

## Institute of Medicine

### Tick the best alternative

#### SCIENCE

- हलितकण जमले मूर्यको प्रकाशलाई मंचय गर्ने क्षमता राख्छ , त्यसको बासस्थान..... मा हो ।  
(Green pigments capable of capturing the energy of sunlight are located within the..... )  
a. golgi complex  
b. endoplasmic  
c. chloroplasts  
d. cell wall
- पानीको osmotic movement गर्दा विन्नामा पर्ने चापलाई ..... भनिन्छ ?  
(Pressure on a plant cell wall caused by osmotic movement of water is called.....)  
a. osmotic pressure  
b. turgor pressure  
c. tonic pressure  
d. hypertonic pressure
- तल दिएको कुन चाहे glucose molecule को सूत्र हो ?  
(Which of the following molecule is Glucose?)  
a.  $C_3H_6O_3$   
b.  $C_6H_{12}O_6$   
c.  $C_3H_5OH$   
d.  $C_6H_{10}O_5$
- Cell cycle को कुन चाहे phase मा DNA को प्रतिलिपि बन्छ ?  
a. prophase  
b. interphase  
c. anaphase  
d. telophase
- तल दिईएको कुन चाहे तनिकावाट fungus ले क्षाना प्राप्त गर्न सक्दैन ?  
(Which of the following ways of acquiring nutrients is not characteristics of fungi?)  
a. heterotrophic  
b. autotrophic  
c. saprophytic  
d. parasitic
- विन्नाको कुन भाग बढेर root hair बन्छ ?  
a. ground tissue  
b. periderm  
c. cuticle  
d. epidermis
- दुई बटा परमाणु विचको आकर्षण शक्तिद्वारा दुईबटा electron हरू मिलेर बनेको बण्ड लाई के भनिन्छ ?  
(A bond formed due to the force of attraction between a shared pair of electrons of two atoms is known as..... )  
a. electrovalent bond  
b. co-ordinate covalent bond  
c. co-valent bond  
d. metallic bond
- यदि दिईएको तापक्रममा थप घोल्य (solute) घोलक (solution) मा घोलिदैन भने यस्तो लाई ..... भनिन्छ ।  
(In the given temperature, when the solute is added into the solution and if the solute is no more dissolved, then the solution is called.....)  
a. solution  
b. saturated solution  
c. unsaturated solution  
d. super saturated solution
- यदि दिईएको orbit को K र L शेलमा atoms भनिएको छ भने त्यसमा जम्मा कति बटा Electrons हरू हुन्छन् ? (If in a given K and L shells of the orbits are filled with atoms , then how many electrons are there?)  
a. 7  
b. 8  
c. 9  
d. 10

10. ब्याट्री एउटा यन्त्रो डिआइज्म हो जसले ..... लाई ..... मा परिणत गर्दछ ? (Cell is a device which change ..... into..... )  
 a. chemical energy into electrical energy  
 b. Electrical energy into chemical energy  
 c. Light energy into electrical energy  
 d. Magnetic energy into Chemical energy
11. Dry cell मा तल दिएको मध्ये कुन चाहि anode हो ? (In dry cell, which one of the following is used as anode?)  
 a. zinc  
 b. carbon  
 c. copper  
 d. aluminium
12. पानीमा बरफ किन तैरिन्छ ? (Why ice floats in water?)  
 a. बरफ धेरै चिम्नो भएकोले  
 b. बरफको घनत्व पानीको भन्दा कम भएकोले  
 c. बरफको घनत्व पानीको भन्दा बढी भएकोले  
 d. बरफ भन्दा पानी बढि भएकोले
13. पौडी स्वेल्दा पानीलाई हातले धकेल्यो भने पौडीने मानिस अगाडि बढ्छ । यसमा न्युटनको कुन सिद्धान्त प्रयोग हुन्छ ? (When a person swims, water is pushed back ward by his/her hand and then the person moves forward, which of the following Newton's law is applied here?)  
 a. first law  
 b. second law.  
 c. third law  
 d. none of above
14. कुन Force ले गर्दा वायुमण्डलमा फैलिएको बस्तु पृथ्वीमा झर्दछ ? (When an object is thrown into the air, due to which force it falls down?)  
 a. nuclear force  
 b. frictional force  
 c. gravitational force  
 d. mechanical force
15. अल्कोहल थर्मोमीटर कहां प्रयोग गरिन्छ ? (Alcohol thermometer can be used at ..... )  
 a. very hot place  
 b. very cold place  
 c. ocean  
 d. desert
16. बोटल ओपनर कुन चाहि लिभर क्लास सम्बन्धित छ? (To which class of lever do a bottle opener belong?)  
 a. 1<sup>st</sup> class  
 b. 2<sup>nd</sup> class  
 c. 3<sup>rd</sup> class  
 d. none
17. कुनमा विद्युत कन्नेन्ट हुन्छ ? (In which combination electric current is high?)  
 a. Series combination  
 b. Single combination  
 c. Parallel combination  
 d. none
18. डी. एन. ए. ( human DNA) ..... हुन्छ ।  
 a. single standard structure  
 b. double standard structure  
 c. triple standard structure  
 d. multiplestandarded structure
19. तलका मध्ये कुनचाहि चाँदीको धाउ होईन ? (which of the following is not a silver ore?)  
 a. Ag<sub>2</sub>S  
 b. AgSO<sub>4</sub>  
 c. (AgCu<sub>2</sub>)<sub>2</sub>  
 d. AgCl

