

**TET CUM TRT – 2018**

**PGT - BOTANY**

1. Fungi are the plants that lack
  1. Oxygen
  2. Carbondioxide
  - 3. Chlorophyl**
  4. Nitrogen
  
2. The polymer used in making non-stick kitchen ware
  1. Nylon
  - 2. Teflon**
  3. Polystyrene
  4. Bakelite
  
3. Telescope was invented by
  1. John L. Baird
  2. Marconi
  3. Landstein
  - 4. Hans Lippershey**

4. Providing Urban Amenities in Rural Areas (PURA) was the brain child of
  1. C. Rangarajan
  2. **A.P.J. Abdul Kalam**
  3. Kasthuri Rangan
  4. Siva Rama Krishnan
  
5. Chief Justice of India at present is
  1. Justice Dipak Mishra
  2. Justice Patanjali Sastry
  3. **Justice Ranjan Gogoi**
  4. Justice Jagadish Singh Kekhar
  
6. What does Rector scale measure
  1. Humidity
  2. Cyclones
  3. **Earthquakes**
  4. Tides
  
7. BCG vaccination is injected to get immunity from
  1. **Tuberculosis**
  2. Polio
  3. Smallpox
  4. Cholera

8. The expanded form of NIOS is
1. National Institute of Organic Saplings
  2. **National Institute of Open Schooling**
  3. National Institute of Organized Sectors
  4. National Institute of Organized Service
9. National Cadet Corps has completed \_\_\_\_\_ years of its existence
1. **70**
  2. 69
  3. 77
  4. 60
10. One day Pelican Festival was held on February 4<sup>th</sup> 2018 in
1. **Atapaka Bird Sanctuary at Kolleru**
  2. Nelapattu Bird Sanctuary at Nellore
  3. Rangannathittu Bird Sanctuary in Karnataka
  4. Vedanthangal Bird Sanctuary in Tamil Nadu
11. Who was the first man to set foot on the moon
1. **Neil Armstrong**
  2. Yuri Gagarin
  3. Valentina Tereshkova
  4. Sunita Williams

12. The number of red balls in snooker
1. 13
  2. **15**
  3. 17
  4. 20
13. The present Cabinet Minister for Minority affairs is
1. Piyush Goyal
  2. **Mukhtar Abbas Naqvi**
  3. Dharmendra Pradhan
  4. Prakash Javadekar
14. Present Chief Election Commissioner in India is
1. **Sunil Arora**
  2. K.K. Venugopal
  3. Mangoo Singh
  4. Om Prakash Rawat
15. Mahavira was born at
1. Kapilavastu
  2. Pataliputra
  3. **Kundalgram**
  4. Peshawar

16. Megasthenese visited the court of
1. Ajatasatru
  2. **Chandragupta Maurya**
  3. Bimbisara
  4. Bindusara
17. Most spoken language in the World
1. English
  2. **Chinese**
  3. Latin
  4. Grease
18. The deepest point in the Pacific Ocean is called
1. **Mariana Trench**
  2. Bermudas Trench
  3. Sunda Trench
  4. Java Trench
19. Right to property was removed from fundamental rights through this amendment in the constitution
1. 42
  2. 356
  3. **44**
  4. 360

20. The founder of Arya Samaj
1. Swami Vivekananda
  2. **Swami Dayananda Saraswathi**
  3. Swami Virajananda Saraswathi
  4. Swami Swarupananda Saraswathi
21. 'European learning would enable Indians to recognise the advantages that flow from the expansion of trade and commerce, and make them see the importance of developing the resources of the country.' Which one of these emphasized on the above 'Education for Commerce'?
1. Ishwar Bhai Patel Committee 1977
  2. **Woods Despatch 1854**
  3. Hartog Committee-1929
  4. Hunter Commission-1882-83
22. Pabajja, the initiation of preliminary ordination for a child of 8 years willing to join the process of education is a ceremony under
1. **Buddhist Period**
  2. Jain Period
  3. Ancient Vedic Period
  4. Post- Vedic Period

23. Which of these is among the subjects taught in Madrasa during Medieval Period?
1. Sociology, Tafsir, Hadis
  2. **Tafsir, Hadis, Fiqh**
  3. Urdu, Persian, Tafsir
  4. Hadis, Fiqh, Sociology
24. What was the name given to the teacher in Post Vedic Period?
1. Guru
  2. Deva
  3. Chari
  4. **Acharya**
25. Which is a defect of the teacher's professional organizations in India?
1. Lack of infrastructural facilities in teacher's professional organizations
  2. Availability of long range academic programmes
  3. **Lack of unity among different organizations**
  4. Regular organization of programmes for the improvement of professional competence of teachers

