

Total Marks 200

508

**BIOLOGY**  
(English Medium)

Category

**A**

508-BIOLOGY

**A** 50800971

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Seat No. of the Candidate

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Block No. of the Candidate

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Signature of the Candidate

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Signature of the Block Supervisor

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**Important Instructions for Candidates**

- (1) Please do not open the question booklet until you are told to do so.
- (2) During examination, if a candidate is found having any literature guide, guide, piece of paper, handwritten or printed paper, mobile phone, calculator, spy camera, headphone or any other equipments then the candidate will be considered as disqualified.
- (3) During the examination if candidates are found conversing with each other, making noise or not following supervisor's instructions then they will be considered as disqualified.
- (4) After receiving question paper please write your seat number in **OMR SHEET** at the correct given place.
- (5) Please do not write your seat number at any other place than the allotted one in the **OMR SHEET** and if any sign of your identity or recognition is found then you will be considered totally disqualified for the examination.
- (6) Signatures of both the supervisor and the candidate in the certificate of **OMR SHEET** are compulsory without which **OMR SHEET** will not be evaluated, so it is compulsory for the candidate to get signature of the supervisor.
- (7) Candidates can use blue/black ball pen. They cannot use pens or pencils of any other colour and also whitener.
- (8) No marks should be made on any of the options in the question paper.
- (9) There are total 200 questions in this question paper. There is only one answer to each question from the options A, B, C and D. Four options are given for each question. All the questions are compulsory.  
Example: What is the capital of Gujarat?  
(A) Ahmedabad (B) Gandhinagar (C) Vadnagar (D) Patan  
Here, if option (B) Gandhinagar is correct then option (B) in the **OMR SHEET** will have to be darkened with pen. **A ● C D**
- (10) One(1) mark is allotted to each correct answer. For each wrong answer 0.25 marks will be deducted. If a candidate does not want to answer any question then he/she will have to select option E. Negative marking will not be applicable for option E.
- (11) Cross marked answers, answers given on more than one option and answers re-marked after use of blade, eraser or whitener will be given **Negative 0.25 marks.**
- (12) Please hand over the **OMR SHEET** to the block supervisor after completion of examination before leaving the classroom. Any candidate failing to do so will be considered as disqualified for the examination.
- (13) Maximum time allotted for the examination is 180 minutes.
- (14) Most appropriate option will be considered as answer of the question.

- (1) How many Indian languages have been declared endangered by UNESCO  
 (A) 195 (B) 196 (C) 189 (D) 197
- (2) The National Education Policy (NEP) 2020, integrates \_\_\_\_ to root education in ancient knowledge of India and its contribution in modern India.  
 (A) Knowledgeable India (B) Indian Knowledge System  
 (C) Modern India (D) Ancient India
- (3) The full form of PARAKH is \_\_\_\_\_.  
 (A) Private Assessment, Report and Analysis of Knowledge for Holistic  
 (B) Performance Assessment, Review and Analysis of Knowledge for Holistic development  
 (C) Performance Assistant, Review and Analysis of knowledge for Holistic development  
 (D) Personal Assistant, Review and Analysis of Knowledge for Holistic development.
- (4) A scientist of Indian origin who made groundbreaking contribution in the study of DNA was \_\_\_\_\_.  
 (A) Radha Krushnan (B) Amartya Sen  
 (C) Hargovind Khurana (D) Dr. A.P.J. Abdul Kalam
- (5) The Three Tier Panchayati Raj System was recommended by \_\_\_\_\_.  
 (A) Mactapl Committee (B) British Committee  
 (C) Sevak Committee (D) Balwantraji Mehta Committee
- (6) Commonwealth Games were previously known as \_\_\_\_\_.  
 (A) European Games (B) Euro – Asian Games  
 (C) Common Games (D) British Empire Games
- (7) Who appoints CAG?  
 (A) Prime Minister (B) President  
 (C) Vice-President (D) Chief – Minister
- (8) The battle between Porus and Sikander was fought on the bank of \_\_\_\_\_ river.  
 (A) Chenab (B) Ravi  
 (C) Satluj (D) Jhelum

- (9) "Who among the following reigned during the Anno Domini Period?"  
(A) Chandragupt Maurya (B) King Ashok  
(C) Khilji Dynasty and Tughlaq Dynasty (D) Bindusara
- (10) \_\_\_\_\_ is the most renowned form of dance of Maharashtra.  
(A) Ghumar (B) Kalbeliya  
(C) Kachhighodi (D) Laavani
- (11). \_\_\_\_\_ was invented by Michael Faraday?  
(A) Penicillin  
(B) Periodic Table  
(C) Precious Metal - Radium  
(D) Conversion of Kinetic Energy into Electric energy
- (12) \_\_\_\_\_ among the following was written by Manubhai Pancholi (Darshak)  
(A) Upanas (B) Socrates  
(C) Anunay (D) Hayaati
- (13) Anup Kumar is a renowned \_\_\_\_\_ player.  
(A) Kho - Kho (B) Kabaddi  
(C) Cricket (D) Football
- (14) \_\_\_\_\_ was Suggested by Swami Vivekanand to Promote nationalism in India.  
(A) Pride of the nation  
(B) Public awareness and upliftment of the poor  
(C) Inclusive Vision  
(D) Cultural Pride
- (15) \_\_\_\_\_ is not a renewable energy resource.  
(A) Forest (B) Wind  
(C) Natural Gas (D) Sunlight

