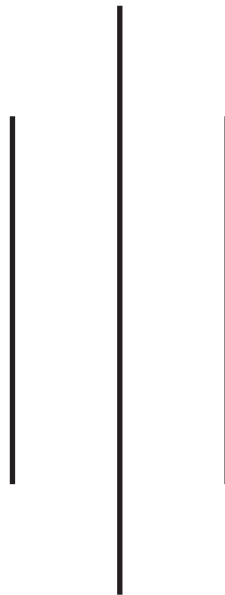


OMEGA

Entrance Model & Practice Questions



OMEGA SECONDARY SCHOOL

Kumaripati, Lalitpur, Nepal

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Grade: XI - Science

Entrance Model Questions

F.M.: 100

P.M.: 40

Students willing to study science in grade XI & XII are required to give entrance examinations of Science, English, Mathematics, Optional Mathematics, Computer & General Knowledge.

1. Which one of the following is fundamental unit?
a. Newton b. Joule c. Candela d. Watt
2. Which one of following coelenterates is found in fresh water?
a. Hydra b. Corals c. Jelly fish d. sea- anemone
3. When Sita observed specimen in the laboratory, she found that both of the organism were long and cylinder. She also found that a organism A has cylinder segmented body and organism A has not segmented body. By the study of above characteristics which statement is true for these organism?
a. Organism A has hermaphrodite where as organism B is unisexual
b. Organism A is unisexual where as organism B is hermaphrodite
c. Organism A is diploblastic where as organism B is triploblastic
d. Organism A is triploblastic whereas organism B is diploblastic
4. Which one of the following organism have cell wall in their cell?
a. Fungi, Plantae, Animalia b. Fungi, Plantae, Protista
c. Fungi, Monera, Animalia d. Fungi, Plantae, Monera
5. What is the process in which the haploid unfertilized egg of honey bee changes into drone?
a. Mitosis b. Meiosis c. Parthenogenesis d. Karyokinesis
6. What is the commercial farming/raring of bees called?
a. Sericulture b. Apiculture c. Horticulture d. Agriculture
7. Who is the first test tune in the world?
a. Dolly b. O.M Tamang c. A. Fleming d. Louise Joy Brown
8. Which cell division occurs for the formation of gametes?
a. Mitosis b. Meiosis c. Amitosis d. Indirect
9. What is the hybrid/crossbreed of male lion and a female tiger called?
a. Hinny b. Liger c. Tigon d. Tilon
10. What is the plasma of the blood after removing fibrinogen is called?
a. Serum b. Venum c. Platelets d. Grnules
11. Which blood cells secretes antibody?
a. Eosinophils b. Monocytes c. Lymphocytes d. Neutrophils
12. What is the normal range of uric acid in adults?
a. 2.5-7.2 mg/dL b. 3.5-7.2 mg/dL c. 3.5-3.7 mg/dL d. 3.5-8.2 mg/dL
13. Which disease is caused by the deficiency of haemoglobin?
a. Anaemia b. Haemophilia c. Leukemia d. Diabetes
14. Which of the following is the common blood group?
a. A b. B c. AB d. O
15. What is the deposit of fats or cholesterol on the inner wall of the artery called?
a. Catheter b. Clot c. Valve d. Plaque
16. What is the scientific name of Neem?
a. *Artemisia indica* b. *Justica adhatoda* c. *Azadirachta indica* d. *Ocimum sanctum*
17. Which of the following is consider as a 'Biological gold'?
a. Bojho b. Ghod tapre c. Turmeric d. Yarshagumba

