

**TET CUM TRT – 2018**

**PGT - BIOLOGICAL SCIENCE**

1. The first and the only lady ruler of Delhi sultanate
  1. Rudrama Devi
  2. Rani Mangamma
  3. Jhansi Lakshmi Bai
  4. Razia Sultana
  
2. The last British Viceroy of Independent India
  1. Lord Linlithgo
  2. Lord Mountbatten
  3. Lord Wavel
  4. Lord Irvin
  
3. The only bird that can fly backwards
  1. Crane
  2. Humming bird
  3. Turkey
  4. Parrot

4. The famous dance form of Andhra Pradesh
  1. Kathak
  2. Bharatanatyam
  3. Kuchipudi
  4. Dhandiya Rass
  
5. National school of Drama was set up in
  1. 1947
  2. 1959
  3. 1970
  4. 1975
  
6. The first element in the periodic table
  1. Oxygen
  2. Lithium
  3. Hydrogen
  4. Helium
  
7. The time taken by the light to reach Earth from Sun
  1. 10 minutes 10 seconds
  2. 8 minutes 20 seconds
  3. 12 minutes 10 seconds
  4. 4 minutes 45 seconds

8. The hottest planet in the solar system
  1. Venus
  2. Mercury
  3. Jupiter
  4. Uranus
  
9. Manabi Bandyopadhyay became the first transgender professor to complete a Ph.D in
  1. Tamil Literature
  2. Bengali Literature
  3. Malayalam Literature
  4. Telugu Literature
  
10. The three primary colours of light
  1. Red, Green, Blue
  2. Purple, Blue, Orange
  3. Red, Brown, Blue
  4. White, Green, Red
  
11. Centre for DNA finger printing and diagnostics is located at
  1. Hyderabad
  2. Mumbai
  3. Delhi
  4. Bengaluru

12. Expanded form of ASLV
  1. Aerospace Satellite Launch Vehicle
  2. Agrobased Satellite Launch Vehicle
  3. Augmented Satellite Launch Vehicle
  4. Aeronautical Satellite Launch Vehicle
  
13. 'Paradise Lost' was written by
  1. Shakespeare
  2. John Milton
  3. W.B. Yeats
  4. Walt Whitman
  
14. Oncology focuses on this disease
  1. Paralysis
  2. Cancer
  3. Heart attack
  4. Mental disorder
  
15. The largest internal organ of the human body
  1. Gallbladder
  2. Lungs
  3. Heart
  4. Liver

16. The number of eyelids for duck
1. 2
  2. 4
  3. 1
  4. 3
17. National Science Day is observed on
1. November 14
  2. September 5
  3. February 28
  4. January 12
18. Benarus was renamed as
1. Myanmar
  2. Varanasi
  3. Yangon
  4. Nippon
19. The country that has largest land mass
1. England
  2. Russia
  3. India
  4. China

20. The first bank established in India is
1. Bank of Hindustan
  2. Imperial Bank
  3. Vijaya Bank
  4. Bank of Bharat
21. 'A first systematic level attempt at tackling the problem of education as a whole and unfolds that a national system of education would take 30 to 40 years to be evolved.' This is in accordance with\_\_\_\_\_
1. Hunter Commission-1882-83
  2. Wood's Despatch-1854
  3. Hartog Committee-1929
  4. Sargent Report- 1944
22. Post-Vedic education is also called
1. Dharmic Education
  2. Upanayanic Education
  3. Brahmanic Education
  4. Swadhyayic Education
23. What was the name given to primary schools attached to a mosque where elementary education was imparted in reading and writing Arabic and Persian in Medieval Period?
1. Khangahs
  2. Maktabas
  3. Madrasas
  4. Mahad

24. Which of these was the core subject of Post- Vedic Curriculum?
1. Brahma Vidya
  2. Bhuta Vidya
  3. Sarpa Vidya
  4. Deva-Jana Vidya
25. Teacher Education is offered in all the following ways except-
1. Regular course for 1 or 2 Academic years
  2. Evening or vacation courses for 2 Academic years
  3. Online course for 2 years plus one year internship at school
  4. Correspondence-cum-contact courses for 2 Academic years
26. Short term courses in teacher education of two or three months duration are called \_\_\_\_\_
1. Certificate courses
  2. Diploma courses
  3. Collegiate courses
  4. Correspondence courses
27. Which of these is a motivating agent for teachers in India?
1. Regular postings and transfers in Government jobs
  2. Demotion in case of unusual behaviour during the tenure
  3. Professional status, availability of proper resources
  4. Pay and allowances in private schools

