B) Binocular vision
C) Increasing cranial capacity
D) Upright posture
9. With reference to the process of cancer growth and metastasis, arrange the following steps in the correct order.
I. Partially transformed cell II. Cancer cell secretions result in metastasis
III. A mass of cells is formed IV. A localized cancerous tumour formed
A) I, III, IV and II
B) I, IV, III and II
C) III, IV, I and II
D) IV, I, III and II
10. Which of the following type of vaccine matches with its correct examples?
I. Toxoids - Tetanus vaccine
II. Attenuated vaccine - BCG vaccine
III. Inactive vaccine - MMR vaccine
IV. Combinations - DPT vaccine
A) I, II and III
B) II, III and IV
C) I, II and IV
D) I, III and IV
11. Consider the following statements
I. A monocyte is a phagocytic cell that acts as a scavenger capable of destroying bacteria or other foreign material
II. Saliva contains lysozyme which kills the microorganisms that are abnormal inhabitants of the buccal cavity.
III. Tears, secreted by the lacrimal glands contains ptyaline enzyme, which prevent eye infections.
Which of the statements given above are correct?
A) I and II
B) I and III
C) II and III
D) I, II and III
12. Which of the following human parasites require mosquito to complete their life cycle?
A) Ascaris lumbricoides and Wuchereria bancrofti
B) Leishmania donovani and Plasmodium ovale
C) Ascaris lumbricoides and Leishmania donovani
D) Wuchereria bancrofti and Plasmodium Ovale
13. DNA gyrase is a type of
A) DNA topoisomerase
B) DNA ligase
C) DNA polymerase
D) reverse transcriptase
14. The construction of the first recombinant DNA was done by using the native plasmid of
A) E.coli
B) Salmonella typhimurium
C) Bacillus thuringiensis
D) Yeast
15. Which of the following is a source of restriction endonuclease?
A) Escherichia coli
B) Haemophilus influenza
C) Bacillus amyloliquefaciens
D) All of the above
16. Statement - I: DNA Polymerase is responsible for DNA synthesis

Statement - II: DNA polymerase used in the PCR is isolated from a virus.
Which one is a true statement regarding DNA polymerase used in Polymerase Chain Reaction (PCR)?
A) Statement I is correct, while statement II is incorrect
B) Statement I is incorrect, while statement II is correct
C) Both of these statements I and II are correct
D) Both of these statements I and II are incorrect
17. Match the following columns:

Column - I
a. Gel electrophoresis technique
b. Father of genetic engineering
c. Father of Indian DNA fingerprinting
d. DNA ligase in $\mathrm{T}_{4}$ bacteriophage

Column-II

- 1. Har Gobind Khorana
- 2. Dr. Lalji Singh
- 3. Paul Berg
- 4. A Tiselius

| Codes: | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |
| ---: | ---: | ---: | ---: | ---: |
| A) | 4 | 2 | 1 | 3 | | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |  |
| :--- | :--- | :--- | :--- | :--- |
| C) | 4 | 3 | 2 | 1 |

18. The infective stage in Plasmodium is
A) Schizont
B) Sporozoite
C) Trophozoite
D) Sporoblasts
19. Mark the correct match
A) Malaria - Aedes
B) Filariasis - Culex
C) Dengue fever - Anopheles
D) Kala azar - Musca nedulo
20. Coelom in Balanoglossus is
A) Schizocoel
B) Enterocoel
C) Holocentric
D) None of the above
21. Soil fertility is reduced by
A) crop rotation
B) nitrogen fixing bacteria
C) decaying organic matter
D) intensive agriculture
22. Match the following:

Column - I Column - II
a. Vein

1. Fight against germs
b. Root - 2. birds, snakes, lizards
c. WBCs

- 3. human
d. Uric acid
- 4. carbon dioxide rich blood
e. Urea

Codes:
$\begin{array}{llllll}\text { A) } & 5 & 4 & 3 & 2 & 1 \\ \text { B) } & 4 & 5 & 1 & 2 & 3 \\ \text { C) } & 1 & 2 & 3 & 4 & 5 \\ \text { D) } & 3 & 4 & 5 & 1 & 2\end{array}$
23. Viviparity is found in
A) Frog
B) Lizard
C) Snake
D) Rabbit
24. Test tube babies are produced by
A) Fertilising the egg removed from the body of the female with the husband's sperm outside in vitro culture. The zygote is transferred back.
B) External fertilization and development in vitro culture till 32 cells stage before putting the embryo back into mother's uterus
C) Complete development of a baby in vitro
D) Development upto 32 cells stage and transplanting embryo in the uterus of a surrogate mother.
25. What is the function of copper - T
A) Checks mutation
B) Stops fertilization
C) Stops zygote formation
D) Stops oblituation of blastocoels
26. First cloned animal is
A) $\operatorname{Dog}$
B) Molly
C) Dolly sheep
D) Polly sheep
27. Which one of the following characters is not typical of the class Mammalia
A) Alveolar lungs
B) Ten pairs of cranial nerves
C) Six cervical vertebrae
D) The codont dentition
28. "Portuguese man of war" is
A) Soldier of world war I
B) Portuguese soldier
C) A sponge
D) A polymorphic, colonial, coelenterate
29. Diploblastic acoelomate condition is found in
A) Planaria
B) Ascaris
C) Rotifer
D) Sea anemone
30. Percentage of protein is more in
A) Lymph
B) Blood
C) Plasma
D) W.B.C.
31. Which of the following acts as middle man
A) W.B.C
B) Plasma
C) Blood
D) Lymph
32. Stain for cell division
A) Saffranin
B) Aniline blue
C) PAS
D) Acetocarmine
33. Which structures perform the function of mitochondria in bacteria?
A) Nucleoid
B) Ribosomes
C) Cell wall
D) Mesosomes
34. The formation of protein can be considered as
A) Dehydration synthesis
B) Dehydration analysis
C) Hydration synthesis
D) Hydration analysis
35. Bond between phosphate and sugar in a nucleotide is
A) H - bond
B) Covalent bond
C) Phosphodiester bond
D) Sulphide bond
36. Physical basis of life is
A) Cytoplasm
B) Protoplasm
C) Nucleoplasm
D) Endoplasm
37. Weight of human liver is
A) 6.0 kg
B) 5.0 kg
C) 3.0 kg
D) 1.5 kg
38. One of the following is a difference between pulmonary respiration of frog and human
A) Diaphragm and ribs play role in respiration in frog
B) Lungs are respiratory organs
C) Respiration occurs due to pressure gradient in human
D) None of the above
39. Cellular respiration depends upon the
A) Availability of carbohydrates in cells
B) Concentration of $\mathrm{O}_{2}$ in atmosphere
C) Presence of nitrogen with $\mathrm{O}_{2}$ in air
D) Transport, of $\mathrm{O}_{2}$ to the cells
40. The normal rate of respiration in man per minute is about
A) 10 to 15 times
B) 16 to 20 times
C) 19 to 21 times
D) 23 to 25 times
41. One of the following is not respiratory pigment
A) Anthocyanin
B) Haemoglobin
C) Haemoerythrin
D) Haemocfdnin
42. If benzoic acid is present in the food of mammals, it is excreted out in the form of
A) Ornithuric acid
B) Aspartic acid
C) Uric acid
D) Hippuric acid
43. Vasa rectae are pertubublar capillaries around
A) Posterior part of alimentary canal
B) PCT
C) Loop of Henle
D) DCT
44. Consider the following four statements (A-D) about certain desert animals such as kangaroo rat