18. Which of the following is the value of g at the pole?
 a. 9.78m/s^2 b. 9.81m/s^2 c. 9.73m/s^2 d. 9.83m/s^2
19. What is the new gravitational force between two objects when their masses are doubled, and their distance is made tripled?
 a. The force becomes 6 times of the initial b. The force becomes $\frac{4}{9}$ times of the initial
 c. The force becomes $\frac{2}{3}$ times of the initial d. The force becomes 12 times of the initial
20. What is S.I. unit of pressure?
 a. Newton (N) b. Watt (W) c. Hertz (Hz) d. Pascal (Pa)
21. When an object is suspended using spring balance in air, water and glycerine, the weight is found to be W_1 , W_2 and W_3 respectively. What will be the weight of the object in these medium in increasing order?
 a. $W_1 < W_2 < W_3$ b. $W_2 < W_1 < W_3$ c. $W_3 < W_1 < W_2$ d. $W_3 < W_2 < W_1$
22. What happens when water at 4°C is cooled to 0°C ?
 a. Volume increase b. Volume decrease
 c. Density decrease d. Volume and density increase
23. At what temperature $^\circ\text{C}$, $^\circ\text{F}$ equal numerically?
 a. 40°C b. 0°C c. -4°C d. -40°C
24. Which of the following is refractive index of water?
 a. 1.36 b. 1.33 c. 1.56 d. 1.47
25. What is the Power of diverging lens with focal length 25cm?
 a. 4D b. 0.25D c. -0.25D d. -4D
26. Which of the following needs step down transformer to operate?
 a. Refrigerator b. Television c. X-ray machine d. Radio
27. What is an approximate value of Hubbles constant?
 a. 73km/s/Mpc b. 73m/s/Mpc c. 73km/h/Mpc d. 73km/s/m
28. Which one of the following is the first stage towards a signal receiver?
 a. Demodulator b. Decoder c. Encoder d. Modulator
29. Which one of the following is the smallest unit of digital information/computer memory?
 a. Byte b. Bit c. Nimble d. Tera bite
30. Which one of the following is most reactive metal?
 a. K b. Na c. Li d. Rb
31. Which one of the following belongs to s-block?
 a. K b. F c. Si d. O
32. What type of chemical reaction is the reaction between silver nitrate and sodium chloride?
 a. Combination reaction b. Decomposition reaction
 c. Acid base reaction d. Double displacement reaction
33. What products are formed when limestone is strongly heated at high temperature?
 a. Methane and quick lime b. Quicklime and carbondioxide
 c. Ammonia and quick lime d. Calcium and quick lime
34. What is the composition of carbogen?
 a. Mixture of hydrogen and carbondioxide b. Mixture of hydrogen and oxygen
 c. Mixture of carbondioxide and ammonia d. Mixture of nitrogen and carbondioxide
35. Which gas is used make a blue print?
 a. Carbondioxide b. Ammonia c. Nitrogen d. Hydrogen
36. Which one is the main ore of Iron?
 a. Haematite b. Bauxite c. Cuprites d. Quartz vein
37. What is the catalyst used in manufacture ammonia by Haber's process?
 a. Iron b. Molybdenum c. Silica d. Nickel
38. Which hydrocarbon consists of equal number of carbon and hydrogen?
 a. Ethane b. Ethene c. Ethyne d. Propene
39. Which one of the following is used to ripen the fruits?
 a. Calcium carbide b. Calcium carbonate c. Sodium Sulphate d. Sodium Carbonate

40. In which group does sodium stearate lie?
 a. Detergent b. Soap c. Insecticides d. Food preservatives
41. If A and B are not mutually exclusive then probability of A or B.
 a. $P(A \cup B) = P(A) + P(B)$ b. $P(A) + P(B) + P(A \cap B)$
 c. $P(A) + P(B) - P(A \cap B)$ d. $P(A) \cdot P(B)$
42. Three children are born in family. Calculate the probability of getting exactly two sons.
 a. $\frac{1}{3}$ b. $\frac{3}{8}$ c. $\frac{2}{26}$ d. $\frac{21}{26}$
43. In a class of 60 students, 70% failed in English, 60% failed in Nepali and 50% failed in both subjects. Find how many students pass in both subject?
 a. 12 b. 24 c. 36 d. 48
44. In a family of 25 members, 15 like meat 12 like fruit and 10 like both, find how many like only one item either meat or fruit?
 a. 5 b. 7 c. 17 d. 37
45. What percent of vowels are there in the word "EDUCATION"?
 a. 44.45% b. 55.56% c. 65.66% d. None
46. If 120% of 'a' is equal to 80% of 'b' what is the value of 'a + b'
 a. 7 b. 3 c. 4 d. 5
47. The curve surface area of right circular cone is 2310 cm^2 and the radius of the back is 21 m, then slant height of cone is
 a. 53 cm b. 35 cm c. 42 cm d. 40 cm
48. Solid cylinder of brass 8 cm height and 4 cm radius is melted and recast into a cone of diameter 3 cm. Find the height of cone.
 a. 108.8 cm b. 48 cm c. 140.45 cm d. 80 cm
49. The equation $ax^2 + bx + c = 0$ has equal roots if
 a. $b^2 > 4ac$ b. $b^2 = ac$ c. $b^2 = 4ac$ d. $b^2 < 4ac$
50. The roots of general quadratic equation $ax^2 + bx + c = 0$ are
 a. $\frac{\pm b - \sqrt{b^2 - 4ac}}{2a}$ b. $\frac{b \pm \sqrt{b^2 - 4ac}}{2a}$ c. $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ d. $\pm \sqrt{\frac{b}{a}}$
51. Ram said to Sita, 'I am twice as old as you were when I was as old as you are. The sum of their present ages is 49 yrs. Then their ages in years are...
 a. 28 and 21 b. 26 and 23 c. 32 and 17 d. 29 and 20
52. For Central values, mean, median and mode which one of the following relations is correct?
 a. Mode = 3 median – 2 mean b. Mode = 3 median – 2 median
 c. Mode = 3 median + 2 mean d. Mode = 2 median – 3 mean
53. The mean of 20 numbers is 9. If 3 is added to every number, what will be the mean?
 a. 12 b. 10 c. 9.15 d. 9
54. What is the total surface of a cone having radius r and slant height h ?
 a. $\pi r l$ b. $\pi r l^2$ c. $\pi r(r + l)$ d. $\frac{1}{3} \pi r l^2$
55. It is given that $n(A) = 15$, $n(B) = 12$ and $n(A \cup B) = 20$, what is the value of $n(A \cap B)$.
 a. 47 b. 7 c. 17 d. 23
56. The current price of an electric scooter is Rs 140000. Its price is depreciated by 2% p.a. Find its selling price after two years.
 a. 134456 b. 5544 c. 145656 d. 134446
57. 7, p, 13 and q are in an AP. Find the value of p and q.
 a. 10 and 16 b. 8 and 14 c. 10 and 14 d. 10 and 17
58. There are n arithmetic means between 20 and -20. The fifth mean is 0, find the value of n.
 a. 8 b. 7 c. 9 d. 10