- (16) \_\_\_\_\_ was considered as the "Soul of Indian constitution" by Dr. B. R. Ambedkar.
- (A) Right to Education
  - (B) Cultural and Educational Right
  - (C) Right to go against exploitation
  - (D) Right to the Constitutional Remedies
- (17) Panchayati Raj Institutions came to exist on \_\_\_\_\_ in Gujarat.
- (A) 1st May, 1960
  - (B) 20th April, 1993
  - (C) 15th August, 1947
  - (D) 1st April, 1963
- (18) \_\_\_\_\_ is not founded by the Government to implement the recommendations of Mudaliar Commission 1953.
- (A) Rural Higher Education Committee
  - (B) University Grants Commission
  - (C) All India Education Council
  - (D) All India Council of Sports
- (19) Astronaut Sunita Williams has an ancestral link with \_\_\_\_\_.
- (A) Karnal, Haryana
  - (B) Vadodara, Gujarat
  - (C) Mahesana, Gujarat
  - (D) Kurukshetra, Haryana
- (20) \_\_\_\_\_ hosted the Kabaddi World Cup 2025.
- (A) India
  - (B) England
  - (C) South Korea
  - (D) Malaysia
- (21) Open and Distance Learning (ODL) is included in \_\_\_\_\_ education.
- (A) Formal
  - (B) Informal
  - (C) Non-formal
  - (D) None of the above
- (22) "I never teach my pupils; I only attempt to provide the conditions in which they can learn" who quoted it?
- (A) Maharshi Arvind
  - (B) Albert Einstein
  - (C) Pestology
  - (D) Eric Crome

- (23) "A person must use the development of his individuality by aligning it to the social needs and ideals."  
This is \_\_\_\_\_ aim of education.
- (A) an Individual (B) a Social  
(C) a Peculiar (D) a Sovereign
- (24) \_\_\_\_\_ described education as a tri-polar process consisting of the teacher the learner the social environment or syllabus as a third pole".
- (A) John Dewey (B) John Adams  
(C) Herbert Spencer (D) Benjamin S. Bloom
- (25) Idealism is also known as \_\_\_\_\_.
- (A) Idealism (B) Realism  
(C) Naturalism (D) Pragmatism
- (26) John Dewey, Kilpatrick, and Mahatma Gandhi advocated \_\_\_\_\_.
- (A) Existentialism (B) Naturalism  
(C) Idealism (D) Pragmatism
- (27) Social and National Integration can be attained through \_\_\_\_\_.
- (A) Joint Family (B) Requirement of Food  
(C) Democracy (D) Population growth
- (28) What kind of education enables human to utilize free time more joyful and productive activities?
- (A) Non-formal Education  
(B) Continuing Education  
(C) Life-long Education  
(D) Education through correspondence
- (29) The cultural objective of education emphasizes on \_\_\_\_\_.
- (A) to enrich a person with knowledge  
(B) to inculcate ideals and morals in life  
(C) to Transfer Knowledge, Art, Literature, Music from generation to generation.  
(D) to enable a person to earn livelihood

- (30) "Human bears the competency of adapting to the situation and adapting one's needs to the situation" \_\_\_\_ form of pragmatism supports it.
- (A) Nominalistic Pragmatism (B) Experimental Pragmatism  
(C) Biological Pragmatism (D) Humanistic Pragmatism
- (31) A person with IQ score 100, is placed in \_\_\_\_ category.
- (A) Average Intelligence (B) High Intelligence  
(C) Lower Intelligence (D) Superior Intelligence
- (32) \_\_\_\_ type of Psychological conflict do Students Face when they neither want to stay at home nor go to school?
- (A) Approach – Avoidance (B) Approach – Approach  
(C) Avoidance – Avoidance (D) Dual Approach Avoidance
- (33) A Psychologist who believed that "Motivation is cyclic"
- (A) Lipid (B) C.T. Morgan  
(C) Lewin (D) Emilicuma
- (34) Which test is used to detect mental retardation among children?
- (A) Achievement Test (B) Reading Test  
(C) Through General Observation (D) Intelligence Test
- (35) The full form of GATB is \_\_\_\_.
- (A) Great Attitude Test Box  
(B) Global Attitude Test Book  
(C) Global Aptitude Test Book  
(D) General Aptitude Test Battery
- (36) \_\_\_\_ is placed the first among eight stages of Robert Gagne's approach.
- (A) Stimulus – Response Approach  
(B) Verbal – Association Approach  
(C) Problem – Solving Approach  
(D) Chaining Approach

- (37) "Trial and Error Principle" of Thorndike is known as \_\_\_\_\_.  
(A) Stimulus – Response Approach  
(B) Theory of operant conditioning  
(C) Cognitive Learning Theory  
(D) Principle of motivation
- (38) After fulfilling basic Physiological need, the next level in Maslow's Hierarchy of needs is \_\_\_\_\_.  
(A) Love and Belongingness  
(B) Esteem Needs  
(C) Self–Actualization needs  
(D) Safety Needs
- (39) The measurement of intelligence was first successfully introduced by \_\_\_\_\_.  
(A) Garrett and Menttest  
(B) Binet and Simon  
(C) Crow and Crow  
(D) Thurston and Spareman
- (40) The learning graph remains extended and horizontal during \_\_\_\_ temporary stage.  
(A) Learning  
(B) Maturity  
(C) Plateau  
(D) End
- (41) To counsel a student towards the most suitable field of learning and future profession, educator usually rely on \_\_\_\_ test.  
(A) Intelligence Test  
(B) Personality Measurement Test  
(C) Aptitude Test  
(D) Diagnostic Test
- (42) To enable a student to develop their creativity fully and completely, maximum importance should be given to \_\_\_\_\_.  
(A) Process  
(B) Idea  
(C) Excellence  
(D) Creativity
- (43) While framing the teaching method in curriculum development, \_\_\_\_\_ state of students require prior consideration.  
(A) Mental  
(B) Physical  
(C) Emotional  
(D) Holistic