28. Which of these is a function of professional organization of teachers?
1. Providing welfare services to all the children studying under the guidance of any teacher.
  2. Providing field services and field experiences
  3. Modifying the educational plans and implementing them as per the government orders
  4. Selling periodicals and research monographs
29. A convergent framework that aims at nurturing a spirit of inquiry and creativity, love for Science and Mathematics and effective use of technology amongst children.
1. Rashtriya Shodh Kshetra
  2. Inspire Programme
  3. Rashtriya Avishkar Abhiyan
  4. National Science Research Institute
30. Which of these has minimum role in bringing equalities in the educational opportunities?
1. Integrated child care services
  2. Comprehensive Access to Primary Education
  3. School Readiness
  4. Child Care schemes for parents



31. Which one is odd one out in case of Kasturba Gandhi Balika Vidyalayas?
1. Free Textbooks & Uniforms
  2. Day schooling
  3. Vocational Training & guidance
  4. Medical Facility
32. One of these is a measure suggested in National Population Policy 1976
1. Promotion of research activities in family planning methods
  2. Removal of population related issues from school curriculum
  3. Girls should be educated only up to secondary level
  4. Age of marriage for girls should be 16 years and for boys 18 years.
33. With respect to RTI Act 2005, which work is correctly matched with the fee charged for that?
1. To submit your request to receive information-Rs 10
  2. Diskette/ Floppy-Rs 20
  3. For each page created/ copied in A-4 or A-3 size paper- Rs 10
  4. For inspection of records (first hour)-Rs 20

34. What is the role of PIO if the superior officer orders him not to release information to the requester?
1. PIO is an independent authority under the law and no approval is required.
  2. PIO shall wait for the order of superior
  3. PIO reaches out to Chief Information Commissioner for the order
  4. PIO rejects request malafidely fully or partially
35. According to RTE Act 2009, part time instructors should be appointed for all except
1. Art Education
  2. Health and Physical Education
  3. Work Education
  4. ICT Education
36. As per RTE Act 2009, what is the student – teacher ratio in Class VI to VIII?
1. 1: 30
  2. 1:40
  3. 1:35
  4. 1:25

37. As per NCF 2005, which of these induces an inordinate level of anxiety and stress and promotes rote learning?
1. Literary activities
  2. Essay writing competitions
  3. Text-based and quiz-type questioning
  4. Multiple choice questions with negative marking
38. As per NCF 2005, in no case would children below the age of 16 years be eligible
1. for using mass media for education
  2. for admission to a VET programme
  3. for taking part in innovative and creative projects
  4. for choosing work and Art as a part of schooling
39. As per NCF 2005, mass media can be used to
1. support teacher training and facilitate classroom learning
  2. involve students in accumulating information from various sources
  3. protect children from self learning
  4. supply instructional materials to schools free of cost
40. As per NCF 2005, which of these is a form of learner engagement?
1. Discovering
  2. Recalling
  3. Imitating
  4. Translating

41. A method which is to know oneself and to study intrapersonal relationships
  1. Observation
  2. Experimentation
  3. Questionnaire
  4. Introspection
  
42. A child learns to control large muscles first and then finer movements with smaller muscles is
  1. Principle of Predictability
  2. Proximodistal Direction
  3. Principle of Integration
  4. Continuous Development
  
43. The number of stages in Jean Piaget's theory of Cognitive Development
  1. 5
  2. 6
  3. 4
  4. 8
  
44. The type of social play which 1 to 2 years of child involve in is
  1. Parallel Play
  2. Solitary Play
  3. Co-operative Play
  4. Competitive Play

45. A mental process that occurs when a child adjusts to new information
1. Schema
  2. Accommodation
  3. Assimilation
  4. Organization
46. The idea that some characteristics of an object stay the same even though the object might change
1. Centration
  2. Animism
  3. Conservation
  4. Seriation
47. Language and thought initially develop independently of each other and then merge was stated by
1. Piaget
  2. Noam Chomsky
  3. Vygotsky
  4. Skinner
48. Child obeys because adults have superior power. This is
1. Interpersonal expectations, relationships and conformity
  2. Social conscience orientation
  3. Individualism, instrumental purpose and exchange
  4. Punishment and obedience orientation

49. Teaching new behavior by reinforcing successive approximation to a specified target behavior
1. Prompt
  2. Shaping
  3. Time out
  4. Extinction
50. The “magical number seven, plus or minus two” is described by
1. George Miller
  2. Ebbinghaus
  3. Terman
  4. Binet
51. Ability to think in pictures, visualise a future result, imagine things in mind eye and use it on having a sense of direction is
1. Naturalist Intelligence
  2. Logico-Mathematical Intelligence
  3. Visual-Spatial Intelligence
  4. Bodily Kinesthetic Intelligence
52. Hitting in ball badminton interferes with hitting in shuttle badminton
1. Negative Transfer
  2. Positive Transfer
  3. Zero Transfer
  4. Bilateral Transfer

