**SUBJECT CODE - 08**  
Biology

<table>
<thead>
<tr>
<th>Time: 3.00 Hours</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>INSTRUCTIONS FOR CANDIDATES</th>
</tr>
</thead>
</table>

1. **Answer all questions.**
2. **All questions carry equal marks.**
3. **Only one answer is to be given for each question.**
4. **If more than one answer is marked, it would be treated as wrong answer.**
5. **Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.**
6. **The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with blue ball point pen only.**
7. **1/3 part of the mark(s) of each question will be deducted for each wrong answer.** (A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.)
8. **The candidate should ensure that Question Paper Booklet No. of the Question Paper Booklet and Answer Sheet must be same after opening the polythene bag/seal. In case they are different, a candidate must obtain another Question Paper. Candidate himself shall be responsible for ensuring this.**
9. **Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.**
10. **Please correctly fill your Roll Number in O.M.R. Sheet. 5 Marks can be deducted for filling wrong or incomplete Roll Number.**
11. **If there is any sort of ambiguity/mistake either of printing or factual nature then out of Hindi and English Version of the question, the English Version will be treated as standard.**

**Warning:** If a candidate is found copying or if any unauthorized material is found in his/her possession, F.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

---

**LS - 61**

| Maximum Marks: 300 |

---

| Do not open this Test Booklet until you are asked to do so. |

---

**P. M. 2015**
1. Zoological gardens are sites of
   (1) Ex situ conservation
   (2) In situ conservation
   (3) Both of above
   (4) None of above

2. Who discovered cell for the first time?
   (1) Robert Brown
   (2) Robert Hooke
   (3) Antony Van Leeuwenhoek
   (4) Theodor Schwann

3. In which kingdom prokaryotic organisms were placed by Whittaker?
   (1) Animalia
   (2) Plantae
   (3) Monera
   (4) Protista

4. The largest and oldest botanical garden of India is situated at:
   (1) Lucknow
   (2) Sibpur
   (3) Saharanpur
   (4) Darjeeling

5. Muramic acid is present in the cell wall of the members of algal class:
   (1) Cyanophyceae
   (2) Phaeophyceae
   (3) Rhodophyceae
   (4) Xanthophyceae
6. Haplonic type of life cycle is present in
   (1) Ectocarpus  (2) Fucus
   (3) Polysiphonia  (4) Spirogyra

7. The endosperm of gymnosperms is
   (1) Triploid  (2) Diploid
   (3) Haploid  (4) Polyploid

8. Characteristic feature of kingdom fungi is:
   (1) It is a group of prokaryotic organisms
   (2) It is a group of eukaryotic organisms with ingestive mode of nutrition
   (3) It is a group of eukaryotic organisms with absorptive mode of nutrition
   (4) It is a group of eukaryotic autotrophic organisms

9. Sexual reproduction in bryophytes is
   (1) Isogamous
   (2) Oogamous
   (3) Anisogamous
   (4) Hologamous

10. The main plant body in pteridophytes is
    (1) Gametophytic
    (2) Sporophytic
    (3) Both of above
    (4) None of above

11. Which among the following is not an example of compound epithelial tissue?
    (1) Stratified cuboidal tissue
    (2) Transitional tissue
    (3) Pseudostratified tissue
    (4) Stratified squamous tissue
12. pH of blood plasma is
   (1) Slightly acidic
   (2) Strongly acidic
   (3) Slightly alkaline
   (4) Neutral

13. Protein ossein is present in
   (1) matrix of bone
   (2) matrix of ligaments
   (3) matrix of cartilage
   (4) matrix of tendon

14. Which one of the following pair of fruit and edible part is not correctly matched?
   (1) Pomegranate – Juicy testa
   (2) Apple – Fleshy thalamus
   (3) Litchi – Fleshy aril
   (4) Coconut – Mesocarp