1. They have dark colour and high rate of reproduction and excrete solid urine
2. They do not drink water, breathe at a slow rate to conserve water \& have their body covered with thick hairs
3. They feed on dry seeds \& do not required drinking water
4. They excrete very concentrated urine and do not use water to regulate body temperature
Which two of the above statements for such animals are true?
A) 3 and 4
B) 2 and 3
C) 3 and 1
D) 1 and 2
5. Aquous humor and vitreous humor are secreted by
A) Iris
B) Ciliary body
C) Lens
D) Cornea
6. The following data 20-24, 25-29, 30-34 is an example for
A) Inclusive method
B) Exclusive method
C) Discrete method
D) Over lapping method
7. The regression lines cut each other at the point of
A) Average of $X$ and $Y$
B) Average of X only
C) Average of Y only
D) mean of $X$ and $Y$
8. If there is an decrease in the value of one variable accompanied by an increase in the value of the other variable, the type of correlation is
A) Negative correlation
B) Positive correlation
C) Partial correlation
D) Non-linear correlation
9. Sometimes secondary data Collection is preferred because
A) it gives more accurate and original data
B) it is exhaustive and in raw form
C) it is more reliable
D) it saves time, money and readily available
10. Find the median of the following data $31,35,27,29,43,37,41,35$ and 30
A) 31
B) 35
C) 30
D) 37
11. Find the range of the data $143,148,135,150,120,139,149,146,151$ and 155
A) 23
B) 25
C) 30
D) 35
12. Find the value of mode of mean is 36 and median is 35
A) 34
B) 38
C) 33
D) 31
13. In a pie chart central value is
A) $\frac{\text { Value of the segment }}{\text { Total value }} \times 360^{\circ}$
B) $\frac{\text { Total value }}{\text { Value of the segment }} \times 360^{\circ}$
C) Total value $x$ Value of the segment
D) $\frac{\text { Total value } \times \text { Value of the segment }}{360^{\circ}}$
14. For calculation of standard deviation which measure of central tendency is used
A) Mode
B) Median
C) Mean
D) All of these
15. The value of the mode may be derived from
A) 2 Median - 3 Mean
B) 3 Median -2 Mean
C) 2 Median +3 Mean
D) 3 Median + 2 Mean
16. What will happen if the secretion of parietal cells of gastric glands is blocked with an inhibitor?
A) Gastric juice will be deficient in chymosin
B) Gastric juice will be deficient in pepsinogen
C) In the absence of HCl secretion, inactive pepsinogen is not converted into the active enzyme pepsin
D) Enterokinase will not be released from the duodenal mucosa and so trypsinogen is not converted to trypsin
17. Meissner's plexus is a network of nerve cells and sympathetic nerve fibres which control secretion of
A) intestinal juices
B) gastric juice
C) pancreatic juice
D) bile
18. Identify the disorders of digestive system according to given description
I. Retention of faeces in rectum with irregular bowel movement
II. Feeling of fullness due to anxiety, over eating, stress, etc.
III. Erosion of stomach or duodenal lining
IV. Travelling up of stomach content leading to discomfort and pain

| A) I-Diarrhoea, | II-Constipation, | III-Heartburn, | IV-Vomiting |
| :--- | :--- | :--- | :--- |
| B) I-Constipation, | II-Indigestion, | III-Ulcers, | IV-Heartburn |
| C) I-Vomiting, | II-Indigestion, | III-Gal stones, | IV-Heartburn |
| D) I-Constipation, | II-Gall stones, | III-Ulcers, | IV-Indigestion |

59. Characteristic of mammalian liver is
A) Kupffer's cells and leucocytes
B) Leucocytes and canaliculae
C) Glisson's capsules and Kupffer's cells
D) Glisson's capsule and leucocytes
60. In which one of the following reactins, oxidative decarboxylation does not occur?
A) Malic acid $\rightarrow$ Pyruvic acid
B) Pyruvic acid $\rightarrow$ Acetyl Co-A
C) Glyceraldhyde 3-phosphate $\rightarrow$ 1, 3-Disphosphoglyceric acid
D) $\alpha$ - ketoglutaric acid $\rightarrow$ Succinyl Co-A
61. Match the following columns.