20. अर्चिनको सिद्धान्त कुनसंग मिल्छ ?  
 a. adaptation  
 b. heredity  
 c. evolution  
 d. mutation
21. अर्को कुन भागमा पात जोडिएको हुन्छ ? (Leaves are attached to the stem at ..... )  
 a. nodes  
 b. internodes  
 c. auxiliary metistems  
 d. apical meristems
22. तल दिएको पदार्थहरू मध्ये कुन Electrolyte होईन? (Which one of the following is not an electrolyte?)  
 a. sulphuric acid  
 b. ethyl alcohol  
 c. hydrochloric acid  
 d. sodium hydroxide
23. गच्छौला ( earthworm ) तल दिएको कुन समुहमा पर्दछ? (Earthworm is in the phylum of ..... )  
 a. Platyhelminthis  
 b. Arthropoda  
 c. Annelida  
 d. Pogonophora
24. विरुवाको कुन भाग बढेर root hair बन्दछ? (Root hairs are formed from extensions of the ..... )  
 a. ground tissue  
 b. periderm  
 c. cuticle  
 d. epidermis
25. पोटशीयमको electronic configuration कुन हो? (What is the electronic configuration of potassium?)  
 a. 2,7,8,2  
 b. 2,7,7,3  
 c. 2,8,8,1  
 d. 1,8,8,2

#### MATHEMATICS

26. If the numbers 8 & 12 are increased by 25% and 100/3% respectively. What will be the average increment?  
 a. 20%  
 b. 30%  
 c. 25%  
 d. 35%
27. After Paying tax at the rate of 8 paisa per rupee a man has Rs. 6900 left . What was his income ?  
 a. Rs. 7500  
 b. Rs. 5500  
 c. Rs. 6500  
 d. Rs. 8500
28. What is the value of  $10^{-1/2} - 0 + 5 - 1$  ?  
 a. 5/9  
 b. 9/4  
 c. 9/5  
 d. 6/7
29. If  $\frac{(x+1)}{x} = 3$  Find the value of  $\frac{(x^2+1)}{x^2}$   
 a. 11  
 b. 8  
 c. 13  
 d. 17

30. Find the value of :  $8\sqrt{45} - 3\sqrt{20}$
- $18\sqrt{5}$
  - $20\sqrt{5}$
  - $15\sqrt{5}$
  - $19\sqrt{5}$
31. The factors of :  $xy + xz - (y+z)^2$  are
- $(y-z)(x-y-z)$
  - $(y+z)(x-y-z)$
  - $(y+z)(x+y-z)$
  - $(y+z)(x+y+z)$
32. The volume of a cube is  $729\text{cm}^3$ . Find its total surface area .
- $498\text{ cm}^2$
  - $480\text{ cm}^2$
  - $478\text{ cm}^2$
  - $486\text{ cm}^2$
33. How many lead balls of radius 1cm can be made from a solid sphere of diameter 12 cm ?
- 240
  - 212
  - 216
  - 225
34. If 540 cm long wire is required to fence a square ground with three rounds . Find the area of the ground ?
- $2030\text{ cm}^2$
  - $2020\text{ cm}^2$
  - $2035\text{ cm}^2$
  - $2025\text{ cm}^2$
35. If the cost of one strip of D.Cold is Rs. 2.50 . Find the cost of one box (100 tabs) of D.Cold.
- Rs.25
  - Rs. 20
  - Rs. 30
  - Rs. 35
36. The value of  $0.3 \times 0.03 \times 0.003$  is :
- $27 \times 10^6$
  - $27 \times 10^{-5}$
  - $27 \times 10^{-6}$
  - $27 \times 10^5$
37. A sum of money earns the interest at the rate of Rs. 10 per Rs. 50. In how many years would it triple itself ?
- 10 years
  - 15 years
  - 12 years
  - 13 years
38. The solution of  $x$  in  $4^x = 1/8$  is :
- $2/3$
  - $-3/2$
  - $3/2$
  - $-2/3$
39. The shaded part represents the set:
- $B - (A \cap C)$
  - $(A \cap B) \cap C$
  - $B - (A \cup C)$
  - none

