

←

**CHT- TGT ARTS 2022**

**E-BOOK-PDF**

**6,000 MCQ**

**EXPLANATION**

**1,500 ଟି ପୂର୍ବ ବର୍ଷର ପ୍ରଶ୍ନ**

**100% ସଫଳତା**



CHT- CONTRACTUAL TEACHER (TGT ARTS) 2022 EXAM !! E-BOOK (PDF) 6,000 BEST MCQ !! CHAPTER WISE QUESTIONS & ANSWER

more

₹199.00 ₹99.00

Validity- 1 Year

English- 1500 (MCQ)...

more

ADD TO CART BUY NOW

[Click Here](#)

←

**CHT- TGT CBZ 2022**


**E-BOOK-PDF**

**6,000 MCQ**

**EXPLANATION**

**750 ଟି ପୂର୍ବ ବର୍ଷର ପ୍ରଶ୍ନ**

**100% ସଫଳତା**



CHT- CONTRACTUAL TEACHER (TGT CBZ SCIENCE) 2022 EXAM !! E-BOOK (PDF) 6,000 BEST MCQ !! CHAPTER WISE QUESTIONS & ANSWER

more

₹199.00 ₹99.00

Validity- 1 Year

Previous Year Question- 750 (2022, 2021 & 2019 Year)...

more

ADD TO CART BUY NOW

[Click Here](#)

←

**CHT- TGT PCM 2022**


**E-BOOK-PDF**

**6,000 MCQ**

**EXPLANATION**

**1,350 ଟି ପୂର୍ବ ବର୍ଷର ପ୍ରଶ୍ନ**

**100% ସଫଳତା**



CHT- CONTRACTUAL TEACHER (TGT PCM SCIENCE) 2022 EXAM !! E-BOOK (PDF) 6,000 BEST MCQ !! CHAPTER WISE QUESTIONS & ANSWER

more

₹199.00 ₹99.00

Validity- 1 Year

Previous Year Question- 1,350 (2022, 2021 & 2019 Year)...

more

ADD TO CART BUY NOW

[Click Here](#)

← Tech of World

HOME VIDEOS PLAYLISTS COMMUNITY

**ଆମ Channel ରେ ଦେଖନ୍ତୁ Video**

**ASO** ଓଡ଼ିଶା ପୋଷାଳ **CT ଓ B.Ed**

ଓଡ଼ିଶା ପୋଲିସ **SSC GD Railway**



**Tech of World**

SUBSCRIBE

315K subscribers • 928 videos

Hello ସାଥୀ ମାତ୍ର ଏହି Channel ରେ ପ୍ରଚାରଣ Educational Video

Free ଲେ ଶେଷପାଇବେ ଯେଉଁ ଚେନେଲର ଲାଇକ ଏହି "Tech Of World" Channel କୁ ...

**+2 କିମ୍ବା +3 ପଢ଼ିବା ପରେ**

**କେମିତି ଜଣେ ଶିକ୍ଷକ**

**ହେଇପାରିବେ ?**

**CT ଓ B.Ed ପରେ କଣ ?**



How To Become A Teacher After +2 Or +3 In Odisha ? How To Get A Teacher Job In Odisha ?

Tech of World · 176K views · 3 years ago

Home Shorts Subscriptions Library

[Click Here](#)

←

**Tech Of World- (Odisha Exam CT)**

Tech Of World

Uninstall Open

Your Review

sujit kumar naik ★★★★★ 6/29/21

Edit your review

Developer contact

About this app

Tech Of World (Odisha Exam) Provides Mock Test & E-Books For Different Exams

Education

3.8 ★ 422 reviews 422 reviews Rated for 3+ 50K+ Downlo.

TECH OF WORLD Mock Test

[Click Here](#)

← Tech Of World 4.1K subscribers

538 Sujit, 9:42 AM

Leave a comment

ASO English 2022 By... 8.7 MB PDF

ASO General Knowledge 2022... 4.9 MB PDF

ASO Math 2022 By Techofworld.in.pdf 4.6 MB PDF

ASO Odia Language 2022 By... 2.9 MB PDF

ASO Reasoning 2022 By... 4.6 MB PDF

508 · 9:47 AM

3 comments

Broadcast

[Click Here](#)

Section 1 - Paper I-General Knowledge and Current Affairs

1) Who is the scientist from India, who won the Dan David Prize for 2017, for his contribution in astronomy?

- A) Shrinivas Kulkarni
- B) Fathullah Shirazi
- C) Jayant Narlikar
- D) Subrahmanyam Chandrasekhar

2) A disk made of vulcanized rubber used in Ice Hockey, that serves the same function as a ball is called:

- A) Puck
- B) Hook
- C) Beikou
- D) Bandy

3) Non-membranous percussion instrument is called

- A) Vitat Vadya
- B) Sushir Vadya
- C) Ghana Vadya
- D) Tat Vadya

4) Which of the following is the work of the poet-saint Tulsidas?