53. The strategy that involves creating a word from the first letters of the items to be remembered
1. Keyword Method
  2. Rhymes
  3. Method of Loci
  4. Acronyms / Mnemonics
54. A boy must learn to think of himself as a male if his behavior is to be appropriate
1. Self-Concept
  2. Sex-Identification
  3. Sex Constancy
  4. Self-Worth
55. The general mental adaptability to new problems and conditions of life is
1. Personality
  2. Intelligence
  3. Memory
  4. Learning
56. Children are able to remember without understanding
1. Episodic Memory
  2. Remote Memory
  3. Habit Memory
  4. Rote Memory

57. The principle that behavior followed by positive outcomes are strengthened and that behavior followed by negative outcomes are weakened
1. Law of Effect
  2. Law of Readiness
  3. Positive Reinforcer
  4. Negative Reinforcer
58. Applying previous experiences and knowledge to learning or problem solving in a new situation
1. Transfer
  2. Learning
  3. Memory
  4. Thinking
59. A systematic, organized strategy for planning lessons
1. Lesson Planning
  2. Unit Planning
  3. Term Planning
  4. Instructional Planning
60. A classroom arrangement style in which small number of students work in small, closely bunched group is
1. Auditorium Style
  2. Offset Style
  3. Seminar Style
  4. Cluster Style



## CONTENT

61. The genetic nature of RNA was discovered by
1. F.H.C. Crick
  2. H.G. Khorana
  3. Frankel Conrat
  4. W.M. Stanley
62. Pick the incorrect pair
1. *Cyanobacteria* - algal blooms
  2. Diatoms - Kieselguhr
  3. *Trichodesmium erythrium* - Red tides
  4. *Noctiluca* - bioluminescence
63. Pick the correct match.
- |                          |                     |
|--------------------------|---------------------|
| A. <i>Puccinia</i>       | I. Phycomycetes     |
| B. <i>Albugo</i>         | II. Ascomycetes     |
| C. <i>Aspergillus</i>    | III. Deuteromycetes |
| D. <i>Colletotrichum</i> | IV. Basidiomycetes  |
- 
- |    | A  | B   | C   | D   |
|----|----|-----|-----|-----|
| 1. | IV | I   | II  | III |
| 2. | IV | I   | III | II  |
| 3. | I  | IV  | II  | III |
| 4. | II | III | IV  | I   |

64. Identify the spores which are develop exogenously in the fungal members.
1. Ascospores and zoospores
  2. Conidiospores and basidiospores
  3. Sporangiospores and zygosporos
  4. Aplanospores and oospores
65. Carl Woese et al studied the evolutionary relationship among the organisms by using the following RNA as marker
1. r - RNA
  2. m - RNA
  3. t - RNA
  4. si - RNA
66. Assertion (A) : Lichens are very good pollution indicators.  
Reason (R) : They grow luxuriantly in polluted areas.
1. Both A and R are true. R is correct explanation for A.
  2. Both A and R are true. R is not correct explanation for A.
  3. A is true. R is false.
  4. A is false. R is true.
67. 'Algin' is obtained from
1. Green algae
  2. Yellow algae
  3. Red algae
  4. Brown algae

68. Motile gametes are absent in

1. *Chlamydomonas* and *Volvox*
2. *Spirogyra* and *Polysiphonia*
3. *Ectocarpus* and *Sargassum*
4. *Ulothrix* and *Fucus*

69. Pneumatophores can be seen in

1. *Avicinea*
2. *Vanda*
3. *Taeniophyllum*
4. *Rafflesia*

70. Pick the correct match

- |                     |                      |
|---------------------|----------------------|
| A. Solitary cyme    | I. <i>Hamelia</i>    |
| B. Monochasial cyme | II. <i>Datura</i>    |
| C. Dichasial cyme   | III. <i>Ipoemoea</i> |
| D. Polychasial cyme | IV. <i>Nerium</i>    |

- |    | A   | B  | C   | D   |
|----|-----|----|-----|-----|
| 1. | I   | II | IV  | III |
| 2. | II  | I  | III | IV  |
| 3. | III | II | IV  | I   |
| 4. | III | I  | II  | IV  |

71. The ovary in brinjal is

1. Inferior
2. Superior
3. Half-inferior
4. Half-superior

72. Polyadelphous stamens are present in

1. *Citrus*
2. *Pisum*
3. *Hibiscus*
4. *Salvia*

73. 'Pepo' develops from

1. superior ovary of tricarpeal unilocular gynoecium
2. inferior ovary of bicarpeal unilocular gynoecium
3. inferior ovary of tricarpeal unilocular gynoecium
4. superior ovary of multicarpeal multilocular gynoecium

74. The intine of pollen grain is chemically made up of

1. Sporopollenin
2. Chitin and Pectin
3. Cellulose and Pectin
4. Lignin

75. The ovule present in sunflower is called
1. Orthotropous ovule
  2. Circinotropous ovule
  3. Anatropous ovule
  4. Campylotropous ovule
76. The number of meiotic and mitotic divisions required to develop four female gametophytes in a typical angiosperm plant respectively are
1. 4 and 4
  2. 1 and 4
  3. 1 and 8
  4. 4 and 12
77. Identify the cell organelle which is not in the part of endomembrane system
1. Endoplasmic reticulum
  2. Vacuole
  3. Peroxisome
  4. Lysosome
78. The stored food material in aleuroplasts is
1. Proteins
  2. Starch
  3. Oils
  4. Glycogen