## Column - I

a. Molecular oxygen
b. Electron acceptor
c. Pyruvate dehydrogenase -
d. Decarboxylation

| : | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |
| :--- | :--- | :--- | :--- | :--- |
| A) | 2 | 3 | 4 | 1 |
| C) | 2 | 1 | 3 | 4 |

B) $\quad 3$
D) 4 3

d

| C) | 2 | 1 | 3 | 4 | D) | 4 | 3 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

62. Match the compounds given in the column I with the number of carbon atoms present in them which are listed under column II. Choose the correct combination

## Column - I

a. Oxaloacetate
b. Phosphoglyceraldehyde
c. Isocitrate
d. $\alpha$ - ketoglutarate

Column - II

1. 6C-Compound
2. 5C-Compound
3. 4C-Compound
4.3C-Compound

Codes:

| : | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ |
| :--- | :--- | :--- | ---: |
| A) | 2 | 1 | 4 |
| C) | 1 | 3 | 2 |

d
3
4

|  | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |
| :--- | :--- | :--- | :--- | :--- |
| B) | 3 | 4 | 1 | 2 |
| D) | 3 | 1 | 2 | 4 |

63. Which one is correct sequence in glycolysis?
A) G-6-P $\rightarrow$ PEP $\rightarrow$ 3-PGAL $\rightarrow 3$-PGA
B) G-6-P $\rightarrow 3$-PGAL $\rightarrow 3-\mathrm{PGA} \rightarrow \mathrm{PEP}$
C) G-6-P $\rightarrow$ PEP $\rightarrow$ 3-PGA $\rightarrow$ 3-PGAL
D) G-6-P $\rightarrow$ 3-PGA $\rightarrow$ 3-PGAL $\rightarrow$ PEP
64. What is mitoplast?
A) Membraneless mitochondria
B) Another name of mitochondria
C) Mitochondria without outer membrane
D) Mitochondria without inner membrane
65. Select the incorrect match from the following:
A) Nuclear envelope - Maintains shape of nucleus
B) Nucleoplasm - Contains histone proteins
C) Nucleolus - synthesis and stores DNA
D) Nuclear matrix - Anchor chromatin fibres
66. Which one of the following is a non-protein enzyme?
A) Amylase
B) Kinase
C) Peptidyl transferase
D) Nitrate reductase
67. Which one of the following circulations is not a type systemic circulation?
A) Coronary circulation
B) Hepatic portal circulation
C) Pulmonary circulation
D) Renal circulation
68. Notochord is
A) endodermally derived structure, formed on the dorsoventral side
B) ectodermally derived structure, formed on the dorsal side
C) mesodermally derived structure, formed on the dorsal side
D) mesodermally derived structure, formed on the ventral side
69. Urochordate animals have notochord
A) that extends from head to tail region
B) is present throughout larval stages and adult life
C) the present only in adult stages
D) the present only in larval stage
70. Which of the following is an exclusive character in mammals?
I. Muscular diaphragm is present in mammals
II. Homeothermy is exclusively present in mammals
III. Heart is four-chambered with two auricles and two ventricles
IV. Mammals can be both oviparous and viviparous
A) Only I
B) Only IV
C) II and III
D) Only III
71. Consider the following statements:
I. Copper containing respiratory pigment is called haemocyanin, it is present in Pila.
II. Mammary glands are modified as sebaceous glands
III. Coxal glands are respiratory organs present in arachnids

Which of the statements given above are correct?
A) I and II
B) I and III
C) II and III
D) I, II and III
72. Keeping in view the 'fluid mosaic model' for the structure of cell membrane, which one of the following statement is correct with respect to the movement of lipids and proteins from one lipid monolayer to the other (described as flip-flop movement)
A) Both lipids and proteins can flip-flop
B) While lipids can rarely flip-flop, proteins can not
C) While proteíns can flip-flop, lipids can not
D) Neither lipids nor proteins can flip-flop
73. Match the following columns:

| Codes: | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |  | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A) | 4 | 2 | 3 | 1 | B) | 1 | 3 | 4 | 2 |
| C) | 4 | 3 | 1 | 2 | D) | 2 | 4 | 3 | 1 |

## Column - I

a. 50 S
b. 30S
c. 60 S
d. 40 S

Codes: a b

## Column - II

1. 28 S , rRNA, 5.8 S rRNA, 5 S rRNA
2. 18 S rRNA
3. 16 S rRNA
4. 23 S rRNA, 5 S rRNA
5. What is true about ribosomes?
A) These are found only in eukaryotic cells
B) These are self-splicing introns of some RNAs
C) The prokaryotic ribosomes are 80 S , where ' S ' stands for sedimentation coefficient
D) These are composed of ribonucleic acid and proteins
6. Select the correct statements from the following
I. Multiple effect of a gene is called pleiotropy.
II. Polygenic traits are expressed as absolute or discrete characters
III. Polygenic inheritance show bell-shaped curve for expression of traits.
IV. Sickle-cell anaemia is an example of pleiotropy.
V. Mendel's pea plant traits also showed polygenic inheritance.
A) II and V
B) II, IV and V
C) I, II and IV
D) I, III and IV
7. Match the following columns:

Column - I
a. XX - XO type
b. $\mathrm{ZO}-\mathrm{ZZ}$ type
c. XX - XY type
d. ZW - ZZ type
e. Haplodipolidy