59. What is the sum of first 200 natural number is
 a. 400 b. 20100 c. 40000 d. 40200
60. If there are 3 geometric means between 2 and 162, which is the correct common ratio?
 a. 2 b. 3 c. 4 d. 5
61. If $f(x)$ is defined by $f(x) = x$, then what is function $f(x)$?
 a. Composite function b. identity function c. constant function d. trigonometric function
62. What is the minimum value of function $f(x) = \cos x$?
 a. 1 b. infinity c. -1 d. 0
63. If $x + a$ is factor of any polynomial $f(x)$ then what is remainder?
 a. 0 b. 1 c. a d. -a
64. If the determinant of a matrix is 0, what is the matrix called?
 a. Identity matrix b. diagonal Matrix c. singular matrix d. non-singular matrix
65. If the slopes of two straight are m_1 and m_2 and $m_1 \times m_2 = -1$, what is the angle between them?
 a. 90° b. 60° c. 0° d. 180°
66. If the general equation of the circle is $x^2 + y^2 + 2gx + 2fy + c = 0$ then what is its centre?
 a. (h, k) b. (g, f) c. (-f, -g) d. (-g, -f)
67. What conic does it form if the intersection plane is parallel to the base of cone?
 a. Circle b. hyperbola c. ellipse d. parabola
68. If $\sin \theta = \cos \theta$, what is value of θ ?
 a. 30° b. 45° c. 60° d. 90°
69. Who is known as the father of Trigonometry?
 a. Euclid b. Eratosthenes c. Pythagoras d. Hipparchus
70. What is the ratio between circumference and diameter of a circle?
 a. θ b. β c. π d. γ
71. Which transformation is represents by $\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$?
 a. Refection on X-axis b. Reflection on Y-axis c. rotation about $+90^\circ$ d. Enlargement
72. If the equation of a pair of straight line is represented by $ax^2 + 2hxy + by^2 = 0$, then what is condition of parallel?
 a. $a = b$ b. $a + b = 0$ c. $h^2 - ab = 0$ d. $h^2 + ab = 0$
73. What does (a, b) mean?
 a. Left open interval b. close interval c. open interval d. left close interval
74. What is the formula of $\sin(A+B) + \sin(A - B)$?
 a. $2\sin A \cos B$ b. $2\cos A \sin B$ c. $2\sin A \sin B$ d. $2\cos A \cos B$
75. What is the name of matrix in which number of row and number of column are equal?
 a. Rectangular matrix b. square matrix c. column matrix d. row matrix
76. I won't be wearing a seat belt. (You)
 a. Neither you do b. Neither would you c. So you should d. Neither can you
77. The students suggest the government that the price hike of petrol will.....
 a. reduce b. should reduce c. reduces d. reduced
78. She didn't have chat with me and so ----- I.
 a. do b. did c. have d. had
79. Neither of us ----- going to picnic.
 a. are b. have c. is d. am
80. She speaks Chinese ----- to be an interpreter.
 a. Well b. well enough c. Enough d. so well
81. It's 10 o' clock. She ----- arrived in office by now.
 a. ought to b. ought to have c. ought d. ought have