- (44) \_\_\_\_\_ is Pre-requisite in order to promote concentration in Students.
- (A) Proficiency of Teacher  
 (B) Selection of proper method, congruent to the unit  
 (C) Age level  
 (D) Mental level
- (45) Any action that is derived from internal motivation and different from temptation is called \_\_\_\_.
- (A) Improper (B) Motivation  
 (C) Eligibility (D) Distress
- (46) Classroom behaviour generally observes total \_\_\_\_\_ types of interactions.
- (A) Five (B) Two  
 (C) Three (D) One
- (47) Bakum developed an evaluation process to measure \_\_\_\_\_ development of student.
- (A) Physical (B) Mental  
 (C) Holistic (D) Social
- (48) \_\_\_\_\_ has released an education from the bandage of Time, Collection and number.
- (A) Internet (B) Technology  
 (C) Website (D) Open University
- (49) The research that scientifically studies the daily problems of the school is called, \_\_\_\_\_ research.
- (A) Pragmatic (B) Action  
 (C) Conditioning (D) Visiting
- (50) To find out the mid-point of the given group, \_\_\_\_\_ is calculated
- (A) Median (B) Mode  
 (C) Mean (D) Any of the above
- (51) \_\_\_\_\_ is also known as Skinnerian Instruction.
- (A) Branchial Instruction (B) Linear Instruction  
 (C) Mathematical Instruction (D) All of the above

- (52) Ned Flanders' Interaction analysis categories comprises Ten main categories, out of that three are..
- (i) Teacher's Talk
  - (ii) Pupil's Talk
  - (iii) Silence
- Which of the following shows the correct order?
- (A) (i) 7 (ii) 1 (iii) 2  
(B) (i) 4 (ii) 4 (iii) 2  
(C) (i) 6 (ii) 3 (iii) 1  
(D) (i) 7 (ii) 2 (iii) 1
- (53) \_\_\_\_\_ is a correct formula for calculating Percentile Rate.
- (A)  $PR = 100 - \frac{(100R - 50)}{N}$   
(B)  $PR = 100 \frac{(100R - 50)}{N}$   
(C)  $PR = 100 - \frac{(50R - 100)}{N}$   
(D)  $PR = 1 - \frac{(100R - 50)}{N}$
- (54) \_\_\_\_\_ is a correct mean of 6, 9, 10, 12, 16, 17.
- (A) 10  
(B) 11  
(C) 17  
(D) 12
- (55) "Teacher uses the change in gestures, modulation of voice and hands' movement so that students stay focused" – This is mainly applied in \_\_\_\_\_ skill.
- (A) Introductory  
(B) Illustration  
(C) Learning aids Experiment Skill  
(D) Stimulus change
- (56) \_\_\_\_\_ will replace the (?)  
3000, 1500, 500, 125, (?)
- (A) 100  
(B) 50  
(C) 25  
(D) 20
- (57) 'A' is the sister of 'B'. 'C' is the mother of 'B'. 'D' is the father of 'C'. Then D is the \_\_\_\_\_ of A.
- (A) Maternal Uncle (Mama)  
(B) Father  
(C) Maternal Uncle (Maasa)  
(D) Maternal Grandfather

(58) \_\_\_\_\_ among the following cannot be framed by using the letter of word

“I N D E P E N D E N C E”

(A) NICE

(B) PINE

(C) PENDING

(D) INDEED

(59) Kavya begins to walk to the south from point A. She turns left after walking 30 metres. Then she walks 40 metres straight and reaches the point 'B'. Now find the distance between 'A' and 'B'.

(A) 50 metres

(B) 35 metres

(C) 70 metres

(D) 120 metres

(60) If  $B=2$ ,  $BAG = 10$  then find the value of  $BOX$ .

(A) 11

(B) 12

(C) 41

(D) 42

(61) Find the correct odd one from the following.

(A) DEGJ

(B) MNPS

(C) PQTX

(D) TUWZ

(62) Five friends are sitting in a line, A is sitting right to B, but not sitting the first. C is sitting left to D. If B is sitting right to E then who is exactly in the middle?

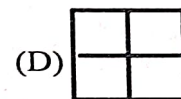
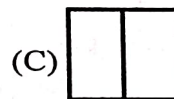
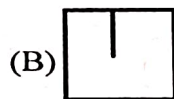
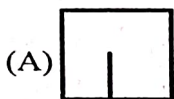
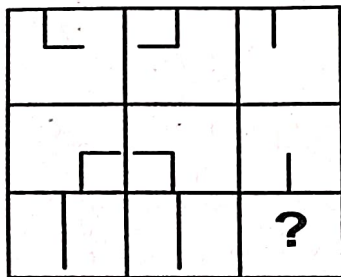
(A) A

(B) B

(C) D

(D) E

(63) Figure is given. \_\_\_\_\_ among the option correctly replaces (?).



- (64) 34, 18, 10, 6, 4, \_\_\_\_\_.
- (A) 0 (B) 1 (C) 2 (D) 3
- (65) If DOG is coded as '4157' Then LION will be \_\_\_\_\_.
- (A) 1271514 (B) 1291514  
(C) 1291312 (D) 1181514
- (66) There are total 65 students in a line. A stands 36th from the left, B Stands 36th from the right then total \_\_\_\_\_ students must be standing between both A and B.
- (A) 9 (B) 13  
(C) 15 (D) 11
- (67) \_\_\_\_\_ will replace the (?)
- 
- (A) 91 (B) 610  
(C) 691 (D) 587
- (68) Thermometer : Temperature :: Earthquake : \_\_\_\_\_.
- (A) Scale (B) Seismograph  
(C) Anemometer (D) Odometer
- (69) The angle formed by the minute and hour hands at 4:00 pm is \_\_\_\_\_.
- (A) 120° (B) 100°  
(C) 80° (D) 60°
- (70) \_\_\_\_\_ among the following will stay first if arranged in alphabetical order.
- (A) Overbid (B) Outstanding  
(C) Oval (D) Outstep