40. In a figure, O is the Centre, xoy is the diameter of a circle and  $\angle wyz = 132^\circ$ . Find  $\angle wxy$  :
- $40^\circ$
  - $45^\circ$
  - $49^\circ$
  - $42^\circ$
42. एउटा क्यामेरा रू 1600 मा बेच्दा 20% घाटा लाग्यो भने त्यो क्यामेराको पनल मूल्य कति होला ?
- Rs. 1800
  - Rs. 2000
  - Rs. 2200
  - Rs. 2400
43. मैले 35% छुट पाएँ पनि एउटा T-shirt को रू 520 तिरेँ भने त्यो T-shirt को अंकित मूल्य (Marked price) कति थियो होला ?
- Rs. 600
  - Rs. 700
  - Rs. 800
  - Rs. 1000
44. Group A = [a, b, c, d, e] र group B = [a, e, i, o, u] भए A - B बराबर कति हुन्छ ?
- [a, c]
  - [b, c, d]
  - [c, d]
  - [o, u]
45. यदि  $A = \{1, 2, \dots, 10\}$  र  $B = \{2, 4, 6, 8, 10\}$  भए तलका मध्ये कुन ठिक छ ?
- $B \subset A$
  - $A \cap B = \{2, 4, 6, 8, 10\}$
  - $A \cup B = \{1, 2, \dots, 10\}$
  - All of above
46. Group A भनेको English वर्णमाला vowels को समूह हो र Group B भनेको Consonants समूह हो भने तलको मध्ये कुन ठिक छ ?
- $A = B$
  - $A \subset B$
  - $B \subset A$
  - $A \cap B = \phi$
47. 20 जना विद्यार्थी मध्ये 12 जनालाई English र 15 जनालाई Math मन पर्छ । ती मध्ये केहिलाई दुवै विषय (subject) मन पर्छ भने दुवै विषय मन पर्ने कति जना छन् ?
- 5
  - 6
  - 7
  - 8
48. (Root equation) बर्ग समीकरण कति डिग्रीको समीकरण हो?
- 1
  - 2
  - 3
  - 4
49.  $x^3 - 5x^2y^2 + 6x^4y^6$  कति डिग्रीको अभिव्यञ्जक (Expression) हो ?
- 3
  - 4
  - 16
  - 10
50. 10 mg को पाउडर औषधी 30 ml पानीमा घोलेर औषधि बनाईएको छ । त्यसबाट प्रत्येक डोजमा 1 mg मात्र खुवाउनु पर्छ भने प्रत्येक डोजमा कति भोल औषधि दिनु पर्छ ?
- 1ml
  - 2ml
  - 3ml
  - 5ml

## HEALTH

51. The longest part of the large Intestine.
  - a. caecum
  - b. ascending colon
  - c. sigmoid colon
  - d. transverse colon
52. Pepsin secretes from :
  - a. saliva
  - b. bile
  - c. gastric juice
  - d. intestinal juice
53. Male genital organs , except :
  - a. prostate gland
  - b. seminal vesicle
  - c. uterine tubes
  - d. testes
54. Cranial nerves are ..... in number.
  - a. twelve
  - b. twenty four
  - c. thirty two
  - d. nine
55. Bile secretes from
  - a. pancreas
  - b. gall bladder
  - c. cystic duct
  - d. liver
56. The life span of RBC is :
  - a. 100 days
  - b. 110 days
  - c. 120 days
  - d. 130 days
57. Minute units in the kidney is known as :
  - a. nephron
  - b. capsule
  - c. tubule
  - d. Adrenal
58. Blood is a kind of :
  - a. epithelial tissue
  - b. muscle tissue
  - c. connective tissue
  - d. nervous tissue
59. Bir Hospital was established on :
  - a. 1947 B.S. Shrawan
  - b. 1937 B.S. Shrawan
  - c. 1947 B.S. Ashwin
  - d. 1937 B.S. Ashwin
60. The normal capacity of the urinary bladder :
  - a. 200 ml
  - b. 300 ml
  - c. 400 ml
  - d. 500ml
61. The main function of the heart is :
  - a. purify the used blood
  - b. pump out the blood all over the body.
  - c. collection of blood for future use
  - d. none of above