82. The soldiers abandoned their fellow fighter..... the enemies.
a. with b. to c. in d. if
83. The two countries broken their diplomatic relationship.
a. of b. off c. into d. none
84. Narayan is the tallest boy ----- his family.
a. of b. on c. in d. with
85. It is proposed that the authorities ----- attention to his issue.
a. give b. gives c. should give d. must give
86. Nobody responded my question, ----- ?
a. do they b. will you c. did they d. didn't they
87. There ----- both the challenge and the secret of his success.
a. laid b. lain c. lay d. lied
88. ABJURE : Synonym
a. discuss b. renounce c. run off d. secretly
89. I prefer coffee..... tea.
a. from b. with c. in d. to
90. She wishes that -----
a. She were coming with us. b. she will coming with us.
c. she would coming with us. d. she would have come with us.
91. The present situation ----- a drastic change in our country.
a. calls in b. calls on c. calls for d. calls up
92. Precipitate: Synonym
a. Candid b. Erratic c. Cautious d. Undesirable
93. He went to hospital to meet his friend.
a. a b. an c. the d. none
94. She met an animal animal was red in color.
a. the b. some c. an d. a
95. We made the boy his copy.
a. to correct b. corrected c. corrects d. correct
96. Which of the following are is not a goal of computer networks?
a. Resource sharing b. High reliability c. Scalability d. None of the above
97. Which one is an example of unbound media?
a. UTP cable b. Microwave transmission
c. Fiber optic cable d. All of the above
98. The device used for connecting PC to telephone line is
a. CD-ROM b. MODEM c. Printer d. Port
99. The speed of Modems is measured in terms of
a. mbps b. bps c. kbps d. bits
100. The maximum speed at which data can be transmitted between two nodes on a network.
a. Bit rate b. Bandwidth c. Band length d. None of them



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Grade: XI- Management

Entrance Model Questions

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P.M.: 40

Students willing to study management in grade XI & XII are required to give entrance examinations of English, Mathematics, Optional Mathematics, Computer & General Knowledge.

1. **Manage your crew,**
a. will not you b. will you c. would you d. won't you
2. **As soon as she reached there, the boys laughing.**
a. start b. starts c. started d. have started
3. **I wanted to know**
a. why she is late b. why was she late c. why are you late d. why she was late
4. **Dipendra belongs to the**
a. class of the upper middle b. upper middle class
c. the more you centre up d. you achieve class
5. **Mohan said that no other car could go.....**
a. so fast like his car b. as fast like his care c. as fast like the car of him d. as fast as his car
6. **As the archaeologist expected, living conditions in the ancient cultures were.....worse than those of today**
a. awfully b. surprisingly c. significantly d. boldly
7. **He is FCA.**
a. a b. an c. the d. none of them
8. **He is under graduate scholar.**
a. a b. an c. the d. none of them
9. **He is under graduate scholar.**
a. a b. an c. the d. none of them
10. **They live ----- the same roof**
a. under b. below c. beneath d. upon
11. **There ----- both the challenge and the secret of his success.**
a. laid b. lain c. lay d. lied
12. **We made the boy his copy.**
a. to correct b. corrected c. corrects d. correct
13. **She didn't have chat with me and so ----- I.**
a. do b. did c. have d. had
14. **She hasn't seen the new movie yet and I -----**
a. haven't either b. have either c. haven't d. also haven't either
15. **She speaks Chinese ----- to be an interpreter.**
a. Well b. well enough c. Enough d. so well
16. **I have been astonished----- her misbehavior.**
a. off b. to c. with d. on
17. **Antonym of "Adversity" is:**
a. Enmity b. Calamity c. Prosperity d. Calamities

18. Which one is correct?
 a. She seldom ever goes to church
 b. She seldom or ever goes to church
 c. She seldom and never goes to church
 d. She seldom goes to church
19. He annoys you and -----
 a. so are you
 b. so does you
 c. so do you
 d. you are too
20. The gun is lethal weapon.
 a. illegal
 b. destructive
 c. combustible
 d. explosive
21. Nobody responded my question, ----- ?
 a. do they
 b. will you
 c. did they
 d. didn't they
22. He ran as quickly as he -----
 a. can
 b. could
 c. would
 d. might
23. The driver was cautioned driving fast.
 a. against
 b. with
 c. in
 d. for
24. Energy produced in a bodyvirtue of its motion is kinetic energy.
 a. from
 b. by
 c. of
 d. off
25. She wishes that -----
 a. She were coming with us
 b. she will coming with us
 c. she would coming with us
 d. she would have come with us
26. The present situation ----- a drastic change in our country.
 a. calls in
 b. calls on
 c. calls for
 d. calls up
27. Hari and I are both ten years old. of the same years
 a. He is
 b. They are
 c. We are
 d. All are
28. Because of "Bandh". I've to go to office foot.
 a. by
 b. on
 c. at
 d. with
29. Hari and I are both ten years old. of the same years
 a. He is
 b. They are
 c. We are
 d. All are
30. her stupidity she passed the exam
 a. Despite
 b. However
 c. Although
 d. In spite
31. I bought a ticket (My brother)
 a. So does my brother
 b. so did my brother
 c. So my brother does
 d. so do my brother
32. He was anxious -----her safety
 a. at
 b. of
 c. for
 d. to
33. Try ----- late:
 a. avoiding
 b. avoid being
 c. to avoid being
 d. a voiding to being
34. Choose the correct sentence:
 a. I wish she could be alright
 b. I wish she will be alright
 c. I wish she had been alright
 d. I wished she could be alright
35. The magazine ----- by the end of this week:
 a. will publish
 b. will have been published
 c. will be published
 d. will be publish
36. I am not obsessed such ideas as you are:
 a. in
 b. on
 c. for
 d. with
37. The changes in the city have occurred -----
 a. fastly
 b. rapidly
 c. in rapid ways
 d. with rapidly
38. She hasn't seen the new movie yet and I -----
 a. haven't either
 b. have either
 c. haven't
 d. also haven't either
39. You must look into this matter
 a. This matter has been looked into you
 b. This matter may be looked into you
 c. This matter must be looked into by you
 d. This matter must have been looked by you