## Column - II

1. Pigeon
2. Ant

## Codes:

| : | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{e}$ |  | a | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{e}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| A) | 3 | 5 | 4 | 1 | 2 | B) | 1 | 2 | 3 | 4 | 5 |
| C) | 3 | 2 | 1 | 4 | 5 | D) | 2 | 1 | 3 | 5 | 4 |

77. Identify the mutation (A-D) based on the description given below and select the correct option
I. a - mutation results from addition or subtraction of a nucleotide base or substitution of one base for another
II. $b$ - mutation occurs because of redundancy in the genetic code
III. c - mutation terminates translation
IV. d - mutation causes can be seen in sickle-cell anaemia

|  | a | b | c | D |
| :--- | :--- | :--- | :--- | :--- |
| A) | Point mutation | Frame shift mutation | Missense mutation | Silent mutation |
| B) | Point mutation | Silent mutation | Nonsense mutation | Missense mutation |
| C) | Frameshift mutation | Silent mutation | Nonsense mutation | Point mutation |
| D) | Frameshift mutation | Point mutation | Missense mutation | Silent mutation |

78. Identify the type of chromosomal mutations (A, B and C) represented below.

79. Assertion: It is not possible for human parents heterozygous for skin colour to have darker or lighter children than themselves.
Reason: Human skin colour is controlled by a single pair of alleles.
A) It both Assertion and Reason are true and Reason is the correct explanation of the Assertion
B) If both Assertion and Reason are true, but Reason is not the correct explanation of the Assertion
C) If Assertion is true, but Reason is false $\quad$ D) Both Assertion and Reason are false
80. Consider the functions of following enzymes and their role in replication of DNA and identify the incorrect statements.
I. Topoisomerase - An unwinding protein
II. Single strand binding protein - Binds to DNA and provide stability
III. Helicases - Synthesis of RNA primers
IV. Ligases - Joining of DNA fragements
A) I, II and III
B) I and III
C) III and IV
D) Only I
81. Which one of the following biomolecules is correctly characterized?
A) Lecithin - a phosphorylated glyceride found in cell membrane
B) Palmitic acid - an unsaturated fatty acid with 18 carbon atoms
C) Adenylic acid - adenosine with a glucose phosphate molecule
D) Alanine - amino acid contains an amino group and an acidic group anywhere in the molecule
82. Given below are two statements I and II. Choose the correct answer related to the statements.
Statement - I: Amino acids are amphoteric in their function.
Statement - II: All amino acids are necessary for our body.
A) Statement I is correct, but statement II is incorrect
B) Both the statements I and II are correct
C) Statement I is incorrect, but statement II is correct
D) Both the statements I and II are incorrect
83. Assertion: In glycolysis, glucose - 6-phosphate inhibition hexokinase catalysed reaction
Reason: It is allosteric modution in which enzyme inhibition is caused by a product of enzyme catalysed reactions.
A) Both Assertion and Reason are true and Reason is the correct explanation of Assertion
B) Both Assertion and reason are true, but Reason is not the correct explanation of Assertion
C) Assertion is true, but reason is false
D) Assertion is false, but Reason is true
E) Both Assertion and Reason are false
84. Find out the wrongly matched
I. Protein - Insulin II. Lipid - Terpenes
III. Biomicro - Acid insoluble fraction molecules
IV. Cellulose - Homopolysaccharide
V. Enzymes - Secondary metabolites
A) I, II and V
B) II, IV and V
C) III, IV and V
D) III and V
85. Match the following:

| Column - I | Column - II | Codes: | a | b | c | d | e |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| a. Fibroin | - | 1. Blood plasma | A) | 2 | 3 | 4 | 1 |
| b. Albumin | - | 2. Siik | B) | 2 | 4 | 1 | 5 |
| c. Keratin | - | 3. Egg and blood plasm | C) | 1 | 2 | 4 | 3 |
| d. Globulin | - | 4. Hair and skin | D) | 5 | 2 | 3 | 1 |

e. Casein - 5. Milk
86. What is holoenzyme?
I. Non - protein and apoenzyme
II. Enzyme, non-protein and coenzyme
III. Protein and apoenzyme
IV. Cofactor and apoenzyme
A) Only II
B) Only III
C) I and IV
D) Only IV
87. From the following what are the properties of cofactor?
I. It is small in size
II. It is heat unstable
III. It is specific for an enzyme
IV. It is non-proteinacious part of enzyme
V. It can be a metal ion
A) III, IV, V - correct
B) I, II, III - correct
C) II, IV, V - correct
D) All of the correct
88. Consider the following statements with reference to Haldane effect.
I. Oxyhaemoglobin behaves as strong acid. As amount of oxyhaemoglobin increases, more $\mathrm{H}^{+}$ions are released in blood.
II. These ions form carbonic acid
III. The carbonic acid dissociated to form carbon dioxide and water.

Choose the correct option
A) I and II
B) I and III
C) II and III
D) I, II and III
89. Given below is a table comparing the effects of sympathetic and parasympathetic nervous system for four features (a-d) which one feature is correctly described?