15. Consider the following statement and choose those which are TRUE using the codes given below:
   A. In amphicribral vascular bundles xylem is surrounded by phloem on all sides.
   B. Cambium is absent in the open type of vascular bundles.
   C. In radial vascular bundles xylem and phloem are present on separate radii.
   D. In radial vascular bundles xylem and phloem are not present on separate radii.
   (1) A, B and C
   (2) B, C and D
   (3) A and C
   (4) A and D
16. जड़ में गोपक्षान का निर्माण होता है :
   (1) रणमण से
   (2) अल्कूलमण से
   (3) त्वचाज्ञान से
   (4) उपरोक्त में से कोई नहीं

17. कौन सा गूँग सही नहीं है?
   (1) मार्ग कोशिकाएं — अन्तस्वच्छा
   (2) संबंध पूल हिन्दी-एकबीजपत्री आविर्भूत से जड़
     पट-आदितक
   (3) मुप्पा फ्लोगमी — लुप्पा
     संस्थान पूल — सिनोमडुका
   (4) सर्वाधर येम — वहू कोशिकपीय

18. रंग में पाये जाते हैं :
   (1) संस्थान पूल व मूज़ना
   (2) अन्तस्वच्छा, परिरम्भ व संस्थान पूल
   (3) परिरम्भ, संस्थान पूल व मूज़ना
   (4) ब्लक्कुट, अन्तस्वच्छा, परिरम्भ, संस्थान पूल व मूज़ना

19. निम्नलिखित में से कौन सी एकबीजपत्री तने की विशेषता नहीं है?
   (1) संस्थान पूल भरण अकं के में विकृत हुए
   (2) संस्थान पूल के चारों ओर पूल आक्षेप
     उपस्थित
   (3) संस्थान पूल समाप्तीक्ष एवं संक्रम
   (4) संस्थान पूलों में फ्लोगम मुक्तक उपस्थित

20. कारण की सक्रियता के द्वारा बनाने वाले कोक्क
     को यह भी कहा जाता है :
   (1) छाल
   (2) फेल्डम
   (3) फेल्दमर्म
   (4) उपरोक्त में से कोई नहीं

16. In root, calyptrogen is formed from :
   (1) Plerome
   (2) Periblem
   (3) Dermatogen
   (4) None of above

17. Which pair is not correct?
   (1) Passage cells — Endodermis
   (2) Vascular Bundle — Monocot
     diarch to hexarch root
   (3) Bicolateral vascular bundle — Luffa
     cylindrica
   (4) Stem hair — Multicellular

18. Stele includes :
   (1) Vascular bundles and pith
   (2) Endodermis, pericycle and vascular bundles
   (3) Pericycle, vascular bundles and pith
   (4) Cortex, endodermis, pericycle, vascular bundle and pith

19. Which among the following is not a characteristic of monocot stem?
   (1) Vascular bundles are scattered in ground tissue.
   (2) Bundle sheath present around vascular bundle.
   (3) Vascular bundle collateral and closed
   (4) Phloem parenchyma present in vascular bundles

20. The cork formed by the activity of phellogen is also known as
   (1) Bark
   (2) Phellem
   (3) Phelloiderm
   (4) None of above
21. Which among the following is not an example of verticillaster inflorescence?
   (1) Mentha
   (2) Ocimum
   (3) Coleus
   (4) Euphorbia

22. Elongated internode of thalamus between calyx and corolla is known as
   (1) Androphore
   (2) Anthophore
   (3) Androgynophore
   (4) Carpophore

23. Monadelphous stamens is characteristic of
   (1) Pisum
   (2) Citrus
   (3) Hibiscus
   (4) Sonchus

24. Which among the following is not an example of schizocarpic fruit?
   (1) Balausta
   (2) Regma
   (3) Cremocarp
   (4) Lomentum

25. Who first time explained that cells are formed from pre-existing cells?
   (1) Robert Brown
   (2) Robert Hooke
   (3) Theodore Schwann
   (4) Rudolf Virchow
26. Which among the following cell organelles is not surrounded by any membrane?
   (1) Lysosome
   (2) Ribosome
   (3) Plastid
   (4) Endoplasmic reticulum