79. "Ricin" is a/an
1. Alkaloid
  2. Lectin
  3. Pigment
  4. Toxin
80. Separation of sister chromatids takes place during the following phase of meiosis
1. Anaphase - I
  2. Telophase - I
  3. Anaphase - II
  4. Telophase - II
81. The number of chromosomes present in the primary endosperm nucleus of rice is
1. 36
  2. 12
  3. 24
  4. 48
82. The sequence of arrangement of xylem and phloem in bicollateral vascular bundles is
1. Xylem - Phloem - Xylem
  2. Xylem - Xylem - Phloem
  3. Phloem - Xylem - Phloem
  4. Phloem - Phloem - Xylem

83. Read the following.
- |               |                      |
|---------------|----------------------|
| a. Cambium    | b. Phloem parenchyma |
| c. Hypodermis | d. Endodermis        |

Monocot stems lack

1. a only
  2. b and c
  3. c, a and b
  4. d, b and a
84. The 'Father of Ecology' in India is
1. Madhav Gadgil
  2. Ramdeo Misra
  3. K.P. Singh
  4. Sunderlal Bahugna
85. *Utricularia* is a
1. free floating hydrophyte
  2. submerged rooted hydrophyte
  3. submerged suspended hydrophyte
  4. rooted hydrophyte with floating leaves
86. The loss of water from the leaves of plants in liquid form is called
1. Transpiration
  2. Guttation
  3. Evaporation
  4. Imbibition

87. Pick the correct match

- |    |            |      |                          |
|----|------------|------|--------------------------|
| A. | Boron      | I.   | Whip tail of cauliflower |
| B. | Chlorine   | II.  | Heart rot in beets       |
| C. | Molybdenum | III. | Mouse ear in pecan       |
| D. | Nickel     | IV.  | Bronzing of legumes      |

- |    | A   | B  | C   | D   |
|----|-----|----|-----|-----|
| 1. | II  | IV | III | I   |
| 2. | III | II | IV  | I   |
| 3. | III | I  | II  | IV  |
| 4. | II  | IV | I   | III |

88. The role of leg-haemoglobin in the root nodules of legume is to

1. maintain oxygen rich atmosphere
2. supply food to the bacterium
3. maintain oxygen free atmosphere
4. supply water and minerals to the bacterium

89. Assertion (A) : Competitive inhibitors are used in the control of bacterial pathogens.

Reason (R) : They can inhibit the activity of bacterial enzymes by binding in the active site.

1. Both A and R are true. R is correct explanation for A.
2. Both A and R are true. R is not correct explanation for A.
3. A is true. R is false.
4. A is false. R is true.



90. Cyclic electron transport / photo-phosphorylation releases
1. only NADPH + H<sup>+</sup>
  2. only ATP
  3. both ATP and NADPH + H<sup>+</sup>
  4. ATP, NADPH + H<sup>+</sup> and oxygen
91. The enzyme involved in the conversion of xylulose-5-phosphate to ribulose - 5 - phosphate is
1. Ribose - 5 - phosphate isomerase
  2. Ribulose - 5 - phosphate epimerase
  3. Ribulose - 5 - phospho kinase
  4. aldolase
92. In aerobic respiration the utilization of oxygen and formation of H<sub>2</sub>O takes place during
1. Glycolysis
  2. Kreb's cycle
  3. Pyruvate oxidation
  4. Electron transport
93. Pick the incorrect pair
1. Citric acid - 6 carbon compound
  2. Acetyl CO-A - 3 carbon compound
  3. Succinic acid - 4 carbon compound
  4. α - Ketoglutaric acid - 5 carbon compound

94. Assertion (A) : Auxins are widely used in tea plantation and hedge making

Reason (R) : Auxins overcome apical dominance

1. Both A and R are true. R is correct explanation for A.
2. Both A and R are true. R is not correct explanation for A.
3. A is true. R is false.
4. A is false. R is true.