26. If the student teacher is admitted into a teacher education institution as fresher from colleges without having any training earlier, it is called as
1. Extension teacher education
  2. In- service teacher education
  3. Collegiate teacher education
  4. **Pre- service teacher education**
27. Which of these involve in affiliating institutions conducting examinations at the Secondary and senior levels and developing and updating curriculum and textual materials?
1. **CBSE**
  2. NCERT
  3. UGC
  4. DIET
28. Which is a function of University Departments of Teacher Education?
1. **Developing the Post- Graduate studies and research work**
  2. Determining the standard of teacher education institutions
  3. Developing a guideline for general teacher education program
  4. Organizing extension programmes with collaboration of NCERT, NCTE, UGC

29. 'Population growth in cities under percentages', 'family members versus consumption of consumable articles under direct and indirect proportion' shows correlation between Mathematics and \_\_\_\_\_
1. Health Education
  2. **Population education**
  3. Urban development
  4. Depletion of resources
30. Which of these investments has the longest gestation periods?
1. Shares
  2. Investments in Small scale business
  3. Real estate investments
  4. **Educational Investments**
31. 'Diversity among children is to be viewed as a gift, not a problem for teachers'. This statement where inclusion is given due value was given by
1. **The 46<sup>th</sup> Session of UNESCO's International Conference in Education, Geneva, 2001**
  2. UNICEF, 2000
  3. Persons with Disability Act, 1995
  4. Dakar Framework for Action, 2000

32. Andhra Pradesh Government initiated Mid-day meal programme for Junior Colleges in August 2018. What is the objective behind this scheme?
1. To maintain regularity and punctuality in colleges
  2. **To reduce the drop-out rate in Junior Colleges**
  3. To make teachers follow strict schedule
  4. To motivate more girls to join Govt. Junior colleges and not private colleges
33. As per RTE Act 2009, every child completing his elementary education shall be
1. Awarded with cash prize
  2. **Awarded with a certificate**
  3. Awarded with a memento
  4. Awarded with School kit for next course
34. According to the National Commission for Protection of Child Rights (NCPCR), the Child is defined as
1. a person in the 0 to 8 years age group.
  2. a person in the 3 to 8 years age group.
  3. a person in the 6 to 14 years age group.
  4. **a person in the 0 to 18 years age group.**

35. If any applicant mutilates or destroys a record during inspection of records then,
1. PIO will ignore the issue
  2. **PIO will lodge a criminal complaint immediately**
  3. PIO will ask penalty on the spot from the person
  4. PO will make a copy of the same and let the matter go off
36. Salary of a Chief Information Commissioner is same as
1. The President
  2. The Prime Minister
  3. The Chief Justice of India
  4. **The Chief Election Commissioner**
37. As per NCF 2005, which is an intellectual space for teachers, learners and members of the community to deepen their knowledge and connect with the wider world?
1. School brochure
  2. Community theatre
  3. Science Laboratory
  4. **School library**
38. As per NCF 2005, to widen teachers' choices and provide for the diversity in children's needs and interests, there is a need for
1. Availability of multiple examination pattern
  2. Availability of online resources
  3. **Availability of multiple textbooks**
  4. Availability of play materials

39. As per NCF 2005, reducing stress and enhancing success in examinations necessitate:
1. **a shift towards shorter examinations**
  2. a shift towards content-based testing to problem solving skills and understanding
  3. a shift towards oral form of examination
  4. a shift towards no examination system
40. According to NCF 2005, which is the key feature of systemic reform which implies the system's capacity to reform itself by enhancing its ability to remedy its own weaknesses and to develop new capabilities?
1. Quantitative development
  2. Teaching competency
  3. **Quality concern**
  4. Organizational development
41. Child gains control over its head first then arms and legs last. This is called as
1. Proximodistal Direction
  2. **Cephalo-Caudal Direction**
  3. Continuous Development
  4. Specific Development
42. Which is the stage of moral development in social system morality
1. Stage 3
  2. Stage 2
  3. **Stage 4**
  4. Stage 5

43. A newly born child responds on reflexive level sucking and crying with gross bodily activity performed in
1. **0 to 1 month**
  2. 1 to 4 months
  3. 4 to 8 months
  4. 8 to 12 months
44. The identity status in which individuals are in the midst of exploring alternatives but have not yet made a commitment
1. Identify Diffusion
  2. Identify Foreclosure
  3. **Identify moratorium**
  4. Identify Achievement
45. Appropriate use of language in different controls is
1. Phonology
  2. Syntax
  3. Semantics
  4. **Pragmatics**
46. A relatively permanent influence on behavior, knowledge and thinking skills which comes out through experiences
1. **Learning**
  2. Thinking
  3. Problem Solving
  4. Creativity