27. Which among the following is not an example of prokaryotic cell?
   (1) Bacteria
   (2) Chlorella
   (3) Mycoplasma
   (4) Nostoc

28. Mesosomes are not associated with
   (1) cell wall formation
   (2) DNA replication
   (3) respiration
   (4) protein synthesis

29. Endoplasmic reticulum was first observed by:
   (1) Fleming
   (2) Benda
   (3) Porter
   (4) Claude

30. Which cell organelle is not found in plant cell?
   (1) Chloroplast
   (2) Centriole
   (3) Smooth endoplasmic reticulum
   (4) Golgi apparatus
31. Which cell organelle is site of aerobic respiration?
   (1) Chloroplast
   (2) Ribosome
   (3) Mitochondria
   (4) Endoplasmic reticulum

32. Which pair is not correct?
   (1) Potassium ion - Passive (K⁺) pump transport
   (2) Fluid mosaic - Singer and model Nicolson
   (3) Movement of - Osmosis water across semi-permeable membrane
   (4) Plant cell - Plasmodesmata

33. A nucleoside is made up of
   (1) Phosphate group + Pentose sugar + Nitrogenous base
   (2) Pentose sugar + Nitrogenous base
   (3) Nitrogenous base + Phosphate group
   (4) None of the above

34. In which phase of cell cycle multiplication of mitochondria and chloroplast take place?
   (1) G₀ (2) S
   (3) G₂ (4) M

35. During which phase of meiosis does crossing over take place:
   (1) Zygotene (2) Leptotene
   (3) Pachytene (4) Diplotene
36. व्यस्क भान्य का बन शून्य हैः
(1) 2 1 2 3
    2 1 2 3
(2) 2 1 3 3
    2 1 3 3
(3) 2 1 2 2
    2 1 2 2
(4) 2 1 2 3
    2 1 3 2

37. आहार नाले के किस भाग में सहजीवी सूखने जीव पाये जाते हैं?
(1) पृंजिंद्र
(2) शूद्रण
(3) अंचनाल
(4) मलारण

38. अन्यायशय का अंतःसात भाग सावित बना हैः
(1) इंसुलिन तथा अन्यायशय रस
(2) ग्लुकाइड तथा अन्यायशय रस
(3) इंसुलिन तथा ग्लुकाइड
(4) इंसुलिन, ग्लुकाइड तथा अन्यायशय रस

39. जल प्रभाव की कौन सी कोशिकाएँ हाइड्रोक्लोरिक अम्ल (HCl) सावित करती हैं?
(1) म्यूसिन प्रमुख कोशिकाएँ
(2) ग्लुम प्रमुख कोशिकाएँ
(3) अन्य प्रमुख कोशिकाएँ
(4) लार्क कोशिकाएँ

40. मस्तिष्क के किस भाग में व्यस्नन त्यो त्यक रिश्त होता हैः
(1) मेडुल्ला भाग में
(2) अनुमितादग्य
(3) महावस्तंत्रीय पिङ्क
(4) प्रमितादग्य
41. Which pair is not correct?
(1) Opening between right atrium and right ventricle – Tricuspid valve
(2) Opening between left atrium and left ventricle – Mitral valve
(3) Opening between right ventricle and pulmonary artery – Semilunar valve
(4) Opening between left ventricle and aorta – Bicuspid valve

42. Best measure of central tendency is:
(1) Mean
(2) Mode
(3) Median
(4) All of the above

43. Formula for coefficient of standard deviation is:
(1) \( \frac{\sigma}{X} \)  \( \frac{X}{\sigma} \)
(2) \( \frac{\sigma}{\bar{X}} \)  \( \frac{\bar{X}}{\sigma} \)
(3) \( \frac{\bar{X}}{\sigma^2} \)  \( \frac{\sigma^2}{\bar{X}} \)