- A) Ramadhanya charitre
- B) Ragi Tandira
- C) Hari Chitta Satya
- D) Ramcharitmanas

5) Krishna is one of the longest rivers of south-central India. The river originates in which of the following states of India?

- A) Kerala
- B) Karnataka
- C) Madhya Pradesh
- D) Maharashtra

6) Who won the 2017 Brisbane International Women's Doubles title, pairing with Bethanie Mattek-Sands?

- A) Sania Mirza
- B) Martina Hingis
- C) Serena Williams
- D) Venus Williams

7) According to The World Happiness Report 2018 released by the Sustainable Development Solutions Network for the United Nations, India is ranked

- A) 27th
- B) 133rd
- C) 90th
- D) 73rd

8) Researchers from National Chemical Laboratory Pune, produced carbon from which of the following agri-products to be used in Li-ion batteries?

- A) Sweet Corn
- B) Groundnuts
- C) Sugarcane
- D) Soyabean

9) The dance drama known as Ankiya-naat is from which state of India?

- A) Kerala
- B) Odisha
- C) Assam
- D) Chhattisgarh

10) Who is the first Indian woman to win an Asian Games gold in 400m run?

- A) M. L. Valsamma
- B) Karnam Malleswari
- C) Kamaljeet Sandhu
- D) P.T. Usha

Techofworld.In

11) Who was the British Governor-General of India in 1773 who introduced the Regulating Act?

- A) Lord Mayo
- B) Warren Hastings
- C) Sir John Shore
- D) Lord Cornwallis

12) Who developed the world's first Braille Atlas for visually challenged people?

- A) Indian Institute of Science Education and Research
- B) National Atlas and Thematic Mapping Organization
- C) International Institute of Geological Sciences
- D) National Brain Research Centre

13) In which of the following regions in India is the Ramman festival celebrated?

- A) Garhwal
- B) Marwar
- C) Bundelkhand
- D) Malwa

14) "He is a Chartered Accountant and with a Law degree. As of 14 January 2019, he is the Honourable Minister for Commerce and Industry and Civil Aviation, Government of India." Who is being referred to here?

- A) Anand Sharma
- B) Suresh Prabhakar Prabhu
- C) Ashok Gajapathi Raju
- D) Ajit Singh

15) Sewall, the author of the book 'A Forgotten Empire.....' talks about which empire here?

- A) Bahmani Empire
- B) Vijayanagar Empire
- C) Saiyyad Empire
- D) Tughlaq Empire

16) Which famous battle was fought between Sultanates of Deccan and Vijayanagar empire in the year 1565?

- A) Battle of Panipat
- B) Battle of Talikota
- C) Battle of Khanwa
- D) Battle of Haldighati

17) The Hwasong-15, a more advanced version of an intercontinental ballistic missile (ICBM) - Hwasong-14 was developed by

- A) North Korea
- B) Taiwan
- C) China
- D) Japan

18) Which among the following were the rivals of Nawab of Bengal in the Battle of Plassey, fought in 1757?

- A) The Swedish
- B) The British
- C) The Portuguese
- D) The Dutch

19) Raymond Samuel Tomlinson is known for which of the following inventions?

- A) Mouse
- B) Router
- C) E-mail
- D) Mobile Phone

20) What is 'APBS' pertaining to cashless transaction through the Aadhaar system in India?

- A) Aadhaar Payment Banking System
- B) Aadhaar Payment Bridge System
- C) Aadhaar Procedure Basic System
- D) Aadhaar Procedure Biometric System

Techofworld.In





Section 2 - Paper I-Reasoning Ability

21) If BROTHER is coded as 2456784. SISTER is coded as 919684, what is the code for ROBBERS?

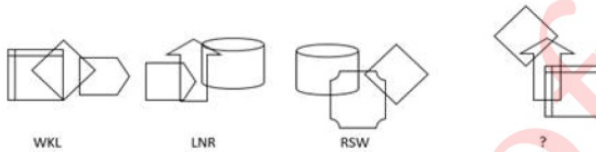
- A) 1815519
- B) 9245784
- C) 4522849
- D) 4562684

22) Two kids Pinku and Rinku start from a point and walk in opposite directions for 2 km. Pinku is walking towards west. After 2 km, both take left turn and walk for 2 km. In which direction is Rinku walking?

- A) South
- B) East
- C) North
- D) West

Techofworld.In

23) Observe the figures below with their corresponding codes and find the correct code for the last figure.



- A) WNS
- B) LNK
- C) WNK
- D) WKL

24) Amit introduces Mohit as, "the son of the only brother of his father's wife". How is Mohit related to Amit?

- A) Nephew
- B) Brother in law
- C) Data Inadequate
- D) Cousin

25) A is the cousin of C. C and Q are sisters. Z is Q's mother. P is the son of Z, then how is P related to A?

