

# HPTET

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1). Which of the following method is most scientific and objective?

[Science]

- A) Introspection method
- B) Clinical Method
- C) Experimental method
- D) Case Study Method

Answer: Experimental method

2). Teacher should consider the individual differences while...

[Science]

- A) Selecting the teaching method
- B) Assigning the task to learners
- C) Constructing the question paper
- D) All of the above



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Answer: All of the above

3). According to Piaget during which stage thinking becomes systematic & logical?

[Science]

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

Answer: Concrete-operational stage

4). 'Structure of Intellect Model' was given by?

[Science]

- A) Thorndike
- B) Guilford
- C) Thurstone
- D) Binet

Answer: Guilford

5). Eysenck's theory of personality is based on?

[Science]

- A) Trait approach
- B) Type approach
- C) Trait-cum-type approach
- D) None

Answer: Trait-cum-type approach

6). If the I.Q. of an individual is above 140 he is termed as?

[Science]

- A) Gifted
- B) Very Superior
- C) Average intelligent
- D) Dull



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Answer: Gifted

7). Who said "Educational psychology deals with teaching & learning"?

[Science]

- A) Hilgard
- B) Skinner
- C) Crow and Crow
- D) Woodworth

Answer: Skinner

8). Which is NOT a stage of Piaget's theory?

[Science]

- A) Sensori-motor stage
- B) Pre-operational stage
- C) Concrete-operational stage
- D) Post-operational stage

Answer: Post-operational stage

9). Who propounded Humanistic theory of learning?

[Science]

- A) Abraham Maslow
- B) Hilgard
- C) Crow and Crow
- D) Skinner

Answer: Abraham Maslow

10). Learning Mathematics may help learning Physics is example of?

[Maths]

- A) Positive transfer
- B) Negative transfer
- C) Zero transfer
- D) None



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Answer: Positive transfer

11). Human development is?

[Science]

- A) Only quantitative
- B) Only qualitative
- C) Both quantitative & qualitative
- D) None

Answer: Both quantitative & qualitative

12). Ability to draw logical conclusions from known statements is?

[Science]

- A) Inductive reasoning
- B) Deductive reasoning
- C) Simple reasoning
- D) None

Answer: Inductive reasoning

13). Test to assess ability to produce novel ideas?

[Science]

- A) Creativity test
- B) Intelligence test
- C) Aptitude test
- D) All

Answer: All

14). Army Alpha test is?

[India GK]

- A) Individual verbal test
- B) Individual performance test
- C) Group verbal test
- D) Group performance test



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Answer: Group verbal test

15). Educational psychology helps teacher to?

[Science]

- A) Select subject matter
- B) Select evaluation technique
- C) Select teaching method
- D) All

Answer: All

16). Punishment is a type of?

[Science]

- A) Extrinsic motivation
- B) Intrinsic motivation
- C) Positive reinforcement
- D) Negative reinforcement

Answer: Negative reinforcement

17). Stage where emotions become controlled?

[Science]

- A) Infancy
- B) Childhood
- C) Adolescence
- D) Adulthood

Answer: Childhood

18). ..... is a positive emotion.

[Science]

- A) Jealous
- B) Fear
- C) Curiosity
- D) None



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Answer: Curiosity

19). Identify mentally retarded children using?

[Science]

- A) Observation
- B) Achievement test
- C) Interview
- D) All

Answer: Achievement test

20). Who belongs to structuralism?

[Science]

- A) Wilhelm Wundt
- B) William James
- C) Watson
- D) Freud

Answer: Wilhelm Wundt

21). Learning effectiveness depends on?

[Science]

- A) Law of effect
- B) Law of exercise
- C) Law of multiple response
- D) Law of readiness

Answer: Law of effect

22). Internal factor influencing development?

[Science]

- A) Intelligence
- B) Social environment
- C) Accident
- D) All



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Answer: Intelligence

23). Exceptional children differ in?