- (71) કયા વાક્યમાં અવ્યયનો ઉપયોગ થતો નથી ?  
 (A) તે પાસ થયો કેમ કે તેણે ખૂબ મહેનત કરેલી.  
 (B) શાબાશ છે એ બહાદૂર જુવાનને !  
 (C) એ પ્રાણપાતક અકસ્માતથી તે મરી જાત.  
 (D) એ ચોરની પેઠે ઘરમાં ધૂર્યો.
- (72) કયું વાક્ય કર્મણિ પ્રયોગમાં નથી ?  
 (A) તને વિમાન દેખાય છે ?  
 (B) મેં શીપસિન કર્યું.  
 (C) મને વાત સમજાય છે.  
 (D) મારે આસને બેસવું છે.
- (73) A સાથે Bનાં સાચાં જોડકાં દર્શાવતો વિકલ્પ કયો છે ?
- | A                        | B                  |
|--------------------------|--------------------|
| (a) લખવાનું આપોને        | (i) ભવિષ્યકૃદંત    |
| (b) માગ્યા મેહ વરસે નહીં | (ii) સંબંધક ભૂ.કૃ. |
| (c) લખી લખીને થાક્યો     | (iii) હેત્વર્થ     |
| (d) વાંચવા આવજો          | (iv) ભૂતકૃદંત      |
- (A) (a) i, (d) ii, (b) iii, (c) iv  
 (B) (b) i, (c) ii, (d) iii, (a) iv  
 (C) (c) i, (b) ii, (d) iii, (a) iv  
 (D) (a) i, (c) ii, (d) iii, (b) iv
- (74) કયા જોડકામાંના શબ્દો એક પ્રકારનો જ સમાસ દર્શાવે છે ?  
 (A) તપોધન, પાઠચેતર  
 (B) ઘનશ્યામ, કાપુરુષ  
 (C) કલ્પલતા, શ્રીયુત  
 (D) શેષશાયી, સ્વચ્છંદ
- (75) એ શબ્દ શોધો કે જેનો અર્થ અન્ય કરતાં ભિન્ન છે.  
 (A) પુંડરિક  
 (B) પર્યંક  
 (C) રાજીવ  
 (D) શતદલ
- (76) સાચી જોડણી પસંદ કરો.  
 (A) હિમસૂતા  
 (B) હીમસૂતા  
 (C) હીમસૂતા  
 (D) હિમસૂતા
- (77) એ, થી, થકી, વડે વગેરે પ્રત્યયો કઈ વિભક્તિમાં આવે છે ?  
 (A) સંપ્રદાન  
 (B) અપાદાન  
 (C) સંબંધ  
 (D) કરણ
- (78) પોતાની વાતને કે વિષયને સ્પષ્ટ કરવાનો પ્રયત્ન કરતા ગદ્યને કયા પ્રકારનું ગદ્ય કહેવામાં આવે છે ?  
 (A) વાદાત્મક  
 (B) વિવરણાત્મક  
 (C) વર્ણનાત્મક  
 (D) ભાવાત્મક

- (79) તમતમારે, જુદાજુદા, દૂરદૂરથી વગેરે કયા પ્રકારના શબ્દો છે ?  
 (A) નામયોગી શબ્દો (B) સંયુક્ત શબ્દો  
 (C) સામાસિક શબ્દો (D) દ્વિરુક્તિવાળા શબ્દો
- (80) નીચેનામાંથી પરિમાણવાચક વિશેષણ જણાવો.  
 (A) આટલું (B) આવું  
 (C) કડવું (D) પહેલું
- (81) નીચેનામાંથી કયા વિકલ્પમાં તમામ શબ્દોની જોડણી વ્યાકરણની દૃષ્ટિએ સંપૂર્ણ સાચી છે ?  
 (A) શારીરિક, આશીર્વાદ, જિજ્ઞવિષા, સુશ્રૂષા  
 (B) શારીરિક, આશીર્વાદ, જિજ્ઞવિષા, શુશ્રૂષા  
 (C) શારીરિક, આશિર્વાદ, જિજ્ઞવિષા, શુશ્રૂષા  
 (D) શારીરિક, આશિર્વાદ, જિજ્ઞવીષા, શુશ્રૂષા
- (82) નીચેનામાંથી કયો શબ્દ 'અમ્'નો પર્યાયવાચી શબ્દ નથી ?  
 (A) હાય (B) વાણ  
 (C) તોખાર (D) કુંજર
- (83) વાક્યશુદ્ધિના નિયમ અનુસાર નીચેનામાંથી વ્યાકરણની દૃષ્ટિએ શુદ્ધ વાક્ય પસંદ કરો.  
 (A) મેં આજે એક ગાય અને એક બળદને આવતી જોઈ.  
 (B) મેં આજે એક ગાય અને એક બળદ આવતાં જોયાં.  
 (C) મેં આજે એક ગાય અને એક બળદ આવતા જોયો.  
 (D) મેં આજે એક ગાય અને બળદને આવતી જોઈ.
- (84) નીચેના વાક્યમાં વ્યાકરણીય રીતે કયો શબ્દપ્રયોગ ખોટો છે ? "તેણે મને સહૃદયતાપૂર્વક આવકાર આપ્યો."  
 (A) તેણે  
 (B) સહૃદયતાપૂર્વક  
 (C) આવકાર  
 (D) આપ્યો
- (85) લેખનકાર્ય કરતી વખતે વાક્યના અંતે કે વચ્ચે કોઈ વિગત લખવાની બાકી રહી ગઈ હોય, ત્યારે તેને ઉમેરવા માટે કયા ચિહ્નનો ઉપયોગ થાય છે ?  
 (A) લોપચિહ્ન (') (B) કાકપદ / હંસપદ (^)  
 (C) લઘુરેખા (-) (D) કુદડી (\*)

(86) Pair the words with their antonyms.