47. A child who is good at utilizing rhyme, rhythm, music, visual impression, colour and pictures, looks for analogies and patterns is said to be the function of
1. **Right Brain**
  2. Left Brain
  3. Integrated Mode
  4. Learning
48. Children learn to walk, sit, run, climb, pick up objects. This is by
1. **Trial and Error Learning**
  2. Classical Conditioning
  3. Observational Learning
  4. Social Learning
49. Taking a positive reinforcer away from an individual
1. Time Out
  2. **Response Cost**
  3. Punishment
  4. Extinction
- 50 . The belief that one can master a situation and produce positive outcome is
1. Self-Concept
  2. Self-Esteem
  3. **Self-Efficacy**
  4. Self-Regulation

51. A student deficient in physical activities may show good result in academic field
1. Identification
  2. **Compensation**
  3. Regression
  4. Project
52. Ability to understand and effectively interact with others
1. Naturalist Skills
  2. Verbal Skills
  3. **Interpersonal Skills**
  4. Intrapersonal Skills
53. A test that is used to predict a student's ability to learn a skill or accomplish something with further education and training
1. **Aptitude Test**
  2. Achievement Test
  3. Ability Test
  4. Attitude Test
54. Learning that occurs when students work in small group to help each other learn
1. **Cooperative Learning**
  2. Collaborative Learning
  3. Group Learning
  4. Transfer of Learning

55. Assessment during the course of instruction rather than after it is completed
1. Summative Assessment
  2. Continuous and Comprehensive Assessment
  3. Pre Instructional Assessment
  4. **Formative Assessment**
56. A style that allows students considerable autonomy but provides them with little support for developing skills
1. Authoritative Classroom Management Style
  2. Authoritarian Classroom Management Style
  3. **Permissive Classroom Management Style**
  4. Withitness
57. Reasoning from the general to the specific is
1. Inductive Reasoning
  2. **Deductive Reasoning**
  3. Transductive Reasoning
  4. Critical Thinking
58. A students general knowledge about the world is
1. Episodic Memory
  2. Short Term Memory
  3. **Semantic Memory**
  4. Implicit Memory

59. Students attributing their failure to the stiff question paper is using defense mechanism of

1. **Rationalization**
2. Compensation
3. Projection
4. Denial

60. “Ink-blot test” is used to measure

1. Achievement
2. **Personality**
3. Attitude
4. Creativity

## CONTENT

61. Select the wrong statement
1. Viruses are obligatory endoparasites
  2. Viruses are acellular organisms
  - 3. Viruses contain both DNA and RNA**
  4. Viruses cannot reproduce independent cells
62. Bacteriophages were discovered by
- 1. Twort and D' herelle**
  2. Beijerinck
  3. W.M. Stanley
  4. Bawden and Pirie
63. Tobacco Mosaic Virus consist of
1. Double stranded RNA
  - 2. Single stranded RNA**
  3. Single stranded DNA
  4. Double stranded DNA
64. The virus which transmits through nematodes is
1. Tobacco mosaic virus
  2. Potato virus 'X'
  3. Cucumber necrosis virus
  - 4. Tomato ringspot virus**

65. The dye used in Gram staining is
1. Rhodamine
  2. **Crystal violet**
  3. Acetocaramine
  4. Methylene blue
66. Peritrichous bacteria have
1. A tuft of flagella at one polar end
  2. Single flagellum at one polar end
  3. **Multiple flagella around the cell**
  4. A tuft of flagella at both polar ends
67. Transfer of genetic material from one bacterium to another bacterium through bacteriophages is called
1. **Transduction**
  2. Transformation
  3. Tansfection
  4. Sexduction
68. The mesosome of bacterial cell is not concerned with
1. Respiration
  2. **Osmoregulation**
  3. Replication of nucleoid
  4. Cell division

69. Streptomycin is obtained from
1. *Streptomyces venezulae*
  2. ***Streptomyces griseus***
  3. *Streptomyces fradiae*
  4. *Streptomyces erythreus*
70. Siphonaceous type of thallus is present in
1. ***Vaucheria***
  2. *Spirogyra*
  3. *Coleochaete*
  4. *Ectocarpus*
71. Chromatophore means
1. Plastid with chlorophyll – b and accessory pigments
  2. **Plastid with chlorophyll – a and accessory pigments**
  3. Plastid with chlorophyll – a, chlorophyll-b and accessory pigments
  4. Plastid with chlorophyll – b and without accessory pigments
72. ‘Stephanokont’ zoospores are seen in
1. *Volvox*
  2. ***Oedogonium***
  3. *Chara*
  4. *Chlamydomonas*