[Science]

- A) Mental characteristics
- B) Social characteristics
- C) Physical characteristics
- D) All

Answer: Mental characteristics

24). "Learning is modification of behaviour through experience"

[Science]

- A) Woodworth
- B) Crow and Crow
- C) Gates
- D) Skinner

Answer: Skinner

25). Stanford-Binet test measures?

[Science]

- A) Personality
- B) Learning
- C) Intelligence
- D) All

Answer: Intelligence

26). Learning is NOT influenced by?

[Science]

- A) Classroom environment
- B) Child health
- C) Teacher's economic status
- D) All



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Answer: Teacher's economic status

27). Helpful for social development of adolescents?

[Science]

- A) Sports
- B) Excursion
- C) Social activities
- D) All

Answer: All

28). Transfer of learning NOT based on?

[Science]

- A) Similarity of content
- B) Similarity of teaching technique
- C) Similarity of facilities
- D) All

Answer: Similarity of facilities

29). ..... is also concrete thinking.

[Science]

- A) Creative thinking
- B) Perceptual thinking
- C) Imaginative thinking
- D) All

Answer: Perceptual thinking

30). Learning a fact without understanding uses?

[Science]

- A) Logical memory
- B) Rote memory
- C) Long-term memory
- D) All



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Answer: Rote memory

31). What is the currency of Germany?

[World GK]

- A) Reel
- B) Euro
- C) Real
- D) Krone

Answer: Euro

32). Which country cultivates tulip flowers?

[World GK]

- A) Denmark
- B) France
- C) Netherlands
- D) Spain

Answer: Netherlands

33). Sahara Desert touches how many countries?

[World GK]

- A) 10
- B) 8
- C) 11
- D) 12

Answer: 8

34). When did the USA enter World War II?

[World GK]

- A) 08-Dec-41
- B) 28-Dec-41
- C) 21-Dec-42
- D) 18-Dec-41



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Answer: 28-Dec-41

35). Headquarters of OPEC?

[World GK]

- A) USA
- B) Vienna
- C) Jakarta
- D) Pakistan

Answer: Vienna

36). Where is world's largest temple located?

[World GK]

- A) India
- B) Indonesia
- C) Cambodia
- D) Nepal

Answer: Indonesia

37). Vienna is situated on which river?

[World GK]

- A) Nile
- B) Rine
- C) Tiber
- D) Danube

Answer: Danube

38). Tropic of Cancer passes through how many States of India?

[India GK]

- A) 7
- B) 6
- C) 5
- D) 8



Answer: 8

39). Which is the largest Veda among the Vedas?

[India GK]

- A) Atharvaveda
- B) Samaveda
- C) Rigveda
- D) Yajurveda

Answer: Rigveda

40). When is Indian Navy Day celebrated?

[India GK]

- A) 4th December
- B) 8th October
- C) 15th January
- D) 25th July

Answer: 4th December

41). How many satellites does Mars have?

[Science]

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

Answer: 2

42). Majuli river island is situated in which river?

[India GK]

- A) Ganga
- B) Godavari
- C) Brahmaputra
- D) Indus



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Answer: Brahmaputra

43). In which form is Goddess Durga worshipped on the fifth day of Navratri festival? [India GK]

- A) Kalaratri
- B) Skandamata
- C) Katyayani
- D) Kushmanda

Answer: Skandamata

44). Name the body of water that separates the Andaman and Nicobar Islands. [India GK]

- A) 11° Channel
- B) Gulf of Mannar
- C) Andaman Sea
- D) 10° Channel

Answer: 11° Channel

45). Who conducts the election of Vice-President of India? [India GK]

- A) Parliament
- B) President of India
- C) Election Commission of India
- D) Lok Sabha

Answer: Parliament

46). When was the Himachal Pradesh High Court established? [HP GK]

- A) 25th January 1971
- B) 28th January 1956
- C) 27th July 1971
- D) 27th April 1956



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Answer: 25th January 1971

47). Who was the third Chief Minister of Himachal Pradesh? [HP GK]

- A) Yashwant Singh Parmar
- B) Shanta Kumar
- C) Virbhadra Singh
- D) Charanjit Singh

Answer: Virbhadra Singh

48). What was the other name of Shimla Conference that took place on 25th June 1945?