- A) Sister
- B) Father
- C) Brother
- D) Cousin

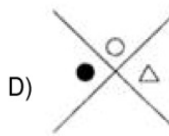
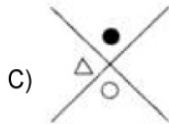
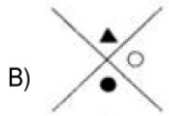
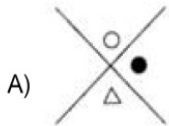
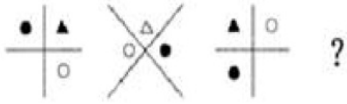
26) The question below consists of a series of figures followed by four alternative figures. Select a proper figure from the alternatives that will replace the question mark to continue the same series as established by some pattern in figures in the question.



- A)
- B)
- C)
- D)



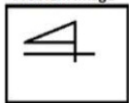
27) Each of the questions consists of a series of figures followed by four alternative figures. Select a proper figure from the alternatives that will replace the question mark to continue the same series as established by some pattern in figures in the question.



Techofworld.In

28)

Problem Image



Answer Images



A figure is given on the left, inside a box. On right of it, four images are given. Which of the four images on the right can be formed by rotating the figure given on the left by 180 degrees in the clockwise direction?

- A) 2
- B) 3
- C) 1
- D) 4

29) Pointing towards a boy V said, "He is the son of the only son of my paternal grandfather." How is that boy related to V?

- A) Cousin
- B) Data inadequate
- C) Brother
- D) Uncle

30) You are facing east. You turn  $100^\circ$  in the clockwise direction and then  $145^\circ$  in the anti-clockwise direction. Which direction are you facing now?

- A) East
- B) South-east
- C) North-east
- D) North

31) The digits from 0 to 9 are coded with letters as shown below:

Digits : 0 1 2 3 4 5 6 7 8 9  
Letter Code : D B H K P T M N W F

- (i) If both the first and the last digit is the same and is even, it should be coded as 'R'.
- (ii) If both first and last digit is the same and is odd, it should be coded as 'J'.

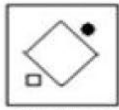
The code of the number 6538244 is

- A) MTKWHPP
- B) MTKWHRR
- C) RTKWHPR
- D) RTKWHPP

32) A man is facing south. He turns  $135^\circ$  in the anti-clockwise direction. The direction he is facing now is

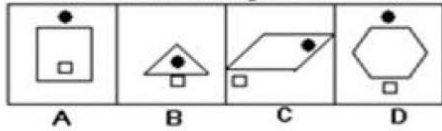
- A) North-west
- B) South-east
- C) North-east
- D) South-west

33) Which among the options are similar to the problem figure?



Problem

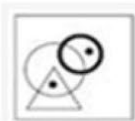
Answer Figures



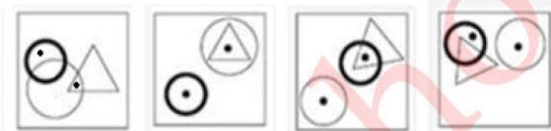
- A) C
- B) A
- C) D
- D) B

Techofworld.In

34) Which among the given options are similar to the problem figure?



Problem Figure



- A) A
- B) B
- C) C
- D) D

35) Lavanya's father's only sister's mother's husband is Narayan. How is Narayan related to Lavanya?

- A) Uncle
- B) Brother
- C) Brother in Law
- D) Grandfather

36) Find the next term of the series 3, 6, 5, 20, 7, 42, 9, .....

- A) 60
- B) 72
- C) 54
- D) 66

37) What is the next term in the following series:

-1, 35, 143, 323, \_\_\_\_.

- A) 483
- B) 575
- C) 667
- D) 625

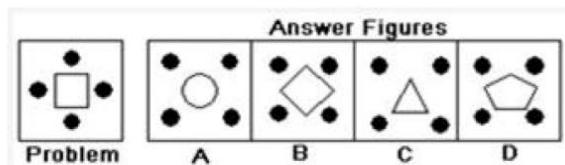
38) In a certain code language PERIODICITY is written as OIREPDYTCI. How is CREDENTIALS written in that code language?

- A) EDERNCSLAIT
- B) EDRECNSLIAT
- C) EDERCNSLAIT
- D) EDERCNLSIAT

39) You move in North direction, turn right, then right again and then turn to the left. Which direction are you facing now?

- A) West
- B) South
- C) East
- D) North

40) Which among the options are similar to the problem figure?



- A) C
- B) D
- C) A
- D) B

Section 3 - Paper1-Computer Literacy

41) Which of the following input devices is essentially a hand ware that contains various electronic sensors that monitor the hand's movements and transform them into a form of input for applications such as virtual reality and robotics?