40. I have been waiting for sugar but none ----- arrived:
a. have b. has c. is d. are
41. If $4^{2x+1} = 4^5$ then what is the value of x.
a. 5 b. 3 c. 2 d. 6
42. Which is the true relation between the area of triangles standing on same base and between the same parallel lines?
a. Double b. Equal c. Half d. Not equal
43. What is the relation between the central angle and inscribed angle standing on the same arc of a circle?
a. Double b. Equal c. Half d. Not equal
44. The exterior angle formed by producing a side of cyclic quadrilateral is equal to
a. Its adjacent angle b. its opposite angle
c. non adjacent co interior angle d. opposite angle to its adjacent angle
45. A wire is tied to a pole of the height 30ft to erect it. If the wire makes the angle of 45° to ground, how far is the wire tied from the pole?
a. 30ft b. $30\sqrt{3}$ ft c. $10\sqrt{3}$ ft d. $20\sqrt{3}$ ft
46. If $\tan\phi = \frac{1}{\sqrt{3}}$ find the value of ϕ ?
a. 30° b. 60° c. 45° d. 90°
47. The circular flat surface of a cone is called
a. Vertical height b. base c. radius d. Salant height
48. Triangular pyramid is also known as
a. Right pyramid b. Tetrahedron c. Square based d. Oblique pyramid
49. Who introduced Venn diagram in mathematics?
a. Georg Cantor Venn b. Jhon Venn c. Georg Venn d. Cantor Venn
50. Who introduced Zero in mathematics?
a. Georg Cantor b. Jhon Venn c. Aryabhata d. Brahmagupta
51. What is the probability of getting a spade or red card from a well shuffled pack of 52 cards?
a. $1/4$ b. $3/13$ c. $3/4$ d. $1/2$
52. Which of the following central tendency is known as positional average.
a. mean b. median c. mode d. quartile
53. Which of the following is the smallest integer when it is exactly divided by 2, 3, 4, 5, 6 & 7?
a. 60 b. 140 c. 210 d. 420
54. Which is the graphical representation of continuous frequency distribution?
a. Bar diagram b. Histogram c. Pie-chart d. Ogive curve
55. The LCM of xy and xz is:
a. xy^2z b. xyz c. x^2yz d. xyz^2
56. A line which passes a circle touching it just at a point is called
a. tangent b. secant c. chord d. diameter
57. If $\frac{2}{3}$ part of land cost Rs. 560. What will be the cost of $\frac{5}{7}$ part of that same land?
a. Rs. 600 b. Rs.720 c. Rs. 960 d. Rs. 1440
58. The M.P of an article is Rs. 1080, if a shopkeeper sells the article by allowing 20% discount. Find the actual selling price of an article?
a. Rs. 684 b. Rs. 864 c. Rs. 850 d. Rs.846
59. From the number cards, 7 to 27 a card is drawn at random. Find the probability of getting the card of a prime or an even number?
a. $\frac{16}{20}$ b. $\frac{16}{21}$ c. $\frac{18}{20}$ d. $\frac{15}{21}$
60. What is 25% of 10% of 40%
a. 1% b. 0.1% c. 0.01 d. None