[India GK]

- A) Himachal Pact
- B) Wavell Plan
- C) British India Conference
- D) Gandhi Conference

Answer: British India Conference

49). The highest cricket ground in the world is located at –

[HP GK]

- A) Chail
- B) Dharamsala
- C) Dharni
- D) Neerath

Answer: Chail

50). Where is Tundah Wildlife Sanctuary?

[HP GK]

- A) Kullu
- B) Chamba
- C) Sirmour
- D) Kangra



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Answer: Chamba

51). Where is Nako Lake?

[HP GK]

- A) Kinnaur
- B) Kullu
- C) Shimla
- D) Una

Answer: Kinnaur

52). Who inaugurated the Shimla–Kalka Railway track on 9th November 1903? [HP GK]

- A) Raja Bhim Sen
- B) Lord Curzon
- C) Captain Barog
- D) Lord William James

Answer: Lord Curzon

53). Himurja works in the field of – [HP GK]

- A) Renewable energy
- B) Power sector
- C) Afforestation
- D) Smart cities

Answer: Renewable energy

54). Who is author of “Himachal Past Present and Future”? [HP GK]

- A) Bal Govind
- B) Ramesh Chauhan
- C) Dev Raj Sharma
- D) Shanta Kumar



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Answer: Bal Govind

55). In ICC Women’s ODI World Cup 2025 who led the Indian women’s cricket team? [India GK]

- A) Smriti Mandhana
- B) Harmanpreet Kaur
- C) Deepti Sharma
- D) Mithali Raj

Answer: Harmanpreet Kaur

56). Where was the first radio station set up in Himachal Pradesh?

[HP GK]

- A) Bilaspur
- B) Shimla
- C) Solan
- D) Kangra

Answer: Bilaspur

57). Who won the 2025 Nobel Peace Prize?

[World GK]

- A) Donald Trump
- B) Mary Brunkow
- C) Laszlo Krasznahorkai
- D) Maria Corina Machado

Answer: Maria Corina Machado

58). Who got the Best Hindi Film Award in 71st National Film Awards 2025?

[India GK]

- A) 12th Fail
- B) Jawan
- C) Kathal
- D) Sam Bahadur



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Answer: 12th Fail

59). Who has been appointed as India's first Mental Health Ambassador?

[India GK]

- A) Virat Kohli
- B) Kangana Ranaut
- C) Deepika Padukone
- D) Amitabh Bachchan

Answer: Kangana Ranaut

60). Who is at present the CEO of NITI Aayog?

[India GK]

- A) Narendra Modi
- B) B.V.R. Subrahmanyam
- C) Amitabh Kant
- D) None of the above

Answer: B.V.R. Subrahmanyam

61). What is the sum of all the interior angles of a polygon with 'n' sides?

[Maths]

- A)  $(n-1) 360^\circ$
- B)  $(n-2) 180^\circ$
- C)  $(n+1) 180^\circ$
- D) None of these

Answer:  $(n-2) 180^\circ$

62). What is the length of diagonal of a rectangular field having dimensions 4 cm × 3 cm?

[Maths]

- A) 5 cm
- B) 7 cm
- C) 1 cm
- D) 4 cm



Answer: 5 cm

63). Find the value of k when '-2' is the root of the quadratic equation  $2x^2 - x + k = 0$ .

[Maths]

- A) 10
- B) -10
- C) 8
- D) 9

Answer: -10

64). Find the smallest number which should be multiplied to 2645 to get a perfect square.

[Maths]

- A) 5
- B) 10
- C) 23
- D) None

Answer: 23

65). The area of minor segment of a circle is –

[Maths]

- A)  $\pi r^2 \theta / 360^\circ$
- B)  $2\pi r^2$
- C)  $2\pi r \theta / 360^\circ$
- D) None

Answer:  $\pi r^2 \theta / 360^\circ$

66). Find the value of  $\tan 48^\circ \times \tan 23^\circ \times \tan 42^\circ \times \tan 67^\circ$ .