- A) Data glove
- B) Joystick
- C) Trackball
- D) Digitizers

42) High resolution of a monitor is defined as

- A) number of active cells per square inch on a display screen
- B) large amount of information per square inch on a display screen
- C) small amount of information per square inch on a display screen
- D) average amount of information per square inch on a display screen

43) Which among the following is a freeware video-editing software from the Microsoft Windows essential suite?

- A) Windows Media Maker
- B) Windows Movie Maker
- C) Microsoft Media Maker
- D) Microsoft Movie Maker

44) Which of the following devices work with a parallel port ?

- A) External storage device
- B) Sound card
- C) Printer
- D) Monitor

45) Which of the following options is an example of primary memory?

- A) CD ROM
- B) Blu-ray Disk
- C) ROM
- D) DVD

46) "There are no changes in the received message. It is the same as the original message", this statement depicts

- A) Confidentiality
- B) Integrity
- C) Availability
- D) Redundancy

47) In Excel, all the formula starts with

- A) at the rate symbol
- B) less than symbol
- C) equal symbol
- D) plus symbol

48) With respect to Information Technology, IoT stands for:

- A) Idea of Transformation
- B) Interest of Things
- C) Internationalization of Technology
- D) Internet of Things

49) Which of the following is a web-based application that lets you create and format spreadsheets and share live data online?

- A) Google Slides
- B) Google Sheets
- C) Google Sites
- D) Google Forms

50) Which of the following Excel Addresses represent an absolute cell reference?

- A) #a#1
- B) \$A\$1
- C) A1
- D) !A!1

Techofworld.In



## Section 4 - Paper-I-Pedagogy and Educational Management and Policy

## Techofworld.In

51) In an inquiry based classroom, the learners are expected to frame and test the hypothesis. As per Piaget's theory of cognitive development in which of the following stages should the learner ideally be?

- A) Preoperational stage
  - B) Sensori motor stage
  - C) Formal operations stage
  - D) Concrete operational stage
- 

52) The concept of micro teaching was developed in

- A) Princeton University
  - B) Stanford University
  - C) Oxford University
  - D) Cambridge University
- 

53) Which of the following is the main objective of 'Saakshar Bharat Mission'?

- A) Promote Adult Education
  - B) Increase enrolment in Elementary Education
  - C) Increase facilities for Higher Education
  - D) Incentives to girls for Secondary Education
- 

54) In which of the following activities does a teacher present a question or situation and gives learners a short time to answer freely and suggest solutions or ideas?

- A) Demonstration
  - B) Case studies
  - C) Dramatization
  - D) Brainstorming
- 

55) If a student is engaged in insightful thinking, synthesis and ability to react to new novel situations, then as per Sternberg's Triarchic Theory of Human Intelligence, which intelligence is he displaying?

- A) Creative intelligence
- B) Practical intelligence
- C) Analytical intelligence
- D) Componential intelligence

56) Which of the following organisations develop school curriculum at regular intervals?

- A) NITTE
  - B) NCTE
  - C) NIOS
  - D) NCERT
- 

57) Which of the following is one of the objectives of District Primary Education Program?

- A) To develop text books
  - B) To promote teacher training programs
  - C) To increase enrolment and reduce drop outs
  - D) To provide employment to working population
- 

58) A specialised instructional module based program for slow learners in the age group of 12-14 years is developed. In order to implement this programme in a school, which sampling technique would be most ideal?

- A) Cluster sampling
  - B) Stratified sampling
  - C) Incidental sampling
  - D) Judgmental sampling
- 

59) National Vocational Education Qualification Framework (NVEQF) was launched by

- A) DGET
  - B) SSCs
  - C) AICTE
  - D) NCVT
- 

60) Attaining of which of the following attitude is the objective of elementary education?

- A) Critical thinking
- B) Confidence
- C) Reasoning
- D) Comprehension

61) NIOS which frames the courses of studies for secondary education is a body at

- A) National Level
- B) Block Level
- C) District Level
- D) State Level

Techofworld.In

62) The maximum goal of education is

- A) Upbringing of the progeny
- B) Working for the nation
- C) Diffusion of knowledge, values, attitudes and norms of relationships required for playing adult role
- D) Management of the organization

63) When Ms Reena saw that many students in her class were not able to do well in Hindi in spite of all her efforts she decided to form groups so that students learnt from each other. What form of teaching is this?

- A) Peer tutoring
- B) Passive learning
- C) Active learning
- D) Helpful learning

64) A teacher who adopts the play way method of teaching is a believer of which school of philosophy?

- A) Naturalism
- B) Idealism
- C) Pragmatism
- D) Realism

65) Nitya Prakash, a specialist at Kennedy High School, Hyderabad, says teachers there have found that classroom rules are most effective when teachers, parents, and students are equally committed to follow them. At the beginning of each year, a note with specific responsibilities is signed by each of the parties involved. In this context, as a teacher you would accept which of the following?