61. A man got 80% of total valid vote and beats his only one opponent by 1500 votes. Find the number of total valid votes.
 a. 2200 b. 2500 c. 2700 d. 2900
62. A room has its perimeter of floor 30 m and height is 5 m. What would be the total cost of plastering its four walls, if per m² cost Rs 30?
 a. Rs. 1200 b. Rs. 3000 c. Rs. 4500 d. Rs. 6000
63. A solid metallic sphere of radius 7 cm is cut in to two equal halves. Then the total surface area of one half is given by.....
 a. 48 cm² b. 72 cm² c. 96 cm² d. 40 cm²
64. Value of $\sqrt[3]{\sqrt{\sqrt{4096^{-1}}}}$ is given by
 a. $\frac{1}{4}$ b. $\frac{1}{2}$ c. 2 d. $-\frac{1}{2}$
65. If $3^{3x} = \frac{1}{27}$, $10^y = 0.001$ Then $6^{-x} \cdot 2^y = \dots\dots\dots$
 a. $\frac{3}{2}$ b. $-\frac{4}{3}$ c. $-\frac{3}{4}$ d. $\frac{3}{4}$
66. What is the period of the function $y = \sin x$?
 a. 2π b. π c. 3π d. $\pi/2$
67. If $\vec{a} \cdot \vec{b} = 0$, what is the angle between $\vec{a}$ and $\vec{b}$?
 a. 0° b. 90° c. 180° d. 360°
68. Which of the following is a scalar quantity?
 a. Momentum b. Mass c. Weight d. Force
69. If a vector is represented by $\vec{a} = \begin{pmatrix} x \\ y \end{pmatrix}$ then what is its direction?
 a. $\cos\theta = \frac{y}{x}$ b. $\cos\theta = \frac{x}{y}$ c. $\sin\theta = \frac{x}{y}$ d. $\sin\theta = \frac{y}{x}$
70. What is the determinant of the identity matrix?
 a. -1 b. 0 c. infinity d. 1
71. What is the vertex of a parabola $y = ax^2 + bx + c$?
 a. $\left(b, \frac{c}{a}\right)$ b. $\left(\frac{b}{2a}, \frac{4ac - b^2}{4a}\right)$ c. $\left(-\frac{b}{2a}, \frac{4ac - b^2}{4a}\right)$ d. $\left(-\frac{b}{2a}, \frac{4ac - b^2}{4a}\right)$
72. If $n(A) = 2$, $n(B) = 3$ then what is the value of $n(A \times B)$?
 a. 6 b. 5 c. 1.5 d. 1
73. If $\sqrt{(x - \text{component})^2 + (y - \text{component})^2} = 1$ what is the name of such types of vectors?
 a. Null Vector b. unit vector c. Row vector d. Column Vector
74. If Q_1 represents first quartile and Q_3 represents third quartile of any data then what do you call for $Q_3 - Q_1$?
 a. Quartile deviation b. Mean deviation c. Standard deviation d. inter-quartile range
75. What is called the square of standard deviation?
 a. Coefficient of SD b. Coefficient of MD c. coefficient of Variance d. Variance
76. The main objectives of a business organization is to earn ...
 a. Goodwill b. Prestige c. Loss d. Profit
77. A sole proprietor is also known by business.
 a. Two men b. One man c. Three men d. Four men
78. The excess amount withdrawn from the bank than the deposit is called...
 a. Bank overdraft b. Expenses c. Advance income d. Loan
79. Which is the first bank of Nepal?
 a. Nepal bank limited b. Rastriya banijya bank
 c. Global bank d. Everest bank

80. A trial balance is prepared after balancing
- Ledgers
 - Journals
 - Cash book
 - Balance sheet
81. Wages and salaries appearing in trial balance is shown
- On the Dr side of trading a/c
 - On the Dr side of P/L
 - On the assets side of the balance sheet.
 - On the liabilities side of the balance sheet.
82. Excess of credit in profit and loss account is called
- Net profit
 - Net loss
 - Gross profit
 - Gross loss
83. Balance sheet shows
- Both assets and liabilities
 - Assets only
 - Liabilities only
 - Neither assets nor liabilities
84. A banking facility enabling customer to withdraw cash 24 hours a day is called:
- Credit card
 - Net banking
 - ATM
 - Phone banking
85. A cheque which is payable to a person, who presents it for payments at bank counter is called:
- Order cheque
 - Bearer cheque
 - Crossed cheque
 - Mutilated cheque
86. The internet was developed by US.
- Department of Defense
 - Department of Electronics
 - Department of Commerce
 - None
87. Which of the following allows the user to surf and interact with the web-page?
- website
 - Browser
 - web page
 - web server
88. Which is not the search engine?
- Yahoo.com
 - Google.com
 - Bing.com
 - Ebay.com
89. An electrical regulator designed to automatically maintain a constant voltage level.
- UPS
 - Voltage regulator
 - Surge processor
 - All of the above
90. Which of the following measure allows to protect computers being opened from unauthorized user?
- Antivirus
 - Password
 - Debug
 - program
91. Which of the following is not a form of data?
- numbers and characters
 - images
 - sound
 - none of above
92. Which of the following is internal memory?
- Disks
 - Pen Drives
 - RAM
 - CDs
93. Which of the following memories needs refreshing?
- SRAM
 - DRAM
 - ROM
 - All of above
94. Which of the following port is used to connect DB-25 pin Modems or Scanners?
- Serial Ports
 - Parallel Port
 - PS/2 Port
 - USB Port
95. The time taken to move an access arm to a certain track on a disk is
- Seek Time
 - Head Switching Time
 - Search Time
 - Data Transfer time
96. Which is the longest river in the world?
- Amazon
 - Nile
 - Yellow river
 - Karnali
97. Which is the oldest temple in Nepal?
- Pashupati
 - Krishna mandir
 - Swayambhunath
 - Mankamana temple
98. Which one is the longest bone of our body?
- Femur
 - Tibia
 - Humorous
 - Ulna
99. What is the name of the son of the Hunuman?
- Makardhoj
 - ugrasen
 - Menaka
 - Uluk
100. Who is known as "Aadi kabi" in Nepali literature?
- Laxmi Prasad Devkota
 - Bhanu Bhakta Acharya
 - Moti Ram Bhatta
 - Bhairav Aryal