44. Inflammation of joints due to accumulation of uric acid crystals is known as
(1) Arthritis
(2) Gout
(3) Muscular dystrophy
(4) Tetany

45. Which part of brain is associated with regulation of sexual behaviour and expression of emotional reactions?
(1) Cerebrum
(2) Corpora quadrigemina
(3) Pons
(4) Hypothalamus
46. मानव आँख में लेंस तथा रेटिना के मध्य का भाग कहलाता है
(1) जलीय वेश्म
(2) काजाम वय वेश्म
(3) अन्त बिन्दु
(4) मैकुला लुटिया

47. निम्नलिखित में से कौन सा हॉमोन एंड्रोपोलेस्टस् द्वारा संवेदित होता है परतु पीयूष प्रभिय द्वारा स्वभावित होता है?
(1) ओक्टोसिन
(2) प्रोलेक्टिन
(3) पुकारौषप हॉमोन
(4) आलितानु उडीक हॉमोन

48. निम्नलिखित उदाहरण में से कौन सी एक काफ़िय जनन की प्राकृतिक विलिंग नहीं है?
(1) प्रजनन के द्वारा काफ़िय जनन
(2) परिपत्र के द्वारा काफ़िय जनन
(3) एयर लेंथरिंग के द्वारा काफ़िय जनन
(4) जड़ों के द्वारा काफ़िय जनन

49. एक ही पादप से प्राप्त आणुविक कक्ता समानध पादपों की समूहित रूप से कहलाती है:
(1) क्लोन (2) संकर
(3) साइक्लिड (4) उपरोज शमी

50. एक ही पुष्प के परिकक्षों से परंपरागत पुष्प के बादित क्षेत्र पर स्थानांतरण कहलाता है:
(1) पुकारौषप
(2) सवाईमुघम
(3) सवाईमुघम परंपरागत
(4) सवाईमुघम

46. In human eye the space between lens and retina is called
(1) Aqueous chamber
(2) Vitreous chamber
(3) Blind spot
(4) Macula lutea

47. Which among the following hormone is synthesised by hypothalamus but released by pituitary gland?
(1) Oxytocin
(2) Prolactin
(3) Follicle stimulating hormone
(4) Melanocyte stimulating hormone

48. Which among the following is not an example of natural method of vegetative propagation?
(1) Vegetative propagation by rhizomes
(2) Vegetative propagation by leaves
(3) Vegetative propagation by air layering
(4) Vegetative propagation by roots

49. A genetically identical population of plants raised from single plant is termed as:
(1) Clone (2) Hybrid
(3) Cybrid (4) All of above

50. Transfer of pollengrains from the anthers to the stigma of same flower is termed as:
(1) Xenogamy
(2) Heterogamy
(3) Geitonogamy
(4) Autogamy
51. How many true breeding varieties of pea plants were selected by Mendel?
(1) 7   (2) 4
(3) 14  (4) 8

52. The term linkage was coined by
(1) Walter Sutton
(2) Theodore Boveri
(3) Henking
(4) Thomas Hunt Morgan

53. Down syndrome is due to:
(1) Presence of an additional X-chromosome.
(2) Absence of one of the X-chromosome.
(3) Presence of an additional chromosome number-21
(4) None of the above

54. Which among the following diseases is caused by a protozoa?
(1) Pneumonia
(2) Malaria
(3) Common cold
(4) Typhoid

55. ELISA – a diagnostic test is used for diagnosis of
(1) Cancer  (2) Typhoid
(3) AIDS    (4) Filaria
56. Chilka lake located in Orissa is famous for
   (1) Crocodiles
   (2) Tortoise
   (3) Birds
   (4) Dolphins