Words

Antonyms

(a) lazy

(i) diligent

(b) active

(ii) blunt

(c) sharp

(iii) inert

(d) fertile

(iv) barren

(A) (c) i, (d) ii, (a) iii, (b) iv

(B) (a) ii, (c) iii, (b) i, (d) iv

(C) (c) ii, (d) i, (b) iii, (a) iv

(D) (a) i, (d) iii, (c) ii, (b) iv

(87) Which word has no suffix.

(A) Health

(B) Library

(C) Embrace

(D) Marriage

(88) Find out the odd pair.

(A) proud - pride

(B) bond - bind

(C) grieve - grief

(D) lose - loss

(89) Arrange these sentences in proper order to describe an accident-scene.

(i) Passengers were told to be ready to quit the ship.

(ii) Everyone knew there was fire on board.

(iii) Smoke oozed up between the planks.

(iv) Flames broke out here and there.

(v) Most people bore the shock bravely.

(A) iii, ii, v, iv, i

(B) i, ii, iv, iii, v

(C) iv, iii, ii, v, i

(D) iii, iv, ii, i, v

(90) Select the sentence with almost similar meaning to the sentence "At the moment the duck looked exhausted."

(A) The duck looked dreadful

(B) The duck was looking for a place to hide

(C) The duck looked very tired.

(D) The duck seemed unhappy.

(91) Put proper preposition in the blank. He was looking ..... his lost keys.

(A) at

(B) for

(C) after

(D) into

- (92) ..... he finds a job, his family will starve. Fill in the blank with proper word.  
 (A) It (B) Unless (C) As (D) However
- (93) The harder you work, the ..... result you will get.  
 (A) good (B) best  
 (C) better (D) lower
- (94) Select the similar word for Inventory.  
 (A) Summary (B) Schedule  
 (C) Index (D) Questionnaire
- (95) All the crows are black. We ..... find a white crow, put proper adverb to complete the sentence.  
 (A) frequently (B) usually  
 (C) rarely (D) always
- (96) Which expression best conveys the idea ?  
 (A) During the curfew, the streets wearing desolate look.  
 (B) During the curfew, the streets wore a desolate look.  
 (C) During the curfew, the streets have had worn desolate looks  
 (D) During the curfew, the streets has been wearing desolation looks
- (97) What is the correct noun form of the verb 'compel' ?  
 (A) Compelation (B) Compulsion  
 (C) Compulsory (D) Compellment
- (98) Fill in the blank with the correct preposition : "The committee is totally opposed ..... the new proposal."  
 (A) for (B) against  
 (C) to (D) with
- (99) Fill in the blanks with appropriate articles : "He is ..... heir to the throne and ..... honest man."  
 (A) a, a (B) an, a (C) an, an (D) the, a
- (100) Identify the correct verb according to subject-verb Agreement : "Neither the principal nor the teachers ..... present at the meeting yesterday."  
 (A) was (B) were (C) are (D) is

- (101) What is the basic unit of biological classification?  
 (A) Species (B) Order (C) Phylum (D) Genus
- (102) How many species of animals were enlisted in 'Systema Naturae' ?  
 (A) 21,200 (B) 3,200 (C) 4,200 (D) 5,500
- (103) Which of the following is an example of filamentous bacteria?  
 (A) Actinomycetes (B) Cyanobacteria (C) Archaeobacteria (D) Myxomycetes
- (104) Which plant is the smallest angiosperm?  
 (A) Lemna (B) Hydrilla (C) Wolffia (D) Rafflesia
- (105) Which of the following is a freshwater sponge?  
 (A) Scypha (B) Grantia (C) Leucosolenia (D) Spongilla
- (106) In frog, which structure protects the eye from dust particles and water?  
 (A) Tympanum (B) Trank  
 (C) Nictitating membrane (D) Stratum compactum
- (107) What is the composition of the filaments present in cilia and flagella?  
 (A) Microtubules (B) Microfilaments (C) Microsomes (D) Microvilli
- (108) When does synapsis occurs in meiosis?  
 (A) Zygotene (B) Leptotene (C) Diplotene (D) Pachytene
- (109) Which is the first stable product in hatch and slack cycle?  
 (A) Oxaloacetate (B) Phosphoglyceric acid  
 (C) Malic acid (D) Aspartic acid
- (110) In which part of mitochondria, Electron transport system is located?  
 (A) Outer membrane (B) Inter membrane space  
 (C) Inner membrane (D) Matrix

- (111) Which hormone is known as stress hormone?  
 (A) Ethylene (B) Cytokinin (C) Abscissic acid (D) Gibberellin
- (112) In which of the following Nissl's granules are present?  
 (A) Mast cells (B) Osteoblasts (C) Chondroblasts (D) Neurons
- (113) Which of the following is known as graveyard of RBCs?  
 (A) Thymus (B) Spleen (C) Pancreas (D) Hypothalamas
- (114) Which gland is degenerated in old individuals?  
 (A) Adrenal (B) Pineal (C) Thymus (D) Pituitary
- (115) Which of the following is also known as antidiuretic hormone?  
 (A) Oxytocin (B) Vasopressin (C) Adrenaline (D) Calcitonin
- (116) Name the order of Mango : \_\_\_\_\_  
 (A) Poales (B) Anacardiaceae (C) Sapindales (D) Dicotyledonae
- (117) Evolutionarily, the first terrestrial plants to possess Vascular tissues are : \_\_\_\_\_  
 (A) Bryophytes (B) Gymnosperms (C) Pteridophytes (D) Angiosperms
- (118) Which of the following phylum exhibits radial symmetry in adult but bilateral symmetry in Larvae?  
 (A) Coelenterata (B) Ctenophora (C) Echinodermata (D) Hemichordata
- (119) Column : I  
 (Scientific name)
- A. Physalia  
 B. Meandrina  
 C. Aplysia  
 D. Antedon
- Column : II  
 (Common name)
- i. Sea lily  
 ii. Sea hare  
 iii. Portuguese man-o'-war  
 iv. Brain coral
- (A) A-iv, B-iii, C-ii, D-i  
 (B) A-iii, B-iv, C-i, D-ii  
 (C) A-i, B-ii, C-iii, D-iv  
 (D) A-iii, B-iv, C-ii, D-i