73. Select the incorrect pair
1. Cup shaped chloroplast - *Chlamydomonas*
  2. Girdle shaped chloroplast - *Ulothrix*
  3. Reticulate chloroplast - *Oedogonium*
  4. **Ribbon shaped chloroplast - *Zygnema***
74. Motile male gametes are absent in
1. *Ectocarpus*
  2. ***Polysiphonia***
  3. *Vaucheria*
  4. *Oedogonium*
75. “Red rust of tea” is caused by a
1. Fungus
  2. Bacterium
  3. **Green alga**
  4. Virus
76. Select the incorrect statement
1. *Chara* is also called “Stonewort”
  2. Asexual reproduction is absent in *Chara*
  3. **The female sex organs in *Chara* are called Globule**
  4. Zygotic meiosis is takes place in *Chara*

77. Facultative saprophyte is
1. Always a saprophyte
  2. **Actually a parasite but can also become saprophyte**
  3. Actually a saprophyte but can also become parasite
  4. Always a parasite
78. The hyphae of *Penicillium* are
1. Septate and uninucleate
  2. Aseptate and multinucleate
  3. **Septate and multinucleate**
  4. Aseptate and uninucleate
79. Dolipore septum is seen in
1. Ascomycotina
  2. Deuteromycotina
  3. **Basidiomycotina**
  4. Zygomycotina
80. Heterothallism was first discovered by
1. Pontecarvo
  2. C.J. Alexopoulos
  3. **A.F. Blakeslee**
  4. Anton Von de Bary

81. White rust of crucifers caused by
1. *Penicillium*
  2. *Sphacelotheca*
  3. *Puccinia*
  4. ***Albugo***
82. The stage that considered as the sexual stage of *Puccinia* life cycle is
1. Pycniospore stage
  2. **Teleutospore stage**
  3. Basidiospore stage
  4. Aeciospore stage
83. Sexual reproduction is absent in
1. *Mucor*
  2. ***Alternaria***
  3. *Rhizopus*
  4. *Penicillium*
84. An intercalary meristimatic zone is present in the capsule of
1. *Marchantia*
  2. ***Anthoceros***
  3. *Polytrichum*
  4. *Funaria*

85. Bryophytes are differ from algae in having
1. thallus like plant body
  2. starch as stored food
  3. motile male gametes
  4. **jacketed sex organs**
86. “Protonema” stage is seen in the life cycle of
1. *Polytrichum*
  2. *Marchantia*
  3. *Anthoceros*
  4. *Sphagnum*
87. *Nostoc* colonies are present in the thallus of
1. *Marchantia*
  2. *Anthoceros*
  3. *Riccia*
  4. *Porella*
88. Elaters in *Marchantia* capsule are concerned with
1. conduction of nutrients
  2. **dispersal of spores**
  3. synthesis of food
  4. production of spores

89. "Club moss" is the common name of
1. *Lycopodium*
  2. *Equisetum*
  3. *Polytrichum*
  4. *Funaria*
90. The common character present in Bryophytes and Pteridophytes is
1. well differentiated plant body
  2. presence of vascular tissue
  3. independent sporophyte
  4. **essential requirement of water for fertilization**
91. *Rhynia* belongs to a geological period called
1. Permian
  2. Carboniferous
  3. **Devonian**
  4. Cambrian
92. Carinal canals are present in the stems of
1. *Lycopodium*
  2. *Equisetum*
  3. *Marsilia*
  4. *Pteris*

93. The stele present in *Marsilea* is
1. Actinostele
  2. Dictyostele
  3. **Amphiphloic siphonostele**
  4. Ectophloic siphonostele
94. Telome theory deals with the
1. origin and evolution of seed habit
  2. origin and evolution of stele
  3. origin and evolution of gametophyte
  4. **origin and evolution of sporophyte**
95. Heterospory is not found in
1. *Marsilea*
  2. *Selaginella*
  3. ***Equisetum***
  4. *Isoetes*
96. The pollination mechanism in Gymnosperms is called
1. Oogamy
  2. **Siphonogamy**
  3. Mesogamy
  4. Anisogamy

97. The endosperm in gymnosperms is
1. prefertilization product and diploid
  2. **prefertilization product and haploid**
  3. post fertilization product and triploid
  4. post fertilization product and haploid
98. Ectotrophic mycorrhiza present in the roots of
1. *Cycas*
  2. ***Pinus***
  3. *Gnetum*
  4. *Ginkgo*
99. The number of archegonia in the female gametophyte of *Gnetum* is / are
1. **Zero**
  2. One
  3. Two
  4. Four
100. Coralloid roots of *Cycas* help in
1. phosphate absorption and gaseous exchange
  2. water and mineral absorption
  3. food synthesis
  4. **nitrogen fixation and gaseous exchange**