57. Veliger larva is found in:
   (1) Platyhelminthes
   (2) Arthropoda
   (3) Mollusca
   (4) Echinodermata

58. Example of phylum Porifera is
   (1) Obelia
   (2) Fasciola
   (3) Planaria
   (4) Sycon

59. Locomotory organelles are absent in the class
   (1) Sporozoa
   (2) Ciliata
   (3) Rhizopoda
   (4) Flagellate

60. Plant disease which develops due to a natural genetic engineer is:
   (1) Citrus canker
   (2) Witches Broom
   (3) Crown gall
   (4) Phylloidy
61. Pseudocoelom develops from
(1) Gut
(2) Mesoderm
(3) Blastocoel
(4) Archenteron

62. The group of cold-blooded animals having incomplete four-chambered heart are:
(1) Amphibia
(2) Aves
(3) Mammalia
(4) Reptilia

63. The placentation in family Asteraceae is:
(1) Parietal
(2) Axil
(3) Basal
(4) Marginal

64. Example of homogamous ligulate capitulum inflorescence is:
(1) Helianthus
(2) Sonchus
(3) Ageratum
(4) Eclipta

65. Anthers of family Poaceae are:
(1) Dithecos, dorsifixed and introrse
(2) Dithecos, basifixed and extrorse
(3) Dithecos, versatile and introrse
(4) Dithecos, adnate and introrse
66. लेमन घास का बानस्पतिक नाम है : 
(1) Cymbopogon nardus 
(2) Cymbopogon citratus 
(3) Cymbopogon martini 
(4) Heteropogon contortus 

67. निम्नलिखित में से कोन सा प्रोटोजोआ अन्तःपरजीवी का उद्दर्शण नहीं है ? 
(1) Trichomonas tenax 
(2) Plasmodium vivax 
(3) Leishmania donovani 
(4) Hydramoebo hydroxena 

68. पारेशोईड बने होते हैं ? 
(1) स्टार्च का कोर (केन्द्र) जो कि प्रोटीन की शीथ से आवरित है। 
(2) प्रोटीन का बना कोर (केन्द्र) जो कि स्टार्च की शीथ से आवरित है। 
(3) प्रोटीन का कोर (केन्द्र) जो कि वसीय शीथ से आवरित है। 
(4) न्युक्लिक अम्ल का कोर (केन्द्र) जो कि प्रोटीन से आवरित है। 

69. मक्शक-धीरिय का प्रयोग के उपचार में किया जाता है। 
(1) मायोपिया 
(2) मलरिया 
(3) अर्थ्यकंदल 
(4) कोलेरा 

70. नेती से प्राप्त किए जाते हैं। 
(1) Murex truncatus 
(2) Pinctada vulgaris 
(3) Brachystomalia 
(4) Mediolaria
71. Botanical name of common bread – wheat is:
   (1) Triticum turgidum
   (2) Triticum aestivum
   (3) Triticum monococcum
   (4) All of the above

72. Which pair is not correct?
   (1) Cotton – Malvaceae
   (2) Withania – Solanaceae
   (3) Coffee – Rubiaceae
   (4) Tea – Apocynaceae

73. In gel electrophoresis, separated bands of DNA are cut out from the agarose gel and extracted from the gel piece. This step is known as:
   (1) Blotting
   (2) Elution
   (3) Cloning
   (4) Tagging

74. The cotton fibre is obtained from which part of cotton plant?
   (1) Bud
   (2) Stem
   (3) Seed
   (4) Flower

75. ‘Tossa jute’ is obtained from:
   (1) Corchorus capsularis
   (2) Corchorus olitorius
   (3) Corchorus erodoides
   (4) None of above
76. Pungency of mustard oil is due to
   (1) Erucic acid
   (2) Ethyl thiocyanate
   (3) Allyl isothiocyanate
   (4) Linoceric acid

77. Botanical name of groundnut is:
   (1) Sesamum indicum
   (2) Eruca sativa
   (3) Ricinus communis
   (4) Arachis hypogea

78. Which country is known as “The Land of Spices”?
   (1) Thailand
   (2) Japan
   (3) India
   (4) Germany

79. Which among the followings is not an example of seed spices?
   (1) Fennel
   (2) Clove
   (3) Coriander
   (4) Cumin