[Maths]

- A) 0
- B) 1
- C) 4
- D) 3



Answer: 1

67). If  $n = 7$  and  $r = 3$ , then what is the value of  ${}^7C_3$ ?

[Maths]

- A) 35
- B) 210
- C) 120
- D) None

Answer: 35

68). If sum of two natural numbers is 95 and one exceeds the other by 15, find the numbers. [Maths]

- A) 40, 55
- B) 45, 50
- C) 50, 48
- D) None

Answer: 40, 55

69). Find the value of  $\int e^x ( f(x) + f'(x) ) dx$ . [Maths]

- A)  $f'(x) + c$
- B)  $f(x) + c$
- C)  $e^x f(x) + c$
- D)  $e^x f'(x) + c$

Answer:  $e^x f(x) + c$

70). For the quadratic polynomial  $6x^2 - 7x - 3$ , the product of roots will be – [Maths]

- A)  $-6/7$
- B) 7-Jun-25
- C)  $-1/2$
- D) 2-Jan-25



Answer:  $-1/2$

71). Find the remainder when  $x^3 - ax^2 + 6x - a$  is divided by  $(x - a)$ . [Maths]

- A)  $3a$
- B)  $5a$
- C)  $7a$
- D)  $7a^2$

Answer:  $5a$

72). Find the distance between the points  $(a, -a)$  and  $(-a, a)$ .

[Maths]

- A)  $8a$
- B)  $2\sqrt{2} a$
- C)  $4\sqrt{a}$
- D) None of the above

Answer:  $2\sqrt{2} a$

73). Find the HCF of 243, 329 and 670.

[Maths]

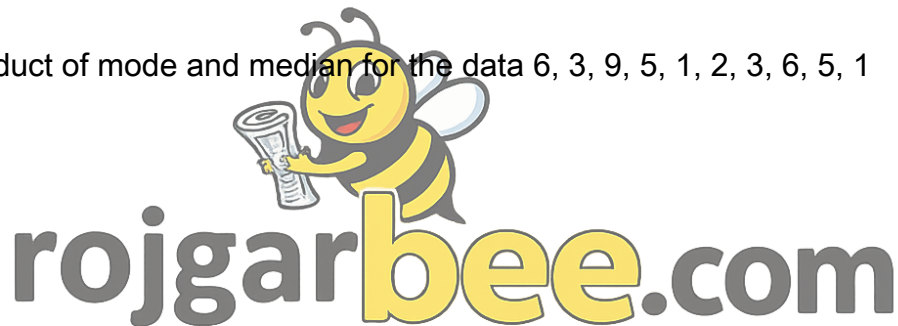
- A) 21
- B) 1
- C) 5
- D) 243

Answer: 1

74). Find the product of mode and median for the data 6, 3, 9, 5, 1, 2, 3, 6, 5, 1

[Maths]

- A) 6
- B) 9
- C) 3
- D) None



Answer: 9

75). Find the 30th term of the A.P. 10, 7, 4, ...

[Maths]

- A) -77
- B) 40
- C) -147
- D) None

Answer: -77

76). The expanded form of  $27x^3 - 64y^3$  is

[Maths]

- A)  $(3x+4y)(9x^2-12xy+16y^2)$
- B)  $(3x-4y)(9x^2+12xy+16y^2)$
- C)  $(3x-4y)^3$
- D) None

Answer:  $(3x+4y)(9x^2-12xy+16y^2)$

77). If a dice is thrown twice, probability of doublet?

[Maths]

- A) 5-Jan-25
- B) 6-Jan-25
- C) 1-Jul-36
- D) None

Answer: 6-Jan-25

78). Find the value of x and y from figure

[Maths]

- A)  $60^\circ, 40^\circ$
- B)  $45^\circ, 90^\circ$
- C)  $45^\circ, 45^\circ$
- D) None



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Answer:  $45^\circ, 45^\circ$

79). Find the value of  $10y(6y+21) \div 5(2y+7)$

[Maths]

- A)  $10y$
- B)  $6y$
- C)  $y$
- D)  $3y+7$

Answer:  $6y$

80). A chalk contains Ca:C:O = 10:3:12. Find % of carbon

[Maths]