- A) Send the student out from the classroom for the misbehaviour
- B) Develop classroom rules I am unwilling to enforce
- C) Supply students and parents with evaluation of progress
- D) Ignore when there is a small disturbance at the backside of the classroom

66) Mr. Sharma found that the students in Class 5 did not perform as well as the students of Class 4. When he investigated the matter he realized that this was due to the noise that came from the adjoining market which was on the side of Class 5. This barrier in communication may be called as

- A) Semantic barrier
- B) Physical barrier
- C) Emotional barrier
- D) Mental barrier

67) Identify the reading disorder, which is characterized by trouble with reading although the person has normal intelligence. Problems may include difficulties in spelling words, reading quickly, writing words, "sounding out" words in the head, pronouncing words when reading aloud and understanding what one reads.

- A) Schizoaffective disorder
- B) Alexia
- C) Dissociative identity disorder
- D) Dyslexia

68) Which of the following is one of the aims of education according to Idealism?

- A) Self-dependence
- B) Self-understanding
- C) Self-actualization
- D) Self-realization

69) The NCERT has its headquarters in

- A) Karnataka
- B) New Delhi
- C) Mumbai
- D) Jaipur

70) As per the guidelines of the government, each school has to take children from poor backgrounds to the tune of

- A) 15%
- B) 20%
- C) 25%
- D) 30%

71) Who among the following is a representative of 'Absolute idealism'?

- A) Rousseau
- B) Maria Montessori
- C) Gandhi
- D) Fichte

Techofworld.In

72) In a class the students are shown a video on electrical repairs. If a student from this class, is later able to do electrical repairing in his house, what kind of learning has taken place?

- A) Accidental learning
- B) Latent learning
- C) Intentional learning
- D) Incidental learning

73) In India, there are various bodies governing school education system such as Islamic Madrasah schools, whose boards are controlled by local state governments, or autonomous, or affiliated with

- A) Jamia Nizamia
- B) Al-Azhar
- C) Al-Maqar, Darul Aman
- D) Darul Uloom Deoband

74) According to NCF 2005, at the primary stage, science and social science should be integrated to form

- A) Environmental Studies
- B) Environmental Science
- C) Ecological Studies
- D) Ecological Science

75) The UGC was founded in the year

- A) 1959
- B) 1958
- C) 1956
- D) 1957

76) Padhe Bharat Badhe Bharat is the sub programme of

- A) Sarv Shiksha Abhiyan
- B) ICSE
- C) CBSE
- D) NCERT

77) What was the name given to the program run by SIDA, central and state government in Rajasthan for the promotion of universal education?

- A) Lok Jumbish
- B) Minimum Learning Levels
- C) Sahaj Shiksha Kendra
- D) Universal Primary Education

78) What does DTH TV stand for?

- A) Direct-to-home television
- B) Debut-to-home television
- C) Detached Home television
- D) Direction-to-home training video

79) Identify the duties which are NOT performed by the regional offices of UGC.

- A) Organizing of meetings of RO's
- B) Transfer of allocated funds in installment
- C) Creation of Universities all-over India
- D) Re-appropriation of funds

80) What does SCERT stand for?

- A) State Committee of Environmental Research and Test
- B) State Council of Evaluation Research and Trade
- C) State Council of Educational Research and Training
- D) State Committee of Evaluation Review and Transit



81) Who among the following conducts two examinations, namely, Secondary Examination and Senior Secondary Examination (All India) and also some courses in Vocational Education?

- A) Intermediate Board of Education
- B) Technical Board of Education
- C) The National Institute of Open Schooling
- D) NCTE

82) While engaging in playing games on a mobile phone, a child learns about the different countries and their capitals. Such a type of learning is called

- A) Informal learning
- B) Fomal learning
- C) Incidental learning
- D) Intentional learning

83) In a classroom, the teacher on assessing the multiple intelligence of students finds that some students are able to do self-reflection while others are able to detect moods of others and respond approximately. Which prominent multiple intelligences do they possess?

- A) Intrapersonal and Interpersonal
- B) Kinesthetic and Interpersonal
- C) Logical and Intrapersonal
- D) Naturalist and Intrapersonal

84) The organizations related to special education need to get a license from

- A) NCERT
- B) CBSE
- C) UGC
- D) RCI

85) Estimating where a ball will land after it is thrown and then moving to the correct location to catch the ball is related to which of the following domains as per Blooms Taxonomy?

- A) Affective
- B) Cognitive
- C) Thinking
- D) Psychomotor

86) According to Biglan's classification of disciplines under which category does education come?

- A) Applied – Hard - Non life
- B) Pure – Soft – Life
- C) Applied - Soft - Life
- D) Pure - hard - Nonlife

87) A curriculum is developed which focuses maximum on utilitarian approach and learning by way of practice and hands on experience. The aims of this curriculum have been influenced by

- A) Realism
- B) Pragmatism
- C) Existentialism
- D) Naturalism

88) When can the students be expected to reach the Plateau stage of a learning curve?