- (120) A conjoint and open vascular bundle will be observed in the transverse section of  
 (A) Monocot Root (B) Monocot Stem (C) Dicot Root (D) Dicot Stem
- (121) In which part of heart sinus venosus opens?  
 (A) Left Atrium (B) Right Atrium (C) Ventricle (D) Aorta
- (122) Different cells have different sizes. Arrange the following cells in ascending order of their size.  
 (I) Mycoplasma (II) Ostrich Eggs (III) Human R. B (IV) Bacteria  
 (A) I, IV, III, II (B) I, II, III, IV (C) II, I, III, IV (D) III, II, I, IV
- (123) Match the correct pairs.

Column : I

- (A) Leptotene  
 (B) Zygotene  
 (C) Pachytene  
 (D) Diplotene

- (A) 1-r, 2-q, 3-s, 4-p  
 (C) 1-r, 2-s, 3-q, 4-p

Column : II

- p. Chiasmata  
 q. Recombinant nodule  
 r. Condensation of chromosomes  
 s. Synapsis

- (B) 1-s, 2-r, 3-q, 4-p  
 (D) 1-r, 2-s, 3-p, 4-q

- (124) Which is the most crucial step of calvin cycle?

- (A) Carboxylation  
 (C) Regeneration

- (B) Reduction  
 (D) Oxidation

- (125) Match the following.

Column : I

- a. Citric acid cycle  
 b. Glycolysis  
 c. Electron transport system  
 d. Proton gradient

- (A) a-iii, b-iv, c-i, d-ii  
 (C) a-i, b-ii, c-iii, d-iv

Column : II

- i. Cytoplasm  
 ii. Mitochondrial matrix  
 iii. Inter membrane space of mitochondria  
 iv. Inner mitochondrial membrane

- (B) a-iv, b-iii, c-ii, d-i  
 (D) a-ii, b-i, c-iv, d-iii

- (126) Xylem differentiation is controlled by \_\_\_\_.
- (A) Auxin (B) GA  
(C) Cytokinin (D) Ethylene
- (127) Vital capacity of lung \_\_\_\_.
- (A) IRV + ERV (B) TL + RV  
(C) IRV + TV (D) ERV + TV + IRV
- (128) Myelinated nerve fibres are found in \_\_\_\_.
- (A) Spinal nerves (B) Cranial nerves  
(C) Autonomous neural system (D) Spinal and cranial nerves
- (129) Which hormone plays a very important role in the regulation of a 24-hour (diurnal) rhythm of our body?
- (A) MSH (B) Melatonin  
(C) Vasopressin (D) Thyroxine
- (130) \_\_\_\_ is a hyperglycemic hormone?
- (A) Insulin (B) Glucagon  
(C) Glucocorticoids (D) Growth hormone
- (131) Bacteria present in the gut of cows and buffaloes
- (A) Halophiles (B) Thermophiles  
(C) Acidophiles (D) Methanogens
- (132) The protistan which is autotrophic & Heterotrophic.
- (A) Euglenoids (B) Dinoflagellates  
(C) Smile molds (D) Protozoans

- (133) Why is virus not included in Whittakers system of classification?
- (A) They have few defining features
  - (B) Because they are non living
  - (C) Because Whittaker did not include microorganism
  - (D) Because they have characters of plant and fungi.
- (134) Epidermal scales or scutes are seen in
- (A) Mammals
  - (B) Amphibia
  - (C) Aves
  - (D) Reptiles
- (135) Dicotyledonous stem is described as
- (A) Conjoint, closed, exarch
  - (B) Conjoint, closed, endarch
  - (C) Conjoint, open, endarch
  - (D) Conjoint, closed, tetrach
- (136) In grasses, epidermal cells modify into large colourless cells to reduce transpiration
- (A) Bundle sheets
  - (B) Mesophyl cells
  - (C) Cortical cells
  - (D) Bulliform cells
- (137) The proportion of protein & Lipid in human erythrocyte is
- (A) 40 percent protein 50 percent Lipid
  - (B) 52 percent protein 40 percent Lipid
  - (C) 40 percent protein 60 percent Lipid
  - (D) 60 percent protein 40 percent Lipid
- (138) Lipids having less than 800 Da are separated in acid-insoluble fraction. why?
- (A) They form vesicles and are not water soluble
  - (B) They are heavier
  - (C) They form bonds with polysaccharides.
  - (D) They have carboxylic acids
- (139) Green alga cladophore was used by which scientist.
- (A) Cornelius van Niel
  - (B) Jan Ingen Housz
  - (C) Joseph Priestly
  - (D) T. W. Engelmann