- A) 0.1
- B) 0.4
- C) 0.48
- D) None

Answer: 0.1

81). A sum of money triples in 10 years at S.I. Find rate

[Maths]

- A) 0.1
- B) 0.2
- C) 0.05
- D) None

Answer: 0.2

82). Volume of a frustum-shaped glass

[Maths]

- A)  $\frac{1}{3} \pi r^2 h$
- B)  $\frac{1}{2} \pi h (r_1^2 + r_2^2 + r_1 r_2)$
- C)  $\frac{1}{3} \pi h (r_1^2 + r_2^2 + r_1 r_2)$
- D)  $\frac{4}{3} \pi r^3$



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Answer:  $\frac{1}{3} \pi h (r_1^2 + r_2^2 + r_1 r_2)$

83). If  $P(E)=0.995$ , find  $P(\text{Not } E)$

[Maths]

- A) 0.05
- B) 0.005
- C) 0.0005
- D) None

Answer: 0.005

84). Sum of interior angles made on same side of transversal

[Maths]

- A)  $180^\circ$
- B)  $90^\circ$
- C)  $360^\circ$
- D) None

Answer:  $180^\circ$

85). A matrix is square if

[Maths]

- A)  $m < n$
- B)  $m = n$
- C)  $m > n$
- D)  $m = n^2$

Answer:  $m = n$

86). Multiplicative inverse of  $4 - 3i$

[Maths]

- A)  $4 + 3i$
- B)  $(4/25) + (3/25)i$
- C) 25
- D) None



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Answer:  $(4/25) + (3/25)i$

87). 3-digit numbers formed using digits 1–9 (no repetition)

[Maths]

- A) 208
- B) 504
- C) 4536
- D) None

Answer: 504

88). If  $DE \parallel BC$ , find  $x$

[Maths]

- A) 2 cm
- B) 4.5 cm
- C) 3 cm
- D) None

Answer: 2 cm

89). Triangle with sides 7, 24, 25 is

[Maths]

- A) Equilateral
- B) Isosceles
- C) Right Angle
- D) None

Answer: Right Angle

90). If 20% of  $a = b$ , find  $b\%$  of  $a$

[Maths]

- A) 4% of  $a$
- B) 6% of  $a$
- C) 8% of  $a$
- D) 10% of  $a$



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Answer: 0.04

91). Dimensions  $M^x L^y T^z$  correspond to

[Science]

- A) Velocity
- B) Acceleration
- C) Force
- D) Pressure

Answer: Pressure

92). If  $x = a t^2 - b t^3$ , acceleration zero at

[Science]

- A)  $2a/3b$
- B)  $a/b$
- C)  $a/3b$
- D) zero

Answer:  $a/3b$

93). Identify vector quantity

[Science]

- A) Heat
- B) Angular momentum
- C) Distance
- D) Energy

Answer: Angular momentum

94). Force 5 N on weight 9.8 N  $\rightarrow$  acceleration

[Science]

- A)  $49 \text{ m/s}^2$
- B)  $5 \text{ m/s}^2$
- C)  $1.96 \text{ m/s}^2$
- D)  $0.51 \text{ m/s}^2$



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Answer:  $5 \text{ m/s}^2$

95). If  $2i+3j+8k \perp 4i-4j+ak$ , find a

[Science]

- A) 2-Jan-25
- B)  $-1/2$
- C) 1
- D)  $-1$

Answer: 2-Jan-25

96). Two bodies  $m$  &  $4m$  have equal KE, ratio of momentum

[Science]

- A) 31-Dec-1899
- B) 31-Dec-1899
- C) 31-Dec-1899
- D)  $1:\sqrt{2}$

Answer: 31-Dec-1899

97). Direction of angular momentum of rotating body

[Science]

- A) Radius
- B) Tangent
- C) Axis of rotation
- D)  $45^\circ$  to plane

Answer: Axis of rotation

98). If Earth radius shrinks 1%,  $g$  will

[Science]