OMEGA SECONDARY SCHOOL

Kumaripati, Lalitpur, Nepal. Tel: 01-5408653, 5450563

Grade: XI

Entrance Practice Questions

Subject: Science

1. **Why is it important to control variable in a scientific study?**
 - a. To create variation and unpredictability in the experiment
 - b. To ensure that only one factor is being tested at a time
 - c. To increase the chances of obtaining desired results
 - d. To make an experiment more complex
2. **Which one of the following is SI unit of resistance?**
 - a. Ohm
 - b. Volt
 - c. Ampere
 - d. Candela
3. **Which caste in honey bee colony is responsible for collecting nectar and pollen?**
 - a. Queen bee
 - b. Worker bee
 - c. Drone bee
 - d. Soldier bee
4. **Which sensory organ do honey bees primarily use for detecting scents and odours?**
 - a. Antennae
 - b. Eyes
 - c. Mouth part
 - d. Wings
5. **Which one of the following is the character of kingdom plantae?**
 - a. Heterotrophic
 - b. Lack of cell wall
 - c. Photosynthetic autotrophic nutrition
 - d. Lack of chlorophyll
6. **Which of the following group come under the angiosperm?**
 - a. Maize, corn, beans
 - b. Gram, maize, Dhupi
 - c. Paddy, banana, mango
 - d. Banana, onion, pine
7. **What is the main reason to classify the whales as mammals?**
 - a. It is viviparous
 - b. Breathe through lungs
 - c. The body has backbone
 - d. Give birth and suckles the milk
8. **Which of the following animals belongs to the subphylum vertebrate?**
 - a. Jelly fish
 - b. Snail
 - c. Bird
 - d. Sponge
9. **Which type of cell division is responsible in the formation of two identical daughter cells?**
 - a. Mitosis
 - b. Meiosis
 - c. Protein synthesis
 - d. Sex determination
10. **What term refers to the study of heredity and variation of an organism?**
 - a. Ecology
 - b. Genetics
 - c. Evolution
 - d. Physiology
11. **What term refers to the manipulation of an organism's gene for practical purposes?**
 - a. Genetic engineering
 - b. Natural selection
 - c. Mutation
 - d. Hybridization
12. **Which disease is caused by the deposit of urate crystal in joints?**
 - a. High blood pressure
 - b. Diabetes
 - c. Gout
 - d. Heart attack
13. **What is the scientific name of titepati?**
 - a. *Artemisia indica*
 - b. *Azadirachta indica*
 - c. *Phyllanthus emblica*
 - d. *Justicia adhatoda*
14. **Which of the following is equivalent to the 1 N force?**
 - a. 10^2 dynes
 - b. 10^3 dynes
 - c. 10^4 dynes
 - d. 10^5 dynes
15. **In which condition does a falling object have zero acceleration?**
 - a. During free fall
 - b. During weightlessness
 - c. When weight of body is lesser than air resistance
 - d. When weight of an object is equal to air resistance
16. **What is the substance which may alter the environment's constituents called?**
 - a. Decomposer
 - b. Pollutant
 - c. Radiator
 - d. Reducer