Feature Sympathetic nervous system Parasympathetic nervous system
A) Salivary gland
B) Pupil of the eye
C) Heart rate
D) Intestinal peristalsis

Stimulates secretion
Dilated
Decrease
Stimulates

Inhibits secretion
Constricts
Increases
Inhibits
90. Match the following columns:

Column - I (Receptors)
a. Tangoreceptor - 1. Heat
b. Thermoreceptor

- 2. Hunger
c. Caloreceptor
- 3. Touch
d. Phonoreceptor
e. Interoreceptor Codes: a

| $:$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{e}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A) | 3 | 4 | 1 | 2 | 5 |
| C) | 3 | 1 | 4 | 5 | 2 |


|  | $\mathbf{a}$ | $\mathbf{b}$ |
| :--- | :--- | :--- |
| B) | 3 | 4 |
| D) | 3 | 1 |


| $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{e}$ |
| :--- | :--- | :--- |
| 1 | 5 | 2 |
| 4 | 2 | 5 |

91. Match the following:

Column - I
a. Epilepsy
b. Alzheminer's disease
c. Parkinson's disease
d. Huntington's chorea

Column - II

1. Degeneration of neurons in the cerebral cortex

- 2. Irregular electrical discharge in the neurons
- 3. Decreased production of acetylcholine
- 4. Degeneration of dopamine releasing neurons
- 5. Formation of blood clots in the brain

| Codes: | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ |  | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ |
| ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| A) | 5 | 4 | 3 | 1 | B) |  |  |  |
| C) | 2 | 3 | 4 | 1 | 3 | 1 | 4 |  |
| D) | 2 | 4 | 3 | 1 |  |  |  |  |

92. Selection the answer with correct matching of the structure, its location and function

| Structure | Location | Function |
| :--- | :--- | :--- |
| A) Eustachian tube | Anterior part of internal ear | Equalises air pressure on either sides <br> of tympanic membrane |
| B) Cerebellum | Midbrain | Controls respiration and gastric <br> secretions |
| C). Hypothalamus | Forebrain | Controls body temperature, urge for <br> eating and drinking |
| D) Blind spot | Near the place where optic <br> nerve leaves the eye | Rods and cones are present but <br> inactive |

93. Which of the following nerves are mixed?
I. Trigeminal
II. Hypoglossal
III. Glossopharyngeal
IV. Abducens
A) I and II
B) I and IV
C) I and III
D) II and IV
94. Select the correct statement about lymphatic system from the following?
I. Lymphatic system returns the excess tissue fluid back to blood
II. Lymph vessels contain no valves III. The lymph moves with pumping of heart
IV. Lymph also has double circulation like heart
A) Only I
B) I and II
C) II and III
D) I, II, III and IV
95. Study the following statements.
I. Plasma constitutes $45 \%$ of the human blood.
II. Albumin is a plasma protein, which helps in osmotic balance.
III. Factors responsible for the blood clotting process are present in the blood
IV. Plasma without clotting factors is called serum
V. Minerals are not generally found in blood.

Of the above statements
A) Only V is incorrect and all other I to IV are correct
B) I and II are correct and III, IV and V are incorrect
C) II and IV are correct and I, III and V are incorrect
D) II, III and IV are correct and I and V are incorrect
96. Study the following statements and select the incorrect statement.
I. Barr body is an another name for neutrophils
II. Agranulocytes are formed in the red bone marrow
III. Granulocytes are formed in the spleen and lymph node
IV. Lymphocytes exists as two major types B and T- lymphocytes
A) I, II and III
B) Only I
C) Only III
D) Only II
97. Which of the following process of urine formation takes place all along the renal tubule and collecting duct?
A) Ultrafiltration and tubular reabsorption
B) Ultrafiltration and tubular secretion
C) Tubular reabsorption and secretion
D) None of the above
98. Which of them are incorrectly matched?
A) Alkaptonuria - Presence of homogenetistic acid in urine
B) Pyelonephritis - Inflammation of ureter
C) Hematuria - Presence of blood in urine
D) Uremia - High concentration of urea in blood
99. Assertion: Nitrogenous waste from arterial blood is removed, when blood passes through dialyser unit.
Reason: Arterial blood of patient and dialyzing liquid are made to flow on two sides of permeable membrane
A) If both Assertion and Reason are correct and but Reason is the correct explanation of Assertion.
B) If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion
C) If Assertion is correct, but Reason is incorrect
D) If Assertion is incorrect, but Reason is correct
E) Both Assertion and Reason are incorrect
100. Hormones help to control many homeostatic mechanisms by positive or negative feedback loop.
I. Positive feedback loop, acts as self amplifying cycle
II. Negative feedback loop, inhibits its own production. Which of the above mentioned statements are correct?
Which of the above are true?
A) Only I
B) Only II
C) Both (A) and (B)
D) None of these
101. Read the statements given below and select the incorrect ones.
I. Testes function as heterocrine gland
II. Thomas Addison is regarded as the Father of Endocrinology.
III. Neurohypophysis secretes ACTH.
IV. Myxoedema is a thyroid disorder
V. Leydig's cell secrete progesterone
A) I, III and IV
B) III and V
C) II and IV
D) II, IV and V
102. Choose the correct statements from the following
I. Calcitonin regulates the metabolism of calcium
II. Oxytocin stimulates contraction of uterine muscles
III. Grave's disease is caused by thyroid gland.
IV. Vasopressin stimulates the absorption of water in renal tubule
V. Adrenaline and nor-adrenaline are the emergency hormones