101. Ylang – Ylang oil is obtained from
1. ***Cananga odorata***
  2. *Artabotrys odoratissimus*
  3. *Monodora myristica*
  4. *Mkilua fragrans*
102. “Regma” is the characteristic fruit of this family
1. Rubiaceae
  2. Asclepiadaceae
  3. Mimosaceae
  4. **Euphorbiaceae**
103. Pollinia can be seen in the members of
1. **Asclepiadaceae and Orchidaceae**
  2. Asclepiadaceae and Mimosaceae
  3. Euphorbiaceae and Orchidaceae
  4. Asclepiadaceae and Rubiaceae
104. The family Cucurbitaceae has all the following characteristics except
1. inferior ovary
  2. **axile placentation**
  3. unisexual flowers
  4. synandrous androecium

105. In taxonomical hierarchy the rank “tribe” situated between the ranks of
1. Genus and Species.
  2. **Family and Genus.**
  3. Order and Family.
  4. Class and Order.
106. Isotype is a duplicate specimen of
1. Syntype.
  2. Paratype.
  3. **Holotype.**
  4. Lecotype.
107. The book “Families of Flowering Plants” was written by
1. Bessey
  2. **Hutchinson**
  3. Takhtajan
  4. Cronquist
108. Versatile anthers and caryopsis fruits are the important characteristics of the family
1. Brassicaceae
  2. Mimosaceae
  3. Rubiaceae
  4. **Poaceae**

109. According to Engler and Prantl the primitive characters of angiosperms are
1. bisexual flowers and hydrophily.
  2. **unisexual flowers and anemophily.**
  3. elongated floral axis and spiral arrangement of floral parts.
  4. hypogynous flowers and numerous stamens.
110. *Haematoxylon campechianum*, a dye yielding plant comes under the family
1. **Caesalpiniaceae**
  2. Mimosaceae
  3. Malvaceae
  4. Fabaceae
111. Membraneless cell organelle is
1. Peroxisome
  2. Lysosome
  3. Glyoxysome
  4. **Ribosome**
112. Tunica – Corpus theory was proposed by
1. Hofmeister
  2. **Schmidt**
  3. Hanstein
  4. Buvat

113. The tissue / cell having cytoplasm without nucleus is
1. Xylem parenchyma
  2. Phloem parenchyma
  3. **Sieve tubes**
  4. Companion cell
114. The tissue absent in monocot is
1. Parenchyma
  2. Xylem
  3. Sclerenchyma
  4. **Collenchyma**
115. Select the correct sequence of events in meiosis-I
1. Synapsis → crossingover → disappearance of nuclear membrane → terminalisation
  2. **Synapsis → crossing over → terminalisation → disappearance of nuclear membrane**
  3. Disappearance of nuclear membrane → synapsis → crossing over → terminalisation
  4. Disappearance of nuclear membrane → terminalisation → crossing over → synapsis
116. Periderm includes
1. Phellem, phelloderm and phloem
  2. **Phellogen, pellem and phelloderm**
  3. Phellogen, phellem and vascular cabium
  4. Phellogen, phellem and phloem

117. Middle lamella of cell wall is made up of
1. Cellulose and pectin
  2. **Calcium, magnesium and pectin**
  3. Phosphorus, magnesium and lignin
  4. Pectin and suberin
118. Presence of medullary vascular bundles is an anomalous character of
1. *Achyranthus* stem
  2. ***Boerhaavia* stem**
  3. *Bignoniastem*
  4. *Dracaenastem*
119. Chromatin is made up of
1. DNA only
  2. DNA and RNA
  3. DNA and Proteins
  4. **DNA, RNA and Proteins**
120. Choose the incorrect property of Genetic code
1. Code is degenerate
  2. Code is non-ambiguous
  3. **Code is overlapping**
  4. Code is commaless

121. The terms cistron, muton and recon were introduced by
1. F.H.C. Crick
  2. Kornberg
  3. Temin
  4. **S. Benzer**
122. The mutation where one purine is substituted for another purine is called
1. Transversion
  2. **Transition**
  3. Insertion
  4. Inversion
123. If the offspring obtained from a cross between two individuals results in 50% of the offspring with dominant trait (A) and other 50% with recessive trait (a), then the genotype would be
1.  $AA \times Aa$
  2.  $Aa \times Aa$
  3.  **$Aa \times aa$**
  4.  $AA \times aa$
124. The number of genetically different types of gametes will be produced by heterozygous plant having the genotype AaBbCc are
1. 6
  2. **8**
  3. 4
  4. 9