95. Transformation was first discovered in

1. *Streptococcus pneumoniae*
2. *Salmonella typhimurium*
3. *Escherichia coli*
4. *Treponema pallidum*

96. The shape of cholera causing bacterium is

1. Rod shape
2. Spherical shape
3. Comma shape
4. Spiral shape

97. The number of capsomeres present in the capsid of TMV are

1. 6,500
2. 2,130
3. 2,310
4. 5,600

98. The distance between the two strands of double helix DNA is
1. 2 nm
  2. 20 nm
  3. 0.2 nm
  4. 3.4 nm
99. Identify the stop codon
1. UCA
  2. UAU
  3. UAA
  4. UAC
100. The gene that codes for  $\beta$  - galactosidase in *lac* operon is
1. *i*
  2. *y*
  3. *a*
  4. *z*
101. Eco RI cuts the double stranded DNA by recognizing the following sequence
1. 5' - GAATTC - 3'
  2. 5' - CTTAAG - 3'
  3. 5' - CTGAAC - 3'
  4. 5' - GAACCT - 3'

102. An ideal recombinant vector should consist all the following features except
1. origin of replication
  2. low molecular weight
  3. genes for antibiotic resistance
  4. multiple recognition sites for the same restriction enzyme
103. Round up ready soyabean is a transgenic crop with a trait for
1. Insect resistant
  2. Viral disease resistant
  3. Herbicide resistant
  4. Rich protein content
104. 'Pusa Gaurav' is an aphid resistant variety of
1. Flat bean
  2. Cowpea
  3. Chilli
  4. Mustard
105. An example for single cell proteins producing bacteria is
1. *Methylophilus methylotrophus*
  2. *Candida utilis*
  3. *Scendesmus acutus*
  4. *Chaetomium cellulolyticum*

106. “Cyclosporin A”, is obtained from
1. *Monascus purpureus*
  2. *Trichoderma polysporum*
  3. *Streptococcus mutans*
  4. *Clostridium butylicum*
107. *Fucus* exhibits
1. Haplontic life cycle
  2. Diplontic life cycle
  3. Haplo-diplontic life cycle
  4. Diplo-biontic life cycle
108. Pick the correct pair of plants which show parietal placentation in their ovules
1. Pea and bean
  2. Mustard and *Argemone*
  3. Rose and tomato
  4. *Dianthus* and primrose
109. Pollination takes place through bats is called
1. Therophily
  2. Ophiophily
  3. Chiropterophily
  4. Malacophily

110. The adaptation which encourage self pollination is
1. Herkogamy
  2. Dichogamy
  3. Cleistogamy
  4. Xenogamy
111. The branch of Biology that deals with the study of microscopic structure of different tissues is
1. Morphology
  2. Anatomy
  3. Histology
  4. Cytology
112. The process by which anything is grouped into convenient categories on some easily observable characters is known as
1. Categorisation
  2. Classification
  3. Characterisation
  4. Identification
113. Assertion (A) : The nomenclature popularized by Linnaeus was called binomial nomenclature.  
Reason (R) : In binomial nomenclature, each organism is provided with two names.
1. Both A and R are true. R is correct explanation for A.
  2. Both A and R are true. R is not correct explanation for A.
  3. A is true. R is false.
  4. A is false. R is true.

114. Basic unit of classification is
1. Genus
  2. Species
  3. Sub species
  4. Family
115. B-lymphocytes develop into two types of functional cells in the secondary lymphoid organs. They are
1. Memory cells and Plasma cells
  2. Cytotoxic cells and Memory cells
  3. Mast cells and Dendric cells
  4. Natural killer cells and Plasma cells
116. Antiviral proteins produced by virus infected cells are
1. Interleukins
  2. Antibodies
  3. Immunoglobulins
  4. Inteferons
117. Immunity developed by vaccination is called
1. Natural active immunity
  2. Natural passive immunity
  3. Artificial passive immunity
  4. Artificial active immunity

118. The most common type of cancer is
1. Carcinoma
  2. Sarcoma
  3. Leukemia
  4. Lymphoma
119. This type of stem cells that can differentiate into nearly all types of cells.
1. Totipotent cells
  2. Multipotent cells
  3. Pluripotent cells
  4. Unipotent cells
120. Abnormal rise in red blood cell count is known as
1. Anaemia
  2. Leukemia
  3. Polycythemia
  4. Leucocytosis
121. Pick up the correctly matched pair from the following.
1. Stichonematic flagellum - *Peranema*
  2. Acronematic flagellum - *Polytoma*
  3. Pantonematic flagellum - *Euglena*
  4. Pantacronematic flagellum - *Chilomonas*



122. Union of male and female pronuclei during conjugation is known as

1. Fertilisation
2. Syngamy
3. Amphimixis
4. Gametogony

123. Nocturnal periodicity is exhibited by

1. *Wuchereria*
2. *Ascaris*
3. Rhabditiform larva
4. *Microfilaria*

124. The following are the stages of *Plasmodium* during endoerythrocytic schizogony. Arrange them in correct sequence.

- |                      |                |
|----------------------|----------------|
| a. Signet ring stage | b. Trophozoite |
| c. Rosette stage     | d. Schizont    |
| e. Amoeboid stage    |                |