- A) Decrease
- B) Increase
- C) Same
- D) A or C



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Answer: Increase

99). Metal feels colder than wood because

[Science]

- A) High specific heat
- B) High thermal conductivity
- C) Low specific heat
- D) Low conductivity

Answer: High thermal conductivity

100). In closed cycle: Q, U, W →

[Science]

- A)  $U=0$
- B)  $Q=0$
- C)  $W=0$
- D)  $Q=W=0$

Answer:  $U=0$

101). Carnot engine efficiency (400K,300K)

[Science]

- A) 1
- B) 0.75
- C) 0.333
- D) 0.25

Answer: 0.25

102). Pendulum length increased 2%, time period

[Science]

- A) 0.02
- B) -0.02
- C) 0.01
- D) -0.01



Answer: 0.01

103). Sound wave  $y = 0.0015 \sin (62.8x + 314t)$ , wavelength

[Science]

- A) 0.1
- B) 0.2
- C) 0.3
- D) None

Answer: 0.1

104). Watch taken to moon will

[Science]

- A) No change
- B) Not work
- C) Runs slowly
- D) Runs faster

Answer: Runs slower

105). The work done in placing a charge of  $8 \times 10^{-18}$  C on a capacitor of 100 microfarad is

[Science]

- A)  $6 \times 10^{-32}$  J
- B)  $3.1 \times 10^{-26}$  J
- C)  $4 \times 10^{-10}$  J
- D)  $32 \times 10^{-32}$  J

Answer:  $4 \times 10^{-10}$  J

106). Torque acting on electric dipole of dipole moment  $p$  placed in uniform electric field  $E$  is

[Science]

- A)  $p \times E$
- B)  $p \cdot E$
- C)  $p \times (E \times p)$
- D)  $p \cdot E / p^2$



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Answer:  $p \times E$

107). The energy stored in a capacitor of capacitance  $C$  and potential  $V$

[Science]

- A)  $\frac{1}{2} C^2 V$
- B)  $\frac{1}{2} V^2 C$
- C)  $\frac{1}{2} CV$
- D)  $\frac{1}{2} C^2 V^2$

Answer:  $\frac{1}{2} CV$

108). In bringing one electron towards another, the electrostatic potential energy [Science]

- A) increases
- B) decreases
- C) remains same
- D) becomes zero

Answer: increases

109). If length and radius of a wire are both doubled, resistance of the wire becomes [Science]

- A) resistance doubled & resistivity halved
- B) resistance halved & resistivity same
- C) resistance halved & resistivity doubled
- D) both unchanged

Answer: resistance halved & resistivity same

110). If an ammeter is used instead of a voltmeter, it must be connected [Science]

- A) low resistance in parallel
- B) high resistance in parallel
- C) very high resistance in series
- D) low resistance in series



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Answer: low resistance in parallel

111). Electromagnets are made of soft iron because soft iron has [Science]

- A) high retentivity & high coercivity
- B) low retentivity & low coercivity
- C) high retentivity & low coercivity
- D) low retentivity & high coercivity

Answer: high retentivity & low coercivity

112). The core of a transformer is laminated to

[Science]

- A) prevent rusting
- B) minimize eddy current loss
- C) increase voltage ratio
- D) reduce weight

Answer: minimize eddy current loss

113). Speed of electromagnetic waves in vacuum is

[Science]

- A)  $\epsilon_0 \mu_0$
- B)  $\sqrt{(\epsilon_0 \mu_0)}$
- C)  $1/\sqrt{(\epsilon_0 \mu_0)}$
- D)  $1/\epsilon_0 \mu_0$

Answer:  $1/\sqrt{(\epsilon_0 \mu_0)}$

114). Speed of light in water ( $n=1.33$ )

[Science]

- A)  $3 \times 10^8$
- B)  $2.26 \times 10^8$
- C)  $4 \times 10^8$
- D)  $1.33 \times 10^8$



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Answer:  $2.26 \times 10^8$

115). In refraction, light bends because

[Science]

- A) frequency changes
- B) elasticity changes
- C) speed of light changes
- D) amplitude decreases

Answer: speed of light changes

116). Sir C.V. Raman got Nobel Prize for which phenomenon?