62. The 1<sup>st</sup> branch of the artery is called :
- coronary artery
  - pulmonary artery
  - renal artery
  - hepatic artery
63. Goitre is a disease that is connected to :
- over secretion of thyroid hormones
  - low secretion of thyroid hormones.
  - Inadequate amount of iodine in the body
  - above a & c
64. The term ventilation is used for :
- use of fan in the room
  - process of replacement of foul air by fresh air
  - use of beautiful windows in the room
  - none of above
65. Diseases are caused by :
- germ
  - nutritional unbalance
  - unhealthy environment
  - all of above
66. When a disease spread through cough, sneeze, breath that is called .
- airborne disease
  - insect borne disease.
  - fomites borne disease
  - vector borne disease
67. T.T vaccine is used to prevent :
- whooping cough
  - TB
  - tetanus
  - typhoid
68. Immediately after dog bite the wound should be :
- cleaned & soap/ water
  - keep open
  - dressing only at hospital
  - all of above
69. A stone formed in biliary tract is known as :
- bladder stone
  - renal stone
  - gall stone
  - none of above
70. Asthma is the condition of :
- narrowing bronchus
  - collapsing trachea
  - atrophy of oesophagus
  - shrinkage of Larynx
71. A patient must keep identity card with their bio data in the condition of :
- cardiac disease
  - diabetic disease
  - renal disease
  - pulmonary disease
72. Common cancer in Nepal is
- liver
  - lungs
  - breast
  - uterus
73. The best and successful artificial respiration is :
- mechanical respiration
  - ventilator respiration
  - cardiac respiration
  - mouth to mouth respiration

74. If you got an accident of electric shock , first of all :
- remove the person from electric contact
  - turn off main electric supply switch off
  - seek medical help
  - give artificial respiration
75. Vasectomy is a permanent family planning method for
- male
  - female
  - both
  - none of above

## ENGLISH

76. 'Why are you late?' The teacher asked me .....
- why I am late
  - why I was late
  - Why I was being late
  - why was I late.
77. "I am very sorry." He says .....
- he was very sorry
  - he had been very sorry
  - he is very sorry
  - he will be very sorry
78. He got the job..... he had no qualifications .
- because
  - because of
  - in spite of
  - although
79. .... you nor your sister could pass the entrance.
- Either
  - Both
  - Neither
  - Also
80. His mother made him ..... his medicine.
- take
  - to take
  - taken
  - took
81. The farmer had the rice ..... by the workmen .
- harvest
  - to harvest
  - harvested
  - harvesting
82. If water freezes, it ..... a solid .
- will become
  - become
  - would become
  - would have become
83. She would lose weight if she ..... eating so much .
- stops
  - stopped
  - will stop
  - had stopped
84. Maya's finished drawing a picture ..... ?
- doesn't she
  - isn't she
  - hasn't she
  - won't she

85. We shall help him . He ..... by us.  
a. is helped  
b. was helped  
c. has been helped  
d. will be helped
86. Mary got her husband ..... a purse for her .  
a. buy  
b. to buy  
c. bought  
d. buying
87. She didn't tell me what had happened . I ..... what had happened ?  
a. was not told  
b. am not told  
c. hadn't told  
d. didn't told
88. You have killed a snake . A snake..... by you .  
a. was killed  
b. have been killed  
c. has been killed  
d. is killed
89. I made John & Mary ..... angry by teasing them .  
a. feel  
b. to feel  
c. felt  
d. feeling
90. Nobody will solve this problem . This problem .....  
a. isn't solved  
b. won't be solved  
c. will not solved  
d. was solved
91. The students ..... English now .  
a. are being taught  
b. are taught  
c. was taught  
d. is being taught
92. My sister'd eat fish , .....?  
a. hadn't she  
b. wouldn't she  
c. hasn't she  
d. will you
93. They'd have enjoyed listening pop songs,.....?  
a. wouldn't they  
b. hadn't they  
c. didn't they  
d. haven't they
94. This book is very good . It ..... by Devkota in 1950 .  
a. is written  
b. was written  
c. has been written  
d. will be written
95. You have not got your shoes ..... by the cobbler .  
a. polish  
b. to polish  
c. polished  
d. polishing
96. No one invited him . It means he .....  
a. wasn't invited  
b. was invited  
c. isn't invited  
d. will be invited

97. Tea is being prepared by Ritu. It means Ritu ..... tea .  
a. prepare  
b. prepares  
c. is preparing  
d. was preparing
98. Someone stole my goats . My goats .....  
a. was stolen  
b. were stolen  
c. are stolen  
d. have been stolen
99. They turned my offer down . My offer ..... down .  
a. were turned  
b. was turned  
c. is turned  
d. has been turned
100. Pinkey is ..... one legged girl.  
a. an  
b. a  
c. the  
d. nothing