1. b, a, e, d, c
2. b, a, d, e, c
3. c, d, e, a, b
4. a, b, e, d, c

125. Intermediate host of *Fasciola hepatica* is

1. *Pila*
2. *Limnaea*
3. *Murex*
4. *Unio*

126. Rearing of honey bees is called
1. Sericulture
  2. Aquaculture
  3. Mariculture
  4. Apiculture
127. Silk is obtained from this stage of silk worm
1. Adult stage
  2. Larval stage
  3. Cocoon stage
  4. Egg stage
128. Study the following and identify the correct statement related to pancreas
1. It is the largest gland in the body
  2. It has five lobes
  3. It secretes enzymes and hormones
  4. Its juice is slightly acidic
129. Two friends are eating together on a dining table. One of them suddenly starts coughing while swallowing some food. This coughing would have been due to improper movement of
1. Diaphragm
  2. Neck
  3. Tongue
  4. Epiglottis

130. Left side shift of oxygen haemoglobin dissociation curve is noticed under

1. Normal temperature and normal  $p^H$
2. Low temperature and high  $p^H$
3. Low  $p^H$  and high temperature
4. Low  $p^H$  and low temperature

131. Match the following.

List – 1

- A. Chloride shift
- B. Bohr effect
- C. Natural air conditioners
- D. Diaphragm

List – 2

- I. Effect of  $CO_2$  on  $O_2$  transport
- II. Hamberger's phenomenon
- III. Nasal chambers
- IV. Breathing movements
- V. Sound production

A    B    C    D

1. II    I    III    IV
2. I    II    III    V
3. II    I    IV    III
4. III    V    I    II

132. Blood circulation takes the following course in human heart

1. Left atrium – Left ventricle – Lungs – Right atrium – Right ventricle
2. Left atrium – Left ventricle – Body parts – Right atrium – Right ventricle
3. Right atrium – Right ventricle – Body parts – Left atrium – Left ventricle
4. Right atrium – Right ventricle – Left ventricle – Left atrium

133. Mitral valve guards the opening of

1. Stomach and intestine
2. Pulmonary vein and left atrium
3. Right atrium and right ventricle
4. Left atrium and left ventricle

134. Renin is secreted when

1. Blood pressure in afferent arteriole decreases
2. Blood pressure in efferent arteriole increases
3. Blood pressure in afferent arteriole increases
4. Blood pressure in efferent arteriole decreases

135. Assertion (A) : In a healthy man, urine does not contain glucose.  
Reason (R) : Glucose is a low threshold substance

1. Both A and R are true. R is correct explanation for A.
2. Both A and R are true. R is not correct explanation for A.
3. A is true. R is false.
4. A is false. R is true.

136. Study the following regarding myofibril and pick up the correct combination:

<b>Option</b>	<b>H - zone</b>	<b>I – band</b>	<b>A – band</b>
1.	Only myosin	Only actin	both actin & myosin
2.	Only actin	Only myosin	Only myosin
3.	Both actin and myosin	Both actin and myosin	Only actin
4.	Only myosin	Only actin	Only myosin

137. Urea is synthesised in

1. Kidney
2. Liver
3. Heart
4. Spleen

138. In human beings, 11<sup>th</sup> and 12<sup>th</sup> pairs of ribs are

1. True ribs
2. Vertebrochondral ribs
3. Floating ribs
4. Absent

139. In man, the elbow joint is

1. Hinge joint
2. Ball and socket joint
3. Gliding joint
4. Pivotal joint

140. Read the following statements and identify the incorrect one

1. Mid brain, Pons varoli and medulla oblongata are together called brain stem
2. Paracoels are connected to the diocoel through the iter
3. Heart beat, respiration, swallowing etc. regulating centres lie in medulla oblongata
4. Cerebellum is called gyroscope of the body

141. V cranial nerve is

1. Optic nerve
2. Trigeminal nerve
3. Pathetic nerve
4. Glossopharyngeal nerve

142. Diabetes insipidus is due to deficiency of

1. Insulin
2. Adrenaline
3. Vasopressin
4. Glucagon

143. Identify the correctly matched pair

1. Glucagon -  $\beta$  cells
2. Testosterone – Sertoli cells
3. Corpus luteum - progesterone
4. Insulin -  $\alpha$  - cells

144. Study the following statements and pick up the correct statement

1. Testes of man lie in scrotum to provide lesser temperature for spermatogenesis
2. Sertoli cells secrete androgens
3. Skene glands are associated with male reproductive system
4. Clitoris is homologous to prostate gland

145. Oral contraceptive pills contain
1. Oestrogen, testosterone
  2. Oestrogen, relaxin
  3. Testosterone, aldosterone
  4. Oestrogen, progesterone
146. Mendelian recombinations of characters are due to
1. Linkage of genes
  2. Crossing over of genes
  3. Random assortment of genes
  4. Dominance
147. In father has O blood group and mother has A blood group (homozygous), the blood group (s) not expected in their children are
1. A, B
  2. A, O
  3. O, B, AB
  4. A, B, AB
148. As per Genic balance theory, if karyotype of a *Drosophila* AAA + X is
1. Male
  2. Metamale
  3. Female
  4. Metafemale