Select the correct statements and choose the option
A) I, II, III, IV and V
B) III, IV and V
C) I, II and V
D) II, III and IV
103. Statement - I: Diabetes insipidus is marked by excessive, urination and thirst Statement - II: Antidiuretic hormone (ADH) is secreted by the posterior lobe of pituitary
A) Statement I is correct, while statement II is incorrect
B) Statement II is correct, while statement I is incorrect
C) Both the statements are correct
D) Both the statements are incorrect
104. Arrange the given events of embryonic development in sequence.
I. Organogenesis
II. Implantation
III. Blastulation
IV. Gastrulation
A) III, II, IV, I
B) II, III, I, IV
C) I, II, III, IV
D) IV, III, II, I
105. Placental membrane are formed from which of the following structure?
I. Syncytiophoblast and cytotrophoblast
II. Basement membrane
III. Mesoderm IV. Endothelium of foetal capillary membrane
A) I and III
B) II and IV
C) I, II and III
D) I, II, III and IV
106. Identify the correct statement(s).
I. Acrosome of sperm contains sperm lysins
II. Spirally arranged mitochondria are found in the midpiece of sperm.
III. Acrosome does not have nucleus
A) I and II
B) I and III
C) II and III
D) I, II and III
107. The correct sequence of embryonic development is
A) Blastula - Morula - Zygote - Gastrula - Embryo
B) Zygote - Blastula - Morula - Gastrula - Embryo
C) Zygote - Morula - Blastula - Gastrula - Embryo
D) Gastrula - Morula - Zygote - Blastula - Embryo
108. Which of the following ART is / are wrongly matched?
I. IUI - Semen collected from husband or donor is artificially introduced either into the vagina or into the uterus
II. GIFT - Transfer of embryos with more than 8 blastomeres into the Fallopian tube
III. ICSI - sperm directly injected into the ovum
IV. ZIFT - Transfer of embryos up to 8 blastomeres into the Fallopian tube
A) Only II
B) III and IV
C) I and II
D) only IV
109. Which of the following experiments suggests that the simplest - living organisms could not have originated spontaneously form non-living matter?
A) Microbes did not appear in stored meat
B) Larvae could appear in decaying organic matter
C) Microbes appeared form unsterilized organic matter
D) Meat was not spoiled, when heated and kept sealed in a vessel
110. Devonian period and carboniferous period of Palaeozoic era are considered as age of ... and age of .respectively.
A) reptiles, fishes
B) invertebrates, amphibians
C) fish, amphibians
D) reptiles, mammals
111. How many steps involved in Herbation lesson planning பாடத்திட்டம் தொடர்புடைய ஹெர்பார்டின் படிநிலைகள் எத்தனை
A) 7
B) 6
C) 8
D) 9
112. Which of the following was established in 1961 ? 1961—ல் வரைவுபடுத்தப்பட்ட ஒன்று எது?
A) DTERT
B) DIET
C) NCERT
D) NAAC
113. Equality in Education suggested by
A) Sargeant Report
B) Kothari Commission
C) Hunter Commission
D) UGC

கல்வியில் சமவாய்ப்பு அளித்த கல்விக்குழு
A) சார்ஜண்்ட் உடன்படிக்கை
B) கோத்தாரி கல்விக்குழு
C) ஹண்டர் குழு
D) UGC
114. Sainik School located in the District of
A) Kovai
B) Thirupur
C) Erode
D) Dindugal

சைனிக்பள்ளி அமைந்துள்ள மாவட்டம்
A) கோவை
B) திருப்பா்
C) ஈரோடு
D) திண்டிக்கல்
115. In which school Widely followed Pestolozzies approach?
A) Nursery
B) Montessori
C) Kindergarden
D) Anganwadi பெஸ்டாலஜியின் அணுகுமுறைகளை பின்பற்றும் பள்ளி எது?
A) நர்சாி
B) மாண்டிசோாி
C) கிண்்டர்கார்டன்
D) அங்கன்வாடி
116. Article 15 (3) mainly insists
A) Womens Education
B) Free Education
C) Children's Education
D) $\mathrm{A} \& \mathrm{C}$

அரசியல் சாசன விதி 15(3) கூறுவது
A) பெண்்கல்வி
B) இலவச கல்வி
C) குழந்தைக் கல்வி
D) A மற்றும் C
117. Environmental protection Act was passed by the parliament in the year of சுற்றுச்சூழல் பாதுகாப்புச் சட்டம் பாராளுமன்றத்தில் நிறைவேற்றப்பட்ட ஆண்டு
A) 1987
B) 1986
C) 1974
D) 1966
118. A person related to Adult Education
A) Braile
B) Bryson
C) Parker
D) $\mathrm{B} \& \mathrm{C}$
வயது வந்தோர் கல்வியுடன் தொடர்புடையவர்கள்
A) ப்ரெய்லி
B) பிரைசன்
C) பார்கர்
D) $\mathrm{B} \& \mathrm{C}$
119. Meaning of Education is
A) Learning
B) Bringout
C) Cultivate
D) All of these
கவ்வி என்பதன் பொருள்
A) கற்றல்
B) வெளிக் கொணர்தல்
C) வளர்ப்பது
D) அனைத்தும்
120. Who Invent "Teaching Machine"
A) Galaxo
B) Faulkner
C) Glacier
D) Sydney pressy

கற்பித்தல் இயந்திரத்தினை உருவாக்கியவா்
A) காலக்ஸோ
B) பால்க்னர்
C) கிளேசியர்
D) சிட்னி ப்ரெஸ்ஸி
121. Society Based Educationist
A) Russell
B) Morgan
C) Maxwell
D) Morne
சமூகக் கல்வியாளர்
A) ரஸல்
B) மார்கன்
C) மாக்ஸ்வெல்
D) மார்னே
122. Wastage \& stagnation defined by
A) Kothari Commission
B) UGC
C) Hartog Committee
D) Hunter Commission
கழிவு மற்றும் தேக்கத்தினை
வரையறை செய்த கமிட்டி எது?
A) கோத்தாாி குழு
B) UGC
C) ஹார்டாக் குழு
D) ஹணன்டர் குழு
123. 'OB' Scheme recommended by
A) 1965 Policy
B) 1991 Policy
C) 1986 Policy
D) 1979 Policy
"OB" திட்டத்தினை வெளியிட்ட கல்விக்குழு
A) 1965 கல்விக்கொள்கை
B) 1991 கல்விக்கொள்கை
C) 1986 கல்விக்கொள்கை
D) 1979 கல்விக்கொள்கை
124. Cognitive stages analysed by
A) Bloom
B) Bruner
C) Maslow
D) Wundt