- (140) What if the amount of  $\text{CO}_2$ , ATP and  $\text{NADPH}_2$  needed to produce 3 Glucose molecules
- (A) 6  $\text{CO}_2$ , 18 ATP, 12 NADPH (B) 12  $\text{CO}_2$ , 18 ATP, 12 NADPH  
 (C) 12  $\text{CO}_2$ , 54 ATP, 36 NADPH (D) 18  $\text{CO}_2$ , 54 ATP, 36 NADPH
- (141) By which name are sperms known before passing from spermiogenesis?
- (A) Spermatid (B) Primary spermatocyte  
 (C) Secondary spermatocyte (D) Germ cell
- (142) What is genotype?
- (A) Genetic composition of an organ (B) Genetic composition of plastids  
 (C) Genetic composition of germ cell (D) Genetic composition of individual
- (143) During the whole life cycle of plasmodium, how many hosts are required?
- (A) One (B) Three (C) Four (D) Two
- (144) From which of the following cyclosporine A is obtained?
- (A) Fungi (B) Bacteria (C) Virus (D) Plants
- (145) Which of the following is used as a 'clot buster' for removing clots from the blood vessels?
- (A) Statins (B) Cyclosporin (C) Streptokinase (D) Penicillin
- (146) From which of the following citric acid is obtained?
- (A) Clostridium butyricum (B) Acetobacter Aceti  
 (C) Saccharomyces Cerevisiae (D) Aspergillus niger
- (147) What is used to stain the separated DNA Fragments?
- (A) Ethidium chloride (B) Lischmen blue  
 (C) Ethidium bromide (D) Floridium bromide
- (148) Which vitamin is more in golden rice?
- (A) Vitamin K (B) Vitamin B (C) Vitamin E (D) Vitamin A

- (149) Which plant produces highly toxic cardiac glycosides?  
 (A) Calotropis (B) Opuntia (C) Cactus (D) Acacia
- (150) Which of the following animals breed only one time in their whole life?  
 (A) Wombat (B) Bamboo (C) Salmon fish (D) Sugar glider
- (151) In a particular condition, decomposition rate is slower if detritus is rich in \_\_\_\_\_ and \_\_\_\_\_.  
 (A) Lignin and Nitrogen (B) Nitrogen and Sugar  
 (C) Lignin and Chitin (D) Chitin and Sugar
- (152) What is the process called when detritivores breakdown detritus into smaller particles?  
 (A) Humification (B) Decomposition (C) Catabolism (D) Fragmentation
- (153) An inverted pyramid of biomass can be found in which ecosystem?  
 (A) Forest (B) Marine (C) Grassland (D) Tundra
- (154) Which of the following alien species is introduced for aquaculture purposes?  
 (A) Eichhornia (B) Gandhari (C) Safed musli (D) Clarias gariepinus
- (155) Persistence of nucellus in the seed is known as:  
 (A) Perisperm (B) Endosperm (C) Scutellum (D) Epiblema
- (156) Which hormone is responsible for maintaining the lining of the uterus during pregnancy?  
 (A) Luteinizing Hormone (LH) (B) Follicle-Stimulating Hormone (FSH)  
 (C) Progesterone (D) Estrogen
- (157) Identify the odd one from the following:  
 (A) Labia minora (B) Fimbriae (C) Infundibulum (D) Isthmus
- (158) Give full form of ICSI.  
 (A) Intercytoplasmic sperm injection (B) Intracytoplasmic sperm injection  
 (C) Intra cellular sperm injection (D) Inter cellular sperm injection

- (159) In \_\_\_\_\_, phenotypic and genotypic ratio is same.
- (A) Co-dominance (B) Monohybrid cross  
(C) Incomplete dominance (D) Dihybrid cross
- (160) If total chromosome number is 47, XXY is indicative of which syndrome?
- (A) Turner's syndrome (B) Down's syndrome  
(C) Klinefelter's syndrome (D) Super female syndrome
- (161) What is the removal of introns and joining of exons during Eukaryotic transcription called?
- (A) Inducing (B) Slicing  
(C) Splicing (D) Replication
- (162) This Enzyme in retro-viruses converts single stranded RNA into double stranded viral RNA
- (A) Transcriptase (B) Reverse transcriptase  
(C) RNA Polymerase (D) DNA polymerase
- (163)  $(P + Q)^2 = P^2 + 2PQ + Q^2 = 1$ , Where to use these equation?
- (A) Population genetics (B) Mendelian genetics  
(C) Adaptive diffusion (D) Molecular genetics
- (164) Who was the human with the lowest brain capacity in human evolution?
- (A) Homo habilis (B) Neanderthal man  
(C) Homo Sapiens (D) Homo Erectus
- (165) In Immunity, Interferon is part of?
- (A) Physiological barrier (B) Physical barrier  
(C) Cellular barrier (D) Cytokine barrier

(166) Match the following.

**Bioactive substances**

a. Statin

b. Cyclosporine A

c. Streptokinase

d. Lipase

(A) a-2, b-3, c-1 ,d-4

(C) a-4, b-1, c-2 ,d-3

**Role**

1. Removal of oil stains

2. Removal of clots from blood vessels

3. Lowering blood cholesterol

4. Immuno-suppressive agent

(B) a-4, b-2, c-1 ,d-3

(D) a-3, b-4, c-2 ,d-1

(167) Which of the following methods is used to prepare competent host?

(A) Electrophoresis

(B) Gene gun

(C) Micro-injection

(D) All of the above

(168) What is called mobile genetic?

(A) Plasmid

(B) Transposons

(C) RNA

(D) VNTRs

(169) Best example of co-evolution is

(A) Fig tree and pollinator species of wasp

(B) Fungus and cyanobacteria

(C) Sea anemone and clown fish

(D) All of them

(170) Who gave species area relationship hypothesis?

(A) Humboldt

(B) Whittaker

(C) Raven

(D) Mendel

(171) In the structure of microsporangium, which layer nourishes the developing pollen grains?

(A) Tapetum

(B) Epidermis

(C) Endothecium

(D) Middle layer

(172) Example of cleistogamous flowers are.