149. Mr. Surya has hypertrichosis. The chances of this trait being inherited to his grandson through his son will be

1. 50%
2. 25%
3. 75%
4. 100%

150. Study the following and pick up the incorrect statement.

1. Lamarck published the book Origin of Species
2. Darwin stated that constancy of population is due to struggle for existence
3. Hugo de Vries proposed the Mutation theory
4. Darwin failed to explain the arrival of the fittest

151. If a human baby born with a tail, it is described as

1. Homologous organ
2. Analogous organ
3. Vestigial organ
4. Atavistic organ

152. Cyclomorphosis is exhibited by

1. *Daphnia*
2. *Cyclops*
3. *Brachionus*
4. *Sacculina*



153. Identify the nekton from the following

1. Larvae of mosquitoes
2. Fish and water snakes
3. Hydras, Bryozoans
4. Chironomid larvae

154. Enrichment of lake with nutrients is called

1. Stratification
2. Eutrophication
3. Biomagnification
4. Green house effect

155. Incinerators are used in

1. Recycling domestic wastes
2. Neutralising the green house gases
3. Disposal of hospital wastes
4. Recycling of plastics

156. One of the following is a harmless diagnostic process. Identify it

1. Computerised Axial Tomography
2. Magnetic Resonance Imaging
3. X-ray radiography
4. X-ray radiography and CAT scan

157. Milk of the transgenic cow, Rosie contain
1. Alpha lactalbumin
  2.  $\alpha$  - 1 antitripsin
  3. p<sup>53</sup> protein
  4. Dioxins
158. If the base sequence of mRNA is UGU AGC UAG CAU, the base sequence of coding chain of its parent DNA molecule is
1. TGT AGC TAC CAT
  2. ACA TCG ATC GTA
  3. TGT ACG ATC CAT
  4. ACA GCC TAG CAT
159. Conservation of Biodiversity by cryopreservation comes under
1. In-situ conservation
  2. In-vitro culture
  3. Gene bank
  4. Ex-situ conservation
160. The first National park in India
1. Jim Corbett National Park
  2. Keoladeo Ghana National Park
  3. Kaziranga National Park
  4. Bandipur National Park

## **METHODOLOGY**

161. A theory about the origin of human beings can be tested by new discourses of human - like fossil remains represents the following characteristic of Nature of Science
1. Science is an enterprise
  2. Scientific knowledge is durable
  3. Science explains and also predicts
  4. Scientific knowledge is holistic and humanistic
162. The book 'Micrographia' published in 1665 is a detailed record of the observations of this scientist
1. Robert Hooke
  2. William Harvey
  3. Louis Pasteur
  4. Charles Darwin
163. The process of Science that involves formulation of hypothesis, identification of the variable, interpreting the data is
1. Observation
  2. Experimentation
  3. Calculation
  4. Measuring

164. Shushruta has described surgery under various heads like 'Chedya' which means
1. Scarification
  2. Puncturing
  3. Excision
  4. Extraction
165. The following aim is realized if student understands the need for conserving nature and other living organisms
1. It provides comprehensive knowledge of Social Sciences
  2. It develops an interest and appreciation of Nature and Environment
  3. It provides a basis for career development
  4. It develops skills and abilities to understand procedures in Geography
166. Students learn new concepts, identify new techniques and perform innovative experiments - this represents development of this value
1. Creative
  2. Vocational
  3. Moral
  4. Cultural
167. Judging the evidences internally and judging the criteria externally are the objectives of
1. Comprehension
  2. Evaluation
  3. Application
  4. Analysis

168. The associated verbs such as illustrate, explain and classify comes under the objective
1. Application
  2. Analysis
  3. Comprehension
  4. Knowledge
169. A specification of interpreting the Biological data, concepts, processes, floral diagram of formulae comes under this instructional objective
1. Application
  2. Understanding
  3. Skill
  4. Appreciation
170. In 1956, Benjamin Bloom classified domains of human learning into three parts, cognitive affective, psychomotor and the year of revised Blooms taxonomy is
1. 2008
  2. 2006
  3. 2001
  4. 2005
171. Conceptual understanding includes
1. to ask critical questions, design questions, predicts results
  2. drawing pictures, flowchart, classification tables
  3. explaining, classifying, giving examples
  4. developing competitive spirit, accepting reality, designing pamphlets

172. Choosing required apparatus, setting, observation, recording, analyzing and concluding comes under this academic standard
1. Information skills and projects
  2. Communication through drawing
  3. Asking questions and making Hypothesis
  4. Experimentation and field investigation
173. There is no room for students' autonomy in this method
1. Heuristic Method
  2. Lecture Method cum Demonstration Method
  3. Project Method
  4. Laboratory Method
174. Heuristic method is a method according to which,
1. Learning occurs by imitation
  2. The learner discovers things by himself
  3. The learner follows the demonstration
  4. Learning occurs without a teacher
175. The topic "Anatomy of Plants" can best be taught by
1. Lecture Method
  2. Lecture cum Demonstration Method
  3. Laboratory Method
  4. Heuristic Method