அறிவுசார் நிலையினை பகுப்பாய்வு செய்தவா்
A) பபூமம்
B) புூனர்
C) மாஸ்லோ
D) உண்ட்
125. 'Udisha project' means
A) ICDS training
B) NCC
C) NRC
D) JRC
"உதிஸ்ஸா திட்டம்" எனப்படுவது
A) ICDS பயிற்சி திட்டம்
B) NCC
C) NRC
D) JRC
126. IQ Variation 110-119 comes Under
A) Gifted Persons
B) Average Persons
C) Genius
D) talented Persons

110-119 நுண்ணறிவு உடையோாின் வகைப்பாடு
A) மீத்திறன் மிக்கோர்
B) சராசாி திறன் படைத்தோர்
C) மேதைகள்
D) திறன் மிக்கோர்
127. Vicerotonia, Cerebrotonia, Somatotonia are of classified by
A) Sheldon
B) Kretchmer
C) Carl Jung
D) Ogburn

சுக விருப்பமுள்ள ஆளுமை, சிந்தனை சார் ஆளுமை, செயல்சார் ஆளுமை, என வகைப்படுத்தியவர்
A) ஷெல்டன்
B) கிரெட்சுமர்
C) காரல்யூங்
D) ஆக்பர்ன்
128. "Schizo phrenia" is a kind of defence mechanism
A) Identification
B) Retionalization
C) Regression
D) Scapogotism
"ஷிஷோப்ரினியா" என்ன வகையான நடத்தை
A) ஒன்றுதல்
B) காரணம் கற்பித்தல்
C) பின்னோக்கம்
D) பலிகடா ஆக்கப்படுதல்
129. Branch of Psychology is mainly focused Adolescence
A) Educational Psychology
B) General Psychology
C) Child Psychology
D) Growth Psychology

குமரப்பருவம் பற்றி படிக்கும் உளவியலின் பிரிவு?
A) கல்வி உளவியல்
B) பொது உளவியல்
C) குழந்தை உளவியல்
D) வளர்ச்சி உளவியல்
130. Who told that "Psychology is a Behavior Science"
A) Mc Doug all
B) Watson
C) Skinner
D) Titchner
உளவியல் நேர்மறை நடத்தை அறிவியல் என்று கூறியவா்
A) மக்டூகல்
B) வாட்சன்
C) ஸ்கின்னர்
D) டிட்ச்னர்
131. Who Introduced Individual Psychology?
A) Sigmen Freud
B) Jung
C) Adler
D) Williamson

தனிநபர் உளவியலை தோற்றுவித்தவா்
A) சிக்மண்்ட
ப்ராய்டு
B) யூங்
C) ஆட்லா்
D) வில்லியம் சன்
132. Attention theory formulated by
A) Ditchner
B) Wundt
C) Watson
D) Hebb

கவன கோட்பாடு
A) டிட்ச்னர்
B) உண்ட்
C) வாட்சன்
D) ஹெப்
133. How many Chromosomes are present in a female germ cell?

பெண் இனச்செல்லில் காணப்படும் குரோமோசோமின் எண்ணிக்கை
A) 46
B) 23
C) $23+23$
D) $46+23$
134. Physical Growth factor determinate by
A) Heredity
B) Environment
C) Heredity \& Environment
D) None of these

உடல் வளர்ச்சியை தீர்மானிப்பது
A) மரப
B) あூழ்நிலை
C) மரபும், சூழ்நிலையும்
D) எதுவுமில்லை
135. How many chromosomes are present in the cells released by meiosis cell division?
A) 23 Pairs of Chromosome
B) 23 Chromosome
C) 46 Chromosome
D) 46 Pairs of Chromosome

மியாஸிஸ் பகுப்பினால் செல்களில் காணப்படிம் குரோமோசோம்களின் எண்்ணிக்கை
A) 23 ஜோடி குரோமோேோம்
B) 23 குரோமோசோம்
C) 46 குரோமோசோம்
D) 46 ஜோடி குரோமோசோம்
136. Who had done Kalli kock test
A) Goddard
B) Calvin
C) Amala \& Kamala
D) Cyrillburt \& Shankar காலிகாக் சோதனை யாரால் செய்யப்பட்டது?
A) கொட்டர்டு
B) கால்வின்
C) அமலா \& கமலா
D) சிரில்பா்ட் மற்றும் சங்க்்
137. Moral relativism is Connected to which one of the following developmental stage?
A) Adolescence
B) Old Age
C) Childhood
D) Pre child hood

ஒழுக்கம் பற்றிய சார்ப நோக்கம் எப்பருவத்துடன் தொடர்புடையது ?
A) குமரப்பருவம்
B) முதிர் பருவம்
C) குழந்தை பருவம்
D) முன் குழந்தைப்பருவம்
138. Inferiority Complex arise from which stage
A) Adolescence
B) $2^{\text {nd }}$ year
C) $6^{\text {th }}$ year
D) 0-2 years

தாழ்வுணர்வு நிலை தோன்றுவது
A) குமரப்பருவம்
B) 2ம் ஆண்் $ு$
C) 6 ஆம்ஆண்டு
D) o-2 வயது வரை
139. J.B. Watson proposed ........... type of Emotions
J.B. வாட்சன் குறிப்பிடிகின்ற மனவெழுச்சிகள்
A) 2
B) 4
C) 3
D) 5
140. Co operation under which development?
A) Physical
B) Moral
C) Social
D) Emotional