(A) Rose and Jasmine

(B) China rose and Hibiscus

(C) Oxalis and Viola

(D) Sunflower and Bottlebrush

- (173) Which endocrine organ is not present in preteen girls?
- (A) Ovary (B) Uterus  
(C) Corpus luteum (D) Fallopian tube
- (174) Which trait among these are dominant in seed shape, seed colour and flower colour?
- (A) Round, Green, Yellow (B) Round, Yellow, Violet  
(C) Wrinkled, Green, Yellow (D) Wrinkled, Yellow, Violet
- (175) When did the first cellular form appear on earth?
- (A) 500 million years ago (B) 2000 million years ago  
(C) 1500 million years ago (D) 320 million years ago
- (176) Baculovirus is a pathogen which attacks
- (A) Annelids (B) Caterpillars  
(C) Insects and Arthropods (D) Armyworms
- (177) DNA precipitates in
- (A) Chloroform (B) Chilled ethanol  
(C) Acetic acid (D) Hydrochloric acid
- (178) Gene which controls corn borer is
- (A) CryIIAc (B) CryIIAb (C) CryIAc (D) CryIAb
- (179) A disorder caused by absence of one of the X-chromosome is
- (A) Down's Syndrome (B) Klinefelter's Syndrome  
(C) Turner's Syndrome (D) Patau Syndrome
- (180) Brood parasitism is seen in which animal.
- (A) Sea anemone and clown fish (B) Cuckoo & crow  
(C) Cattle and egret (D) Algae and fungi

- (181) Empiricism and Belief in cause and effect relationship are the example of scientific \_\_\_\_\_.  
(A) Area (B) Attitude (C) Approach (D) Aptitude
- (182) What is the foremost aim of science teaching and learning at school level?  
(A) To conduct science classes  
(B) To create awareness in society  
(C) Inculcation of scientific attitude among the students  
(D) Implementation of science in society
- (183) Which of the following topic reflects the correlation between science and geography?  
(A) Nitrogen cycle (B) Fertilisation  
(C) Transcription (D) Radiocarbon dating
- (184) What is the new term for comprehension in cognitive domain?  
(A) Creating (B) Remembering (C) Understanding (D) Applying
- (185) Which one of the following skills won't be developed through Biological science teaching?  
(A) Observation skill (B) Vocal skill  
(C) Drawing skill (D) Problem solving skill
- (186) What is the example of constructive approach?  
(A) Discovery method (B) Historical method  
(C) Team teaching (D) Lecture method
- (187) Which of the following is not a basic component of teaching skill?  
(A) Perception (B) Introduction (C) Cognition (D) Action
- (188) Which of the following won't be considered as a major step of problem solving method?  
(A) Data collection (B) Data Analysis  
(C) Recapitulation (D) Formulating hypothesis

- (189) In science laboratory for darkening the room, \_\_\_\_\_ may be used.
- (A) Iron nets (B) Ventilators  
(C) Sound proof wall (D) Window blinds
- (190) Which of the following is not the form of vivarium?
- (A) Aquarium (B) Insectarium  
(C) Paludarium (D) Fisarium
- (191) While teaching plant kingdom, a teacher should highlight alternation of generations in bryophytes and pteridophytes primarily to:
- (A) Differentiate haploid and diploid phases  
(B) Memorize life cycles  
(C) Link to economic importance  
(D) Avoid diagrams
- (192) While teaching "Biological classification" Why is it more effective to use a 'Phylogenetic' approach rather than just 'artificial' classification?
- (A) It is easier for students to memorize  
(B) It reflects the actual evolutionary relationship between organisms  
(C) It uses fewer technical terms  
(D) It avoids the use of scientific names
- (193) In the chapter "Plant Kingdom" a teacher shows a live Moss and a Fern to the class. This is an example of:
- (A) Rote learning  
(B) Specimen-based inquiry  
(C) Theoretical instruction  
(D) Deductive reasoning

- (194) When teaching "Biomolecules", Why is the "Concept Mapping" of metabolism useful?
- (A) It simplifies the chemical formulas
  - (B) It helps students see the inter connectedness of various biochemical pathways.
  - (C) It replaces the need for chemistry knowledge
  - (D) It is only useful for the final exam
- (195) A student asks why "Photorespiration" is considered a wasteful process in  $C_3$  plants. A pedagogical response should focus on:
- (A) Asking the student to ignore the topic
  - (B) Explaining the loss of fixed carbon and lack of ATP/NADPH Production
  - (C) Telling the student to memorize the pathway for marks
  - (D) Saying it is a mistake in nature
- (196) When explaining structural organization in animal, frog alimentary canal should be taught using:
- (A) Labeled diagram with functions
  - (B) Only names and parts
  - (C) Ignoring Histology
  - (D) Human comparison only
- (197) Molecular basic of Inheritance – central dogma is best taught by:
- (A) Flowchart : DNA  $\rightarrow$  RNA  $\rightarrow$  Protein
  - (B) Only Replication
  - (C) Only Translation
  - (D) Flowchart: 1.DNA  $\rightarrow$  RNA  $\rightarrow$  Protein 2.Replication : transcription : translation

- (198) While teaching "Human Reproduction" a student expresses discomfort or giggles. The most appropriate pedagogical response is:
- (A) Ignore the behaviour and continue the lecture
  - (B) Scold the student and ask them to leave the room
  - (C) Maintain a professional, scientific tone and normalize the topic as a fundamental biological process
  - (D) Skip the chapter and ask students to read it at home
- (199) When teaching "Evolution" why is it important to show "Homologous Organs" (like the fore limb of whales, bats and humans)
- (A) To demonstrate divergent evolution and common ancestry
  - (B) To show that these animals live in the same habitat.
  - (C) To prove that these animals have the same diet
  - (D) To show that evolution has stopped.
- (200) Which pedagogical tool is most effective for teaching "Pedigree Analysis" in genetics?
- (A) A long essay on royal families
  - (B) Memorizing the definition of a mutation.
  - (C) Watching a movie about DNA
  - (D) Solving practice charts to track the inheritance of a trait.