80. The terminal buds of tea plant are commonly known as
   (1) Silver buds
   (2) Platinum buds
   (3) Diamond buds
   (4) Golden buds
81. Which is an example of palindromic nucleotide sequence?
   (1) GAATTC
   (2) TAACGT
   (3) CGGTAT
   (4) TAGCGT

82. Polymerase chain reaction was discovered by:
   (1) J. Lederberg
   (2) A.E. Jacob
   (3) Cary Mullis
   (4) Barbara McClintoc

83. First transgenic cow is:
   (1) Dolly
   (2) Poly
   (3) Moly
   (4) Rosie

84. Cell without cell wall is known as:
   (1) Cytoplasm
   (2) Chromoplast
   (3) Protoplast
   (4) Chloroplast

85. Technique of shoot tip culture was developed by:
   (1) Haberlandt
   (2) White
   (3) Sipra Guha Mukherjee and S.C. Maheshwari
   (4) Morel and Martin
86. The food chain which begins with the death of an organism is known as:
   (1) Primary food chain
   (2) Edaphic food chain
   (3) Detritus food chain
   (4) Grazing food chain

87. Who coined the term 'Ecosystem'?
   (1) Clements
   (2) Tansley
   (3) Haeckel
   (4) Odum

88. The following endocrine glands are present in the human body:
   A. Adrenal gland
   B. Pancreas
   C. Pineal gland
   D. Pituitary gland
   E. Thymus

   Arrange them in descending sequence of their location i.e. from head to foot:
   (1) DECBA
   (2) ACDEB
   (3) CDEBA
   (4) DEABC

89. \( \text{PAN} \) is:
   (1) Peroxyamylnitrate
   (2) Polyoxamylnitrate
   (3) Peroxyacetyl nitrate
   (4) Polyoxacyl nitrate

90. Which is not a xerophytic adaptation?
   (1) Presence of waxy coating on the surface
   (2) Presence of aerenchyma
   (3) Presence of CAM Physiology
   (4) Presence of chlorenchymatous cells in the stem hypodermis
91. Hyaline cap of pseudopodium of Amoeba is made up of:
   (1) Ectoplasm
   (2) Mesoplasm
   (3) Endoplasm
   (4) All of the above

92. Obelian medusa is a
   (1) Detritous feeder
   (2) Omnivorous
   (3) Carnivorous
   (4) Herbivorous

93. How many pairs of cranial nerves arise from Rana’s brain?
   (1) 8
   (2) 10
   (3) 12
   (4) 16

94. Body cavity of Ascaris is:
   (1) Coelenteron
   (2) Pseudocoel
   (3) Enterocoel
   (4) Haemocoel

95. Rana tigrina belongs to the order:
   (1) Urodela
   (2) Lepospondyle
   (3) Anura
   (4) Apoda
96. The burrow of rabbit is called
   (1) Barrel  (2) Warren
   (3) Barren  (4) Form

97. Which type of placenta is found in apes?
   (1) Allantoic
   (2) Allantochorionic
   (3) Yolk sac
   (4) Chorionic

98. Select correct pair:
   (1) Sertoli cells  —  Testosterone
   (2) Prostate gland  —  Testosterone
   (3) Corpus luteum  —  Progestrone
   (4) None of above

99. In chick the embryonic respiratory organ is:
   (1) Amnion
   (2) Allantois
   (3) Chorion
   (4) Yolk sac

100. In the zygote of frog first cleavage is:
     (1) Meroblastic
     (2) Horizontal
     (3) Holoblastic equal
     (4) Holoblastic unequal
101. Which hormone is responsible for regulation of growth and development of an organism?
   (1) Thyroxin
   (2) Somatotropin
   (3) Progesterone
   (4) Estrogen

102. Hormone responsible for lactation is:
   (1) Relaxin
   (2) Oxytocin
   (3) Oestrogen
   (4) Prolactin

103. Fungi used in maturation of cheese is
   (1) Mucor
   (2) Penicillium
   (3) Aspergillus
   (4) Agaricus

104. “The project tiger” was initiated in
   (1) 1973
   (2) 1972
   (3) 1975
   (4) 1974