125. Select the incorrect statement regarding linkage
1. Linked genes does not show independent assortment.
  2. Crossing over can break the linkage.
  3. The effect of linkage can be studied better in test cross.
  4. **The strength of linkage is directly proportional to the distance of genes.**
126. The number of meiotic and mitotic divisions required to develop polygonum type of embryo sac from megaspore mother cell are
1. one meiotic division and two mitotic divisions.
  2. two meiotic divisions and two mitotic divisions.
  3. **one meiotic division and three mitotic divisions.**
  4. two meiotic divisions and one mitotic division.
127. Synergids are absent in the embryo sac of
1. *Poenea*
  2. *Oenothera*
  3. ***Plumbago***
  4. *Peperomia*
128. In *Citrus*, the adventitious embryos are derived from
1. Antipodals
  2. **Nucellus**
  3. Endosperm
  4. Synergids

129. The interaction between the two organisms where only one organism is benefited and the other remain unaffected is called

1. Amensalism
2. **Commensalism**
3. Predation
4. Mutualism

130. The pioneer community in Xerarch succession is

1. Foliose lichens
2. **Crustose lichens**
3. Mosses
4. Ferns

131. Plants that lack perennating buds and are annuals are placed in the life form of

1. Phanerophytes
2. **Therophytes**
3. Chameophytes
4. Cryptophytes

132. The good example for high productive ecosystem is

1. Normal agricultural crop land
2. Savannah
3. Temperate forest
4. **Coral reef**

133. Urn shaped age pyramid indicates
1. **Diminishing population**
  2. Expanding population
  3. Female population
  4. Stable population
134. The headquarters of National Bureau of Plant Genetic Resources (NBPGR) located at
1. Lucknow
  2. **New Delhi**
  3. Hyderabad
  4. Kolkata
135. The conservative approach which does not come under In-situ method is
1. National park
  2. **Botanical garden**
  3. Sanctuary
  4. Biosphere reserve
136. According to Cohesion - Tension theory the main driving force for ascent of sap is
1. root pressure
  2. capillarity and atmospheric pressure
  3. **transpiration pull**
  4. pulsation activity

137. Stomatal movements are regulated by the flux of
1.  $\text{Ca}^{++}$  ions
  2.  **$\text{K}^+$  ions**
  3.  $\text{Mg}^{++}$  ions
  4.  $\text{Na}^+$  ions
138. RQ for carbohydrates is
1. **1**
  2. 4
  3. 0.7
  4. '0'
139. In  $\text{C}_4$  plants  $\text{CO}_2$  fixation takes place in the chloroplasts of
1. **bundle sheath cells**
  2. mesophyll cell
  3. guard cells
  4. both mesophyll and bundle sheath cells
140. Select the correct sequence of the three cell organelles involved in photorespiration
1. peroxisome  $\rightarrow$  mitochondrion  $\rightarrow$  chloroplast
  2. **chloroplast  $\rightarrow$  peroxisome  $\rightarrow$  mitochondrion**
  3. chloroplast  $\rightarrow$  mitochondrion  $\rightarrow$  peroxisome
  4. mitochondrion  $\rightarrow$  chloroplast  $\rightarrow$  peroxisome

141. The number of NADPH and ATP molecules required for fixation of one molecule of CO<sub>2</sub> in Calvin cycle are
1. 6 NADPH and 9 ATP
  2. **2 NADPH and 3 ATP**
  3. 1 NADPH and 2 ATP
  4. 2 NADPH and 3 ATP
142. “Grey speck disease of Oat” caused due to the deficiency of
1. Zinc
  2. Copper
  3. Molybdenum
  4. **Manganese**
143. The enzyme promotes a chemical reaction by
1. combining with product
  2. increasing substrate molecules
  3. **lowering activation energy**
  4. changing equilibrium of the reaction
144. All the enzymes that are involved in Krebs cycle are located in the mitochondrial matrix except
1. Succinic thiokinase
  2. **Succinic dehydrogenase**
  3. Oxalosuccinic decarboxylase
  4. Malate dehydrogenase

145. Red drop and Emerson effect have proved the existence of

1. light and dark phases in photosynthesis
2. two different types of phosphorylations
3. **two distinct photosystems**
4. oxygen evolving complex

146. The plant hormone auxin generally not associates with

1. fruit growth
2. initiation of new roots
3. **breaking of dormancy in seeds and buds**
4. sex determination

147. Ammonia  $\xrightarrow{\text{'A'}}$  Nitrites  $\xrightarrow{\text{'B'}}$  Nitrates  
The 'A' and 'B' in above representation are

1. A – *Nitrobacter*, B - *Nitrosomonas*
2. **A – *Nitrosomonas* , B - *Nitrobacter***
3. A – *Nitrosomonas*, B - *Rhizobium*
4. A – *Rhizobium* , B- *Nitrobacter*

148. Select the incorrect statement regarding transcription

1. Always takesplace in 5' → 3' direction.
2. **Primer is essential for initiation.**
3. The transcribed strand is called “antisense strand”.
4. Proof reading mechanism is absent.