- A) The teacher has given worksheets for students to solve
- B) The teacher has been demonstrating an experiment
- C) The teacher is using lecture cum discussion method
- D) The teacher is presenting a complex and abstract content continually

89) In a class the learners are not familiar with the new learning ideas that the teacher is presenting and hence the teacher plans to provide support and scaffolding to link the new idea to what they might already know. Which kind of advanced organizer is this teacher using?

- A) Narrative advance organizers
- B) Skimming
- C) Expository advance organizers
- D) Graphic organizers

90) In a pre school and primary classes, effective learning has to be the one where the verbal knowledge is presented in combination with visual information like pictures, models, illustrations, diagrams etc. Such sort of representations as per Bruner fall under which of the following categories?

- A) Multiple representation
- B) Symbolic representation
- C) Enactive representation
- D) Iconic representation

## Section 5 - PaperII-Chemistry

91) What is the molar solubility of silver chromate in pure water? ( $K_{sp} = 1.12 \times 10^{-12}$ )

- A)  $6.54 \times 10^{-5} \text{ M}$
- B)  $6.54 \times 10^{-4} \text{ M}$
- C)  $1.04 \times 10^{-4} \text{ M}$
- D)  $1.05 \times 10^{-5} \text{ M}$

92) D-glucose reacts with hydroxyl amine to form

- A) sorbitol and mannitol
- B) glucose hydrazone
- C) glucaric acid
- D) glucose oxime

93) The strength of an acid is 8N. What is the volume of acid required to prepare a 0.1N solution of 250 ml?

- A) 0.32 ml
- B) 1.312 ml
- C) 3.125 ml
- D) 31.25 ml

94) The scattering of light by colloidal-size particles is referred to as

- A) Electrophoretic effect
- B) Brownian motion
- C) Tyndall effect
- D) Osmotic effect

95) If 6 gm of sodium hydroxide is dissolved in 100 ml of distilled water then molarity of the sample will be:

- A) 0.1 mol/L
- B) 1 mol/L
- C) 2 mol/L
- D) 1.5 mol/L

96) Which of following electronic configurations corresponds to the most electronegative element?

- A)  $1s^2 2s^2 2p^5$
- B)  $1s^2 2s^2 2p^6$
- C)  $1s^2 2s^2 2p^3$
- D)  $1s^2 2s^2 2p^4$

97) Dimethylglyoxime is used for the quantitative analysis of

- A)  $\text{Zn}^{2+}$  ion
- B)  $\text{Ni}^{2+}$  ion
- C)  $\text{Co}^{2+}$  ion
- D)  $\text{Fe}^{2+}$  ion

98) Which of the following species has the highest ionisation potential?

- A)  $\text{C}^{3+}$
- B)  $\text{Be}^{2+}$
- C)  $\text{O}^{5+}$
- D)  $\text{F}^{6+}$

99) What is the unit of molar conductivity?

- A)  $\text{ohm cm}^{-2} \text{ mol}^{-1}$
- B)  $\text{ohm}^{-1} \text{ cm}^2 \text{ mol}^{-1}$
- C)  $\text{ohm cm}^{-1} \text{ mol}^{-1}$
- D)  $\text{ohm cm mol}^{-1}$

100) Which of the following conditions apply to adiabatic systems? (Symbols and notations carry their usual meaning)

- A)  $dU = dq$
- B)  $dq = dw$
- C)  $pdV = 0$
- D)  $dq = 0$

101) Identify the most stable carbocations among the following:

- A)  $(\text{CH}_3)_2\text{CH}^+$
- B)  $\text{CH}_3\text{CH}_2^+$
- C)  $\text{CH}_3^+$
- D)  $(\text{CH}_3)_3\text{C}^+$

102) A catalyst increases the rate of a chemical reaction by

- A) lowering the activation barrier
- B) increasing the average kinetic energy of the reacting molecules
- C) providing a reaction pathway with lower activation barrier
- D) reducing the enthalpy

103) Among the following boron trihalides, the weakest Lewis acid is

- A)  $\text{BBr}_3$
- B)  $\text{BI}_3$
- C)  $\text{BCl}_3$
- D)  $\text{BF}_3$

104) The reaction of phenol with benzoyl chloride in presence of dilute NaOH is known as

- A) Schotten-Baumann reaction
- B) Wurtz reaction
- C) Reimer-Tiemann reaction
- D) Carbylamine reaction

105) Which of the following pairs is isoelectronic?

- A)  $\text{P}^{2+}$  and  $\text{S}^{2-}$
- B)  $\text{Al}^{3+}$  and  $\text{F}^-$
- C)  $\text{Na}^+$  and  $\text{Ca}^{2+}$
- D)  $\text{O}^{2-}$  and  $\text{Mg}^+$

106) Phenyllithium can be synthesized by the reaction of lithium metal with which of the following organic compounds?