[Science]

- A) Scattering
- B) Diffraction
- C) Interference
- D) Polarization

Answer: Scattering

117). A photon has energy  $E$ , velocity  $c$  and frequency  $\nu$ , which represents its wavelength?

[Science]

- A)  $hc/E$
- B)  $h\nu/c$
- C)  $h\nu/c^2$
- D)  $h\nu$

Answer:  $hc/E$

118). If half-life of a radioactive substance is 225.8 min, decay constant is

[Science]

- A)  $3.1 \times 10^{-3} \text{ min}^{-1}$
- B)  $3.1 \times 10^{-4} \text{ min}^{-1}$
- C)  $3.1 \times 10^{-6} \text{ min}^{-1}$
- D)  $3.1 \times 10^{-9} \text{ min}^{-1}$



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Answer:  $3.1 \times 10^{-3} \text{ min}^{-1}$

119). Which is used as moderator in nuclear reactor?

[Science]

- A) Cadmium
- B) Plutonium
- C) Uranium
- D) Heavy water

Answer: Heavy water

120). Which impurity produces N-type semiconductor when added to silicon?

[Science]

- A) Phosphorus
- B) Aluminium
- C) Magnesium
- D) Both (B) & (C)

Answer: Phosphorus

121). What type of stoichiometric defect is shown by ZnS?

[Science]

- A) Frenkel defect
- B) Metal excess defect
- C) Schottky defect
- D) Metal deficiency defect

Answer: Frenkel defect

122). In ideal solutions, enthalpy change  $\Delta_{mix}H$  is

[Science]

- A)  $\Delta_{mix}H > 1$
- B)  $\Delta_{mix}H < 1$
- C)  $\Delta_{mix}H = 0$
- D)  $\Delta_{mix}H \geq 1$



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Answer:  $\Delta_{mix}H = 0$

123). Colligative property used to find molar mass of polymers & proteins

[Science]

- A) Depression in freezing point
- B) Relative lowering of vapour pressure
- C) Elevation in boiling point
- D) Osmotic pressure

Answer: Depression in freezing point

124). Effect of temperature on Henry's constant KH

[Science]

- A) Increases
- B) Decreases
- C) Remains constant
- D) Decrease then increase

Answer: Increases

125). Pressure of H<sub>2</sub> to make H<sub>2</sub>-electrode potential zero at 298 K

[Science]

- A) 10<sup>-10</sup> atm
- B) 10<sup>-4</sup> atm
- C) 10<sup>-14</sup> atm
- D) 10<sup>-12</sup> atm

Answer: 10<sup>-4</sup> atm

126). Unit of rate constant K for first-order reaction

[Science]

- A) mol L<sup>-1</sup> s<sup>-1</sup>
- B) s<sup>-1</sup>
- C) L mol<sup>-1</sup> s<sup>-1</sup>
- D) L<sup>2</sup> mol<sup>-2</sup> s<sup>-1</sup>



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Answer: s<sup>-1</sup>

127). Which is an acidic oxide?

[Science]

- A) Mn<sub>2</sub>O<sub>7</sub>
- B) Mn<sub>3</sub>O<sub>4</sub>
- C) MnO
- D) Mn<sub>2</sub>O<sub>3</sub>

Answer: Mn<sub>2</sub>O<sub>7</sub>

128). Maximum oxidation state of osmium (Os)

[Science]

- A) 6
- B) 7
- C) 5
- D) 8

Answer: 8

129). No. of unpaired electrons in  $Ni^{2+}$

[Science]

- A) 0
- B) 2
- C) 4
- D) 8

Answer: 2

130). Most stable form of carbon thermodynamically

[Science]

- A) Diamond
- B) Graphite
- C) Fullerene
- D) Coal



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Answer: Graphite

131). Which oxide is neutral?