149. Introns were discovered by
1. **Philip Sharp and Richar Roberts**
  2. Jacob and Monad
  3. Gilbert and Nirenberg
  4. Howard Temin and Baltimore
150. Botanical name of para rubber yielding plant is
1. *Ficus elastica*
  2. *Palaquium gutta*
  3. ***Hevea brasiliensis***
  4. *Costilla elastica*
151. “Asafoetida” a popular flavouring agent for curries is obtained from
1. leaf
  2. **root**
  3. fruit
  4. flower
152. Botanical name of sunhemp is
1. *Corchorus capsularis*
  2. ***Crotalaria juncea***
  3. *Cannabis sativa*
  4. *Corchorus olitorius*

153. "Digitoxin", a drug is obtained from *Digitalis purpurea* used in the treatment of
1. cancers
  2. chronic fevers
  3. **heart disorders**
  4. diabetes
154. The alkaloids morphine and codeine are obtained from
1. *Catharanthus roseus*
  2. *Strychnos nux-vomica*
  3. *Atropa belladonna*
  4. ***Papaver somniferum***
155. The ideal explant to raise virus free plants is
1. root
  2. endosperm
  3. **apical meristem**
  4. leaf tip
156. An ideal cloning vector should not possess the following property
1. **High molecular weight**
  2. Self replicate
  3. Unique sites for restriction enzymes
  4. Genes for antibiotics

157. Select the correct pair

1. Roundup Ready soyabean - Papaya ring spot virus resistant
2. Bt cotton - Herbicide resistant
3. **GM musturd - Male sterile**
4. Flavr Savr tomato - Insecticide resistant

158. The following is not a green house gas

1. **carbon monoxide**
2. sulphur dioxide
3. chlorofluoro carbons
4. nitrogen dioxide

159. "Minimata" disease is caused due to consumption of

1. cadmium contaminated fish
2. lead contaminated fish
3. nitrate contaminated fish
4. **mercury contaminated fish**

160. The study of non-chlorophyllus heterotrophic thallophytes is called

1. **Mycology**
2. Phycology
3. Bryology
4. Virology

## METHODOLOGY

161. This prominent scientist said that the members of the same species are not alike
1. Herbert Spencer
  2. Jagdish Chandra Bose
  3. Aristotle
  4. **Charles Darwin**
162. This is a verified generalization which is otherwise considered as
1. Theory
  2. Fact
  3. Concept
  4. **Scientific Law**
163. This uses the senses to obtain information or data, about objects and events in collecting data regarding the experimentation
1. Thinking
  2. Interpretation
  3. **Observation**
  4. Experimentation

164. He is best known for his investigations concerning the prevention of rabies

1. Charles Darwin
2. William Harvey
- 3. Louis Pasteur**
4. Robert Hooke

165. Consider the following statements with respect to aim

- A. Aim is directional but broad and general
- B. Aim can be achieved through planning
- C. Aim is a short term goal
- D. Aim is specific

Choose the option in which the statements are correct

- 1. A & B**
2. B & C
3. B & D
4. C & D

166. This scientist called the nature as “the pre established harmony”

1. Darwin
2. Huxley
- 3. Einstein**
4. Lamarck

167. According to Thurber and Collette, one of the following is not the criteria for the selection of objectives
1. Usefulness
  2. Timeliness
  3. Fitness
  4. **Objectiveness**
168. This knowledge is about how to perform activities and experiments and how to use apparatus for teaching learning process
1. Factual knowledge
  2. Conceptual knowledge
  3. **Procedural knowledge**
  4. Meta Cognitive knowledge
169. Developing unique communication, developing a new set of operations and arriving at a new set of abstract relations are involved in the objective
1. Analysis
  2. **Synthesis**
  3. Comprehension
  4. Application

170. If a student is able to use the knowledge of 'first aid' after he met with an accident and able to establish cause and effect relationship, it refers to this instructional objective

1. Knowledge
2. Understanding
3. Interest
4. **Application**

171. The topic 'Germination of seeds' can best be taught by

1. Lecture method
2. Project method
3. **Heuristic method**
4. Historical method

172. One of the following is an important characteristics of a standardized test

1. It is flexible to administer
2. The quality of test items is not known
3. It has no speciality of scoring procedure
4. **It can be used to test the students of a number of schools**