ஒத்துழைப்பு எவ்வகை வளர்ச்சி?
A) உடல்ரீதியான
B) ஒழுக்க
C) சமூக
D) மனவெழுச்சி
141. Who is called as father of modern computer
A. Bill Gakes
B. Michael Faraday
C. Alexander Fleming
D. Charles Babbage நவீண கணினியின் தந்ळை என அழைக்க்்பดுவர்?
A) பில் கேட்ஸ்
B) மைக்கேல் பாரடே
C) அலெக்ஸ்சான்டர் பிாமிங்
D) சார்லஜ் பாயேஜ்
142. Which of following stacks were created in 1987?
A. Goa only
B. Goa and Arunachal Pradesh
C. Arunachal Pradesh only
D. None of these 1987-ல் உருவாக்க்்பட்ட மாநிலம்
A) கோவா மட்டிம்
B) கோவா மற்றும் அருணாசல பlரதேச்்
C) அருணாசல லிரதேசம்
D) எதுவுமில்லை
143. Which of the following articles makes the super court a court of record? கீழ்க்கண்்ட எந்த விதி உச்தநீதிமன்்த்தின் பதிவுகளைப் பற்றி க2றுகிறது
A. 125
B. 127
C. 129
D. 131
144. In which year planning commission was established in India?

திட்டக்கமிஷ\&ன் இந்தியாவில் அமைக்க்்பட்ட ஆண்லு
A. 1950
B. 1952
C. 1951
D. 1949
145. Wimbledon is place associated with of the following sports?
A. Badminton
B. Cricket
C. Lawn tennis
D. Hockey விம்பிள்டன் என்ற இடம் கீழ்க்கண்்ட விளையாட்டுக்காக அமைக்கப்பட்டுள்ளது
A) பேட்மிட்டன்
B) கிாிக்கெட்
C) டென்னிஸ்
D) ஹாக்கி
146. Largest National Park in North east in India is Located at?
A. Assam
B. Mizoram
C. Arunachal Pradesh
D. Nagaland வடகிழக்கு இந்தியாவில் உள்ள மிகப் பொிய தேசிய பூங்கா அமைந்துள்ள மாநிலம்
A) அஸ்ஸாம்
B) மிசோரம்
C) அருணாசலப்பிரதேசம்
D) நாகலாந்து
147. Where was the First Tamil Sangam held?
A. South Madurai
B. Kapatapuram
C. Kaveripattinam
D. Nellai முதல் தமிழ்ச் சங்கம் நடைலெற்ற இடம்
A) தென்மதுரை
B) கபாடபுரம்
C) காவோிப்பட்டினம்
D) நெல்லை
148. Bhutan does not share its border with which Indian state?
A. West Bengal
B. Arunachal Pradesh
C. Meghalaya
D. Sikkim பூடான் நாடி எந்த இந்திய மாநிலத்தின் எல்லையை பகி்்ந்து கொள்ளவில்லை?
A) மேற்கு வங்காளம்
B) அருணாச்சலப்பிரதேசம்
C) மேகாலயா
D) சிக்கிம்
149. Which of the following is the full form of U.S.S.R?
U.S.S.R—ன் விவாிவாக்கம்?
A. Union of Soviet Socialist Republics
B. Union of Soviet secular Republics
C. Union of secular Soviet Republics
D. Union of secular socialist republics
150. What does OS stand for?

OS -ன் விாிவாக்கம்
A. Operating software
B. Operating System
C. Operating status
D. Operating supplier

## P.G. Zoology - Model - I [Online Test]

Answer Keys:
13.09.19

| 1 | C | 26 | C | 51 | D | 76 | A | 101 | B | 126 | D |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | C | 27 | B | 52 | C | 77 | B | 102 | A | 127 | A |
| 3 | C | 28 | D | 53 | A | 78 | D | 103 | C | 128 | C |
| 4 | A | 29 | B | 54 | C | 79 | D | 104 | A | 129 | C |
| 5 | D | 30 | C | 55 | B | 80 | B | 105 | D | 130 | B |
| 6 | C | 31 | D | 56 | C | 81 | D | 106 | D | 131 | C |
| 7 | B | 32 | D | 57 | A | 82 | D | 107 | C | 132 | D |
| 8 | C | 33 | D | 58 | B | 83 | A | 08 | A | 133 | B |
| 9 | A | 34 | A | 59 | C | 84 | D | 109 | D | 134 | A |
| 10 | C | 35 | C | 60 | C | 85 | A | 110 | C | 135 | B |
| 11 | A | 36 | B | 61 | A | 86 | C | 111 | B | 136 | A |
| 12 | D | 37 | D | 62 | B | 87 | A | 112 | A | 137 | A |
| 13 | A | 38 | C | 63 | B | 88 | D | 113 | B | 138 | C |
| 14 | B | 39 | D |  | A | 89 | B | 114 | B | 139 | C |
| 15 | D | 40 | B | 65 | C | 90 | B | 115 | C | 140 | C |
| 16 | A | 41 | A | 66 | A | 91 | C | 116 | D | 141 | D |
| 17 | C | 42 | D | 67 | D | 92 | C | 117 | B | 142 | B |
| 18 | B | 43 | C | 68 | C | 93 | C | 118 | D | 143 | C |
| 19 | B | 44 | A | 69 | D | 94 | A | 119 | D | 144 | A |
| 20 | B | 45 | C | 70 | A | 95 | D | 120 | D | 145 | C |
| 21 | D | 46 | A | 71 | D | 96 | C | 121 | A | 146 | C |
| 22 | B | 47 | A | 72 | B | 97 | C | 122 | A | 147 | A |
| 23 | D | 48 | A | 73 | C | 98 | B | 123 | C | 148 | C |
| 24 | B | 49 | D | 74 | D | 99 | C | 124 | A | 149 | A |
| 25 | B | 50 | B | 75 | C | 100 | C | 125 | A | 150 | B |