176. One of the following is not a two dimensional taxonomy given by the Anderson and Krathwohl
1. Factual Knowledge
  2. Procedural Knowledge
  3. Conceptual Knowledge
  4. Technical Knowledge
177. “How plants will prepare food material and how plants spread in forest?” Such type of projects are considered under
1. Productive Project
  2. Consumer Project
  3. Problem Project
  4. Training Project
178. The important concepts to be taught during the teaching process is emphasized in the following step of unit plan
1. Instructional objectives
  2. Content analysis
  3. Teacher Learning activities
  4. Evaluation
179. A lesson plan is actually a plan of action - According to
1. N. L. Bossing
  2. Lastar B. Stands
  3. Bining & Bining
  4. W. M. Ryburn

180. The approach of lesson planning which is based on a apperceptive mass theory of learning is

1. Herbart Approach
2. Blooms Evaluation Approach
3. Constructivist Approach
4. Digital Approach

181. One of the following is a merit of Bloom's approach to lesson planning

1. Personal factors of the teachers influence the planning of teaching activities
2. It is highly mechanized and structured
3. Objectives are written in behavioural terms
4. Personal factors of the teachers influence the organization of the teaching activities

182. An example for direct experience

1. Observing the photograph of Swaminathan
2. Maintenance of green house
3. Recording discussion on science activities
4. Listening the presentation on control of pollution

183. For phosphorus burn after washing with water

1. It must be washed with sodium bicarbonate
2. It must be washed with 1% solution of acetic acid
3. Treated with dilute silver nitrate solution
4. Treated with milk of magnesia



184. The size need not be given in the indent for the purchase of this item

1. Beaker
2. Flask
3. Measuring Cylinder
4. Saffranine

185. The purchase details of distilled water, cotton, reagents, salts are to be entered into

1. Order register
2. Breakage register
3. Consumables stock register
4. Permanent stock register

186. The chemicals in Bio-Science laboratory like white phosphorous are to be preserved in

1. Water
2. Petrol
3. Naphthalene
4. Formalin

187. Principle of conservation of curriculum should

1. provide suitable opportunities for fulfilling the varied needs of the learner
2. help to live a wholesome and fulfilling life
3. help in preserving and spreading the traditions and culture of our Nation
4. Integrate the child needs on one hand and needs of the society on the other

188. “Curriculum is a tool in the hands of an artist to mould his material according to his ideals in his studio”. This is defined by
1. Secondary Education Commission
  2. Cunningham
  3. Crow & Crow
  4. Alexander & Saylor
189. The three significant features of a good Science textbook are
1. Mechanical features, Publisher, Content
  2. Publisher, Content, Tables
  3. Author, Mechanical features, Content
  4. Mechanical features, related tables, Content
190. One of the following is not a determinant of the curriculum
1. Objectives
  2. Content
  3. Method
  4. Marks
191. Introduction of a new topic should follow inductive approach. This is mentioned in this step of Vogel’s spot check evaluation scale.
1. Organisation of the content
  2. Presentation of the Material
  3. Accuracy of the Material
  4. Readability of the Material

192. In Hunter's score card, the points allotted to Psychological Soundness out of 1000 points are
1. 100
  2. 300
  3. 250
  4. 140
193. A three dimensional aid
1. Table Chart
  2. Iconic Chart
  3. Model
  4. Black Board
194. After organizing a Science Fair / Exhibition, identification of mistakes and trying to improve upon their performance is done in this step
1. Planning
  2. Execution
  3. Evaluation
  4. Preparation
195. This voluntary organization works for rural development established in the village Palia Pippalia in M.P.
1. Vikram Sarabhai Community Science Center
  2. Jawahar Bal Bhavan
  3. Kishore Bharathi
  4. A.P. Science Center

196. The habitate for land animals or An enclosure for land animals
1. Aquarium
  2. Herbarium
  3. Vivarium
  4. Terrarium
197. The difficulties in Science learning are investigated in
1. Placement Evaluation
  2. Formative Evaluation
  3. Summative Evaluation
  4. Diagnostic Evaluation
198. One of the following is not an achievement test
1. Teacher made test
  2. Standardised test
  3. Intelligence test
  4. Personality test
199. If a student scores the same points even if examined by his teacher and other teachers at different times of same test, the test is said to be
1. Objective
  2. Valid
  3. Reliable
  4. Practicable

200. This is used to test the students language, expression, organization ability besides subjective knowledge in an elaborate way.

1. Completion type test
2. Essay type test
3. Short answer questions
4. Multiple choice questions