173. This method is based on the principle of natural setting

1. Lecture method
2. Heuristic method
3. **Project method**
4. Lecture cum demonstration method

174. 'Structure of Eye' can best be taught through
1. **Lecture demonstration method**
  2. Heuristic method
  3. Project method
  4. Lecture method
175. This is not a criteria for a good objective
1. useful for the student
  2. feasible for application
  3. specific in terms of means
  4. **no time frame**
176. This method is based on individual involvement in laboratory activities by engaging in higher order thinking
1. Discovery learning
  2. **Inquiry learning**
  3. Problem based learning
  4. Induction method
177. The objective of these projects is to make student obtain vicarious experiences such as reading books on pollution, learning stories, listening to a musical delectation on nature are,
1. Producer projects
  2. **Consumer projects**
  3. Problem projects
  4. Drill projects

178. This step of scientific method involves reflective thinking and lot of practice and is wise to break the larger area with simpler abilities

1. Analysis of the problem
2. **Interpreting the data**
3. Collecting the data
4. Formulation of tentative solutions

179. We learn 11.0 percent (11%) through

1. smell
2. **hearing**
3. touch
4. sight

180. As per the classification of Audio-Visual aids Motion pictures comes under -

1. **Visual aids**
2. Auditory aids
3. Audio-Visual aids
4. Information technology

181. In this step of developing a teaching unit, students establish relationships between new experiences and assimilate them

1. Presentation
2. **Organisation of learning**
3. Summarization
4. Review and drill

182. An example for indirect experience
1. observing flying birds
  2. **observing the structure of DNA**
  3. maintenance of an aquarium
  4. observing the animals in the Zoo
183. In the process of developing improvised apparatus, the step which provides feedback for modifying objectives and design of the materials if necessary is
1. Preparation of a design
  2. Development of materials
  3. **Pilot testing of the material**
  4. Finalisation of materials
184. For an Alkali burn after washing with excess of 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
185. This is not true about science kit
1. simple and easy to handle
  2. **elaborate establishment to conduct practicals**
  3. portable and cheap
  4. helps in developing experimental skills

186. Register which includes a record of the requisitions sent for the purchase of the new apparatus -
1. Consumable
  2. Breakage
  3. Requirement
  4. **Order**
187. The following principle of curriculum construction that preserves and transmits the traditions, standards of conduct on which the culture and civilization depends is
1. Principle of community-centredness
  2. Principle of integration
  3. **Principle of conservation**
  4. Principle of activity-centredness
188. The topic on “Factors and conditions for seed germination” can best be organised through this method of curriculum construction
1. concentric method
  2. topic method
  3. **process method**
  4. concept method
189. No single curriculum is suitable for all the times, it has to change in accordance with the changes in social strata represent this characteristic/s of curriculum
1. curriculum is a broad and comprehensive process
  2. **curriculum is dynamic**
  3. curriculum involves evaluation
  4. curriculum is related with the aims and objectives

190. In Biological Science Laboratory Sodium is preserved in
1. water
  2. **kerosene**
  3. naphthaline
  4. Formalien
191. The emphasis of this summer institute for science teachers is laid on the development of indigenous resource material and audio visual material
1. Special Institutes
  2. **Project Technology Institutes**
  3. Sequential Institutes
  4. Unitary Institutes
192. Dissection of Earthworm by pupil comes under
1. contrived experience
  2. demonstration
  3. **direct experience**
  4. dramatization
193. One among the following is not included in special interest clubs.
1. Agricultural club
  2. Nature study club
  3. **Bio Science club**
  4. Aviation club

194. The office bearer of a science club who maintains the record of equipment and materials of the club is
1. Assistant secretary
  2. Librarian
  - 3. Store keeper**
  4. Publicity officer
195. The non-governmental organization which was established in 1972 which concentrated on rural issues and to inculcate knowledge of science and processes among rural students
1. Vikram Sarabhai Community Science Center
  2. Jawahar Bal Bhavan
  3. Konaseema Science Parishad
  - 4. Ekalavya Sastra Bhodana Project**
196. This is a graphic aid
1. Globe
  2. Flannel board
  - 3. Chart**
  4. Model
197. This evaluation provides feedback at appropriate stages of the teaching learning process which helps in making changes in the learning environment
1. Diagnostic evaluation
  - 2. Formative evaluation**
  3. Placement evaluation
  4. Summative evaluation

198. The tool of evaluation that provides useful data about the pupil behavior in real life situations is
1. cumulative record
  2. rating scale
  3. **anecdotal record**
  4. check list
199. One of the following is not true about CCE.
1. It develops cognitive, psychomotor & affective skills
  2. **It lays emphasis on thought process and emphasise memorization**
  3. It makes the process of teaching and learning a learner-centered activity
  4. It uses evaluation as quality control devise to maintain desired standard of performance
200. The pupil participates in Biological Science activities in School - it comes under this objective.
1. Application
  2. Attitude
  3. Appreciation
  4. **Interest**