105. A piece of wood swells when it placed in water because of
   (1) Diffusion
   (2) Osmosis
   (3) Imbibition
   (4) Guttation
106. Stomata restricted to lower surface of the leaf are termed as:
   (1) Potato type
   (2) Oat type
   (3) Water lily type
   (4) Mulberry type

107. The site of Kreb cycle in the cell is:
   (1) Cytoplasm
   (2) Chloroplast
   (3) Mitochondria
   (4) Endoplasmic reticulum

108. The site of dark reaction of photosynthesis is:
   (1) Grana
   (2) Stroma
   (3) Mitochondria
   (4) F1 particle

109. Who among the following is known as father of plant physiology?
   (1) Josef Priestley
   (2) Stephen Hales
   (3) Robert Hill
   (4) F. Blackman

110. Which among the followings is not an example of induced nastic movement?
   (1) Epinasty
   (2) Photomorphogenesis
   (3) Thermonasty
   (4) Seismonasty
111. Globally threatened bird species is:
   (1) Peacock
   (2) Great Indian Bustard
   (3) Jungle Crow
   (4) Patridge

112. The 20th session of the Conference of Parties (CoP-20) in December 2014 was held at:
   (1) Warsaw, Poland
   (2) Hyderabad, India
   (3) Cape Town, South Africa
   (4) Lima, Peru

113. Which type of graphical representation of data is commonly used for percentage distribution?
   (1) Line charts
   (2) Pie charts
   (3) Histograms
   (4) Polygons

114. Electron microscope was invented by
   (1) H. Rohrer
   (2) G. Binning
   (3) Antony von Leeuwenhoek
   (4) Max Knoll and Ernst Ruska

115. Visualization of DNA fragments is done after staining DNA with
   (1) Ethidium bromide only
   (2) Ethidium bromide followed by white light exposure
   (3) Ethidium bromide followed by UV light exposure
   (4) Ethidium fluoride followed by UV light exposure
116. During centrifugation which cell organelle will sediment at lower speed?
(1) Mitochondria
(2) Nuclei
(3) Golgi complex
(4) Ribosome

117. Sephadex gel is commonly used in
(1) Adsorption chromatography
(2) Ion exchange chromatography
(3) Gel filtration chromatography
(4) Affinity chromatography

118. In SDS – PAGE, sodium dodecyl sulphate provides an overall ______ charge to the protein.
(1) Positive
(2) Negative
(3) Neutral
(4) None of the above

119. Who among the following is not an ethnologist?
(1) K. Lorenz
(2) Karl Ernst von Baer
(3) Karl von Frisch
(4) Niko Tinbergen

120. Which among the following sites is listed in UNESCO World Heritage sites?
(1) Keoladeo National Park
(2) Ranthambore National Park
(3) Madhav National Park
(4) Desert National Park
121. “शिक्षा मनोविज्ञान, मनोविज्ञान की वह शाखा है, शिक्षक सबसे पहले व शीखने से है।” यह कथन सिंबाकू है, जहाँ है
(1) सिंबाकू
(2) क्रो व क्रो
(3) डेविस
(4) बी.एन. ज्ञा

122. शिक्षक के लिए मनोविज्ञान की उपयोगिता जिस क्षेत्र में है, जहाँ है
(1) उच्चतम शिक्षण विद्वानों के प्रयोग में
(2) वाल्यों के व्यक्तित्व के संबंधी विकास में
(3) कक्षा के समस्त शिक्षण के समाधान में
(4) उपरोक्त सभी

123. समस्त प्रतिक्रिया विज्ञान के प्रतिपक्ष हैं
(1) पावलोव
(2) थोर्नडाइक
(3) स्कीनर
(4) कोल्हासर