[Science]

- A) CO
- B)  $SnO_2$
- C) ZnO
- D)  $SiO_2$

Answer: CO

132). Percentage of lead in lead pencil

[Science]

- A) 20
- B) 0
- C) 80
- D) 60

Answer: 0

133). Ions produced from complex  $[\text{Co}(\text{NH}_3)_6]\text{Cl}_2$  in solution

[Science]

- A) 6
- B) 4
- C) 3
- D) 2

Answer: 3

134). Carbon has oxidation number zero in

[Science]

- A)  $\text{CH}_4$
- B)  $\text{CH}_3\text{Cl}$
- C)  $\text{CCl}_4$
- D)  $\text{CH}_2\text{Cl}_2$



Answer:  $\text{CH}_2\text{Cl}_2$

135). Maximum hydrogen bonds formed by one  $\text{H}_2\text{O}$  molecule

[Science]

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

Answer: 4

136). Which acts as rocket propellant?

[Science]

- A) Liquid O<sub>2</sub> – Liquid Ar
- B) Liquid N<sub>2</sub> – Liquid O<sub>2</sub>
- C) Liquid O<sub>2</sub> – Liquid H<sub>2</sub>
- D) Liquid H<sub>2</sub> – Liquid N<sub>2</sub>

Answer: Liquid O<sub>2</sub> – Liquid H<sub>2</sub>

137). Potassium metal is stored in

[Science]

- A) Alcohol
- B) Water
- C) Kerosene
- D) Liquid ammonia

Answer: Kerosene

138). Chemical formula of Plaster of Paris

[Science]

- A) CaSO<sub>4</sub>·2H<sub>2</sub>O
- B) CaSO<sub>4</sub>·½H<sub>2</sub>O
- C) CaSO<sub>4</sub>·¾H<sub>2</sub>O
- D) CaSO<sub>4</sub>·H<sub>2</sub>O



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Answer: CaSO<sub>4</sub>·½H<sub>2</sub>O

139). Reaction  $\text{Fe}_2\text{O}_3 + 2\text{Al} \rightarrow \text{Al}_2\text{O}_3 + 2\text{Fe}$  is

[Science]

- A) Combination
- B) Double displacement
- C) Decomposition
- D) Displacement

Answer: Displacement

140). Phenolphthalein turns pink in which solution?

[Science]

- A) Basic
- B) Neutral
- C) Acidic
- D) All of these

Answer: Basic

141). Lightest metal floating on water

[Science]

- A) Na
- B) Sc
- C) Li
- D) Ca

Answer: Li

142). Gases show which property due to high speed & large spacing?

[Science]

- A) Scattering
- B) Diffusion
- C) Rigidity
- D) Condensation



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Answer: Diffusion

143). Rutherford alpha scattering discovered

[Science]

- A) Atomic nucleus
- B) Electron
- C) Proton
- D) Neutron

Answer: Atomic nucleus

144). Radioactive isotope of hydrogen

[Science]

- A) Protium
- B) Deuterium
- C) Tritium
- D) None

Answer: Tritium

145). Test to differentiate 1°, 2°, 3° amines

[Science]

- A) Lucas test
- B) Tollen's test
- C) Hinsberg test
- D) Ferric chloride test

Answer: Hinsberg test

146). Auto-reduction process NOT used for which metal?

[Science]

- A) Mercury
- B) Copper
- C) Lead
- D) Iron



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Answer: Iron

147). IUPAC name of m-Cresol

[Science]

- A) 3-Methylphenol
- B) 3-Chlorophenol
- C) 3-Methoxyphenol
- D) Benzene-1,3-diol

Answer: 3-Methylphenol

148). Test to distinguish acetaldehyde & acetone

[Science]

- A)  $\text{FeCl}_3$
- B)  $\text{NaHCO}_3$
- C) Tollen's test
- D) Molisch test

Answer:  $\text{NaHCO}_3$

149). Species initiating nitration of benzene

[Science]

- A)  $\text{NO}_2$
- B)  $\text{NO}^+$
- C)  $\text{NO}_2^+$
- D)  $\text{NO}_2^-$

Answer:  $\text{NO}_2^+$

150). Element with atomic no. 57 belongs to

[Science]

- A) s-block
- B) p-block
- C) d-block
- D) f-block



Answer: d-block