- A) Toluene
- B) Naphthalene
- C) Chlorobenzene
- D) Phenol

107) Which period of the periodic table contains the element with electronic configuration  $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^2$ ?

- A) 3
- B) 5
- C) 7
- D) 4

108) Ethyl acetate reacts with excess  $\text{CH}_3\text{MgBr}$  to produce

- A) propanal-1
- B) propanol-1
- C) isopropyl alcohol
- D) 2-methylpropan-2-ol

109) Which of the following options is a complex salt?

- A)  $\text{FeSO}_4 \cdot (\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$
- B)  $\text{K}_4[\text{Fe}(\text{CN})_6]$
- C)  $\text{KCl} \cdot \text{MgCl}_2 \cdot 6\text{H}_2\text{O}$
- D)  $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$

110) The effective atomic number (EAN) of Co in  $[\text{Co}(\text{NH}_3)_6]^{2+}$  is

- A) 33
- B) 28
- C) 36
- D) 54



Section 6 - PaperII-Botany

111) In which of the following options photolysis of water in the presence of light occurs?

- A) Glycolysis
  - B) Gluconeogenesis
  - C) Photosystem I
  - D) Photosystem II
- 

112) A branch of life science which deals with the kinds and diversity of all organisms and the existing relationships amongst themselves is defined as

- A) Identification
  - B) Systematics
  - C) Classification
  - D) Nomenclature
- 

113) In plants, photosynthetic pigments are located in which part of the chloroplast?

- A) Thylakoid membrane
  - B) Stroma
  - C) Outer membrane
  - D) Inner membrane
- 

114) In plants, which of the following sclereid is star shaped?

- A) Brachysclereid
  - B) Asterosclereid
  - C) Macrosclereid
  - D) Osterosclereid
- 

115) Cocos nucifera is the botanical name of

- A) Cocoa
- B) Coconut
- C) Walnut
- D) Cotton

116) Spray of which of the following plant hormones induces artificial ripening of fruits?

- A) Abscisic acid
  - B) Ethylene
  - C) Cytokinin
  - D) Auxin
- 

117) Which of the following represents the female reproductive unit of a flower?

- A) Gynoecium
  - B) Androecium
  - C) Filament
  - D) Anther
- 

118) In plants, meristematic tissue are classified on the basis of position. Which of the following meristematic tissue are located at the tips of root and shoot?

- A) Lateral meristem
  - B) Apical meristem
  - C) Rib meristem
  - D) Intercalary meristem
- 

119) Which of the following diagram is used to predict the genetic and phenotypic outcome of a cross?

- A) Punnett square
  - B) Venn diagram
  - C) Flow chart
  - D) Pie diagram
- 

120) The scientific name of the pea plant is

- A) Allium cepa
- B) Pisum sativum
- C) Mangifera indica
- D) Glycine max

121) The particular set of alleles carried by an individual is referred as

- A) locus
  - B) recessive
  - C) dominant
  - D) genotype
- 

122) Which of the following phytohormones is also known as 'stress hormone'?

- A) Abscisic acid
  - B) Gibberellic acid
  - C) Cytokinin
  - D) Ethylene
- 

123) "Species Plantarum" is the book written by

- A) Carolus Linnaeus
  - B) Ernst Mayr
  - C) Carl Woese
  - D) Robert Whittaker
- 

124) Colourless plastids that are found in storage parenchyma and other colourless tissues are referred to as

- A) Chromoplasts
  - B) Phaeoplasts
  - C) Leucoplasts
  - D) Rhodoplasts
- 

125) Which of the following process occurs after fertilization in flowering plants?

- A) Embryo development
  - B) Formation of Pollen grains
  - C) Transfer of Pollen grains
  - D) Formation of flower
- 

126) Potometer is used to measure the rate of

- A) viscosity
- B) diffusion
- C) osmosis
- D) transpiration

127) The innermost wall layers of microsporangium in an anther is

- A) endothecium
  - B) endodermis
  - C) epidermis
  - D) tapetum
- 

128) What is the condition in which a dicotyledonous plant bear flowers but do not produce fruits and seeds?

- A) Plant is monoecious
  - B) When the plant is dioecious but bears staminate flowers
  - C) When climatic conditions are not favourable for survival
  - D) When the plant is dioecious, but bears pistillate flowers
- 

129) The Organism which causes Late blight disease is

- A) Streptomyces scabies
  - B) Erwinia carotovora
  - C) Meloidogyne chitwoodi
  - D) Phytophthora infestans
- 

130) Late blight is a serious fungal disease found in

- A) Pumpkin
- B) Cabbage
- C) Raddish
- D) Potato

Section 7 - PaperII-Zoology

131) In Human kidney, which of the following is lined by simple cuboidal brush border epithelium which increases the surface area for reabsorption?

- A) Proximal Convoluted Tubule
- B) Collecting Duct
- C) Urinary bladder
- D) Glomerulus

132) The site of fertilization in human reproductive system is

- A) Cervix
- B) Uterus
- C) Vagina
- D) Fallopian tubes

133) Who among the following published his observations and conclusions regarding evolution in the book "Origin of Species" in 1859?