124. प्रभावशाली अभिगम के आवाम हैं
(1) संवेग अभिगम
(2) उद्देश्य अनुश्रूत अभिगम
(3) गुरुत्व अभिगम
(4) उपरोक्त सभी

125. वाल्य के मानसिक स्वास्थ्य पर बाधा डालने वाला तत्व है
(1) पावलोविक संचरण
(2) बिकास की उत्कृष्ट बंदाएँ
(3) शिक्षा का सहानुभूतिपूर्ण व्यवहार
(4) नानात्मक अनुशासन
126. Teachers and schools should not do to adolescents
(1) proper dealing
(2) providing vocational education
(3) rendering proper sex education
(4) avoid the adolescent psychology

127. Which is not group learning method?
(1) Project method
(2) Discussion
(3) Symposium
(4) Programmed learning

128. “Learning is the acquisition of habits, knowledge and attitudes.” It is the statement of
(1) Kingsley
(2) Gates
(3) Crow & Crow
(4) Cronbach

129. Which of the following is not instructional material?
(1) Overhead projector
(2) Audio cassette
(3) Printed material
(4) Transparency

130. Information communication technology includes:
(1) Online learning
(2) Web based learning
(3) Learning through the use of EDUSAT
(4) All the above
131. The most appropriate purpose of learning is
   (1) personality adjustment
   (2) modification of behaviour
   (3) Social and political awareness
   (4) Preparing oneself for employment

132. Which of the following is not a product of learning?
   (1) Attitudes
   (2) Concepts
   (3) Knowledge
   (4) Maturation

133. Under signal learning, the following is learnt:
   (1) Traditional adaptation
   (2) Psychology
   (3) Environment
   (4) Psychophysical

134. Powerful motivation is an effective factor of learning, as the child
   (1) becomes healthy
   (2) does meditation
   (3) feel happy
   (4) learn rapidly

135. Motive includes
   (1) Incentives
   (2) Needs
   (3) Drives
   (4) All the above
136. “Adolescence is a period of great stress, strain, storm and strike.” It is the statement of
(1) Blair
(2) Stanley Hall
(3) Crow and Crow
(4) Adler

137. Types of programmed instruction is
(1) Linear programmed instruction
(2) Branching programmed instruction
(3) Mathetics programmed instruction
(4) All the above

138. Which of the following is a teaching aid?
(1) Working model of wind mill
(2) Tape Recorder
(3) 16 mm film projector
(4) All the above

139. Which of the following statement is correct?
(1) Virus improves the speed of processing information through computer
(2) Internet does not allow the virus to spread
(3) Virus is part of software
(4) Virus is an operating system

140. The main aim of teaching is
(1) To develop only reasoning
(2) To develop only thinking
(3) Both (1) and (2)
(4) To provide information
141. Which of the following is not the characteristic of a computer?
(1) Computer is an electric machine
(2) Computer cannot think at its own
(3) Computer processes error free information
(4) Computer can hold data for any length of time

142. Propounder of teaching model “Advance Organizer” is
(1) David Ausubel
(2) Hida Tabo
(3) Richard Suchman
(4) Kohler

143. Last step of cognitive aspect is
(1) Comprehension or understanding
(2) Analysis
(3) Synthesis
(4) Evaluation

144. Social learning takes place
(1) Alienation
(2) Crowd
(3) Contact
(4) Audio-visual aids

145. Mental health of child depends on, it is
(1) school
(2) family
(3) community
(4) All of the above
146. You should have for sending e-mail
(1) Modem and Telephone line
(2) Internet connection
(3) Receiver’s e-mail address
(4) All of above

147. Example of data is
(1) Name of students
(2) Roll Number
(3) Account Number
(4) All of above

148. Aspects of mental development are
(1) Observation
(2) Thinking
(3) Attention
(4) All of above

149. Teaching principle includes
(1) Teacher’s behaviour
(2) Student’s behaviour
(3) Impact of teaching
(4) All above

150. Is not a problem child
(1) who steals
(2) who is liar
(3) who disobeys parents
(4) mentally retarded