- A) August Weismann
- B) Jean Baptiste de Lamarck
- C) Herbert Spencer
- D) Charles Darwin

134) In Krebs's cycle there is oxidative decarboxylation of isocitrate to form alpha-ketoglutarate. This reaction is catalyzed by which of the following enzymes?

- A) Isocitrate dehydrogenase
- B) Aconitase
- C) Isocitrate synthase
- D) Succinate dehydrogenase

135) Which of the following blood cells are also known as thrombocytes?

- A) Monocyte
- B) Platelets
- C) Red blood cells
- D) White blood cells

136) The microscopic gap between a pair of adjacent neurons over which nerve impulses pass when going from one neuron to the next is called a

- A) dendrites
- B) axon
- C) cell body
- D) synapse

137) How many molecules of ATP is produced during anaerobic respiration?

- A) 2
- B) 8
- C) 4
- D) 6

138) The environment in which a species normally lives or the location of a living organism is referred as

- A) population
- B) habitat
- C) predation
- D) community

139) In neuron, the gaps between two adjacent myelin sheaths are called as

- A) Synaptic knob
- B) Schwann cells
- C) Nissl's granules
- D) Nodes of Ranvier

140) Which of the following is a part of male reproductive system?

- A) Fallopian tubes
- B) Vas deferens
- C) Vagina
- D) Uterus



141) In the five kingdom classification, bacteria are included in the Kingdom of

- A) Protista
  - B) Fungi
  - C) Plantae
  - D) Monera
- 

142) In the eukaryotic cell cycle, DNA replication occurs in which of the following phase?

- A) Synthesis phase
  - B) Telophase
  - C) Anaphase
  - D) Metaphase
- 

143) Which of the following is defined as total amount of living matter present in an ecosystem?

- A) Biogas
  - B) Biome
  - C) Biomass
  - D) Biofuel
- 

144) Which of the following type of white blood cells are classified under agranulocytes?

- A) Basophil
  - B) Neutrophil
  - C) Eosinophil
  - D) Monocyte
- 

145) How many pairs of autosomes are found in a normal human genome?

- A) 46
- B) 23
- C) 44
- D) 22

146) 6-Amino purine is a trivial name of which of the following nitrogenous base?

- A) Uracil
  - B) Guanine
  - C) Adenine
  - D) Cytosine
- 

147) Autosomal recessive disorder, sickle cell anaemia is caused due to substitution of which amino acid to valine?

- A) Aspartic acid
  - B) Histidine
  - C) Glutamic acid
  - D) Tyrosine
- 

148) In human kidney, during urine formation, the filtration of blood is carried out by the

- A) Glomerulus
  - B) Proximal Convoluted Tubule
  - C) Henle's Loop
  - D) Distal Convoluted Tubule
- 

149) Uptake of which of the following nutrients can significantly reduce the risk of neural tube defects (NTDs), such as spina bifida during pregnancy?

- A) Calcium
  - B) Iron
  - C) Vitamin D
  - D) Folic acid
- 

150) Which of the following minerals is necessary for the proper functioning of the thyroid gland?

- A) Iron
- B) Iodine
- C) Calcium
- D) Magnesium

Question Paper No:

52679\_3

## Answer Key

1	A	31	A	61	A	91	A	121	D
2	A	32	C	62	C	92	D	122	A
3	C	33	C	63	A	93	C	123	A
4	D	34	A	64	A	94	C	124	C
5	D	35	D	65	C	95	D	125	A
6	A	36	B	66	B	96	A	126	D
7	B	37	B	67	D	97	B	127	D
8	C	38	C	68	D	98	D	128	B
9	C	39	C	69	B	99	B	129	D
10	C	40	D	70	C	100	D	130	D
11	B	41	A	71	D	101	D	131	A
12	B	42	B	72	B	102	C	132	D
13	A	43	B	73	D	103	D	133	D
14	B	44	C	74	A	104	A	134	A
15	B	45	C	75	C	105	B	135	B
16	B	46	B	76	A	106	C	136	D
17	A	47	C	77	A	107	D	137	A
18	B	48	D	78	A	108	D	138	B
19	C	49	B	79	C	109	B	139	D
20	B	50	B	80	C	110	C	140	B
21	C	51	C	81	C	111	D	141	D
22	C	52	B	82	C	112	B	142	A
23	C	53	A	83	A	113	A	143	C
24	D	54	D	84	D	114	B	144	D
25	D	55	A	85	D	115	B	145	D
26	C	56	D	86	C	116	B	146	C
27	C	57	C	87	B	117	A	147	C
28	B	58	D	88	D	118	B	148	A
29	C	59	C	89	C	119	A	149	D
30	C	60	B	90	D	120	B	150	B