17. Which statement is true about the law of floatation?
 - a. Upthrust applied on the body is less than the weight of displaced liquid.
 - b. Upthrust applied on the body is equal to the weight of displaced liquid.
 - c. Upthrust applied on the body is less than density of liquid.
 - d. Upthrust applied on the body is equal to density of liquid
18. Which of the following is equivalent to the 1 calorie heat?
 - a. 1.2 J
 - b. 2.2 J
 - c. 3.2 J
 - d. 4.2 J
19. Which one of the following is specific heat capacity of mercury?
 - a. 140J/kg°C
 - b. 240J/kg°C
 - c. 340J/kg°C
 - d. 940J/kg°C
20. What is the speed of light in vacuum?
 - a. 3×10^8 Km/sec
 - b. 2.25×10^8 m/sec
 - c. 3×10^8 cm/sec
 - d. 3×10^8 m/sec
21. Which of the following are the characteristics of image formed by concave lens?
 - a. Real and magnified
 - b. Real and diminished
 - c. Virtual and diminished
 - d. Virtual and magnified
22. What is the near point of normal eye?
 - a. 0.25cm
 - b. 25cm
 - c. 0.25m
 - d. 2.5cm
23. Who discovered magnetic effect of electric current?
 - a. Fleming
 - b. Dalton
 - c. Oersted
 - d. Faraday
24. In which of the following are fossil fuels used?
 - a. Solar power plant
 - b. Thermal power plant
 - c. Wind power plant
 - d. Hydropower plant
25. What type of information is referred to as digital data?
 - a. Continuous
 - b. Discrete
 - c. Bit
 - d. Bytes
26. Which are called the d-block elements?
 - a. Halogens
 - b. Alkali metals
 - c. Transition elements
 - d. Representatives elements
27. Which of the following elements is located in the same group as oxygen?
 - a. Nitrogen
 - b. Fluorine
 - c. Sodium
 - d. Sulphur
28. Which of the following do alkali metals belong to?
 - a. p-block
 - b. s-Block
 - c. d-block
 - d. f-block
29. Which necessary condition is essential for green plants to make glucose as food using carbon dioxide and water?
 - a. Sunlight
 - b. heat
 - c. Catalyst
 - d. Pressure
30. What is the molecular weight of Nitrogen?
 - a. 16 amu
 - b. 17 amu
 - c. 19 amu
 - d. 20 amu
31. What proportion of ammonium chloride and lime water is taken while preparing ammonia gas in laboratory?
 - a. 3:1
 - b. 2:3
 - c. 2:1
 - d. 1:2
32. Which of the following chemical compound is formed when carbondioxide is passed in lime water for a short period of time?
 - a. Calcium carbonate
 - b. Calcium Bicarbonate
 - c. Calcium oxide
 - d. Calcium Sulphate
33. What is called the process of heating the carbonate ore in the absence or presence of limited oxygen?
 - a. Calcination
 - b. Roasting
 - c. Smelting
 - d. Electro refining
34. Which metal is extracted from argentite ore?
 - a. Silver
 - b. Iron
 - c. Gold
 - d. Copper
35. What is called the process of heating the sulphide ore in the presence of excess oxygen?
 - a. Calcination
 - b. Roasting
 - c. Smelting
 - d. Electro refining
36. Which is the functional group of alcohol?
 - a. -O-
 - b. CH_2
 - c. -CHO
 - d. -OH

37. Which of the following is an example of unsaturated hydrocarbon?
 a. C_3H_8 b. C_3H_6 c. C_4H_{10} d. C_5H_{12}
38. Which of the following is always true about the isomerism?
 a. Melting point b. Molecular formula c. Boiling point d. Reactivity
39. Which of the following is biodegradable substance?
 a. Detergent b. Rittha c. Plastic d. Glass
40. Which of the following is chemical pollutant?
 a. Sikakai b. Kitchen waste c. Wood ash d. Pesticides
41. What is the SI unit of Power?
 a. Ohm b. Joule c. Hertz d. Watt
42. Which dimension is correct for density?
 a. $[ML^{-2}]$ b. $[ML^{-3}]$ c. $[ML^4]$ d. $[M T L^{-2}]$
43. What will be the mass of the body in the Jupiter, if its weight is 900N?
 a. 36kg b. 900kg c. 100kg d. 586kg
44. What will be changed in a gravitational force if both masses are doubled and distance between them is also doubled?
 a. Increased 16 times b. Decreased 8 times c. No changed d. Decreased 16 times
45. When Ram observed specimen in the laboratory, he found that both organisms were triploblastic. He also found that organism A has pseudo-segmented body and organism B has segmented body. By the studying of the above characteristics, which one is true for this organism.
 a. Organism B has nephridia and organism A has flame cell as excretory organ
 b. Organism A has nephridia and organism B has flame cell as excretory organ.
 c. Both of them have complete digestive system.
 d. Organism A is hermaphrodite and organism B is unisexual only.
46. Why pine is kept in gymnosperm?
 a. It bear flower and produces seed. b. It bear flower and has pointed leaf.
 c. It bear cone instead of flower and has seed. d. It bear cone instead of flower and has naked seed.
47. At what age the worker bees make royal jelly and feeding larva and queen?
 a. 7-11 days b. 4-6 days c. 1-3 days d. 18-20 days
48. Who founded the law of genetics?
 a. Mendel b. Darwin c. Aristotle d. De Vries
49. Which of the given elements is most reactive?
 a. Beryllium b. Magnesium c. Calcium d. Strontium
50. Hydrogen reacts with Sulphur to form hydrogen Sulphide. What type of reaction is this?
 a. Neutralization b. Addition c. Decomposition d. Acid base reaction.
51. Which one of following is also known as amphibian plants?
 a. Spirogyra b. Cycas c. Fern d. Moss
52. To which class do viviparous animals with four chambered heart and body is covered with feather belongs?
 a. Mammalia b. Reptiles c. Aves d. Amphibian
53. Which is known as Father of taxonomy?
 a. Darwin b. Lamarck c. Carolos Linnaeus d. Aristotle
54. Which of the following are the features of queen bee?
 a. Haploid, fertile, large b. Diploid, fertile, female, control the hives
 c. Haploid, male, sterile d. Diploid, sterile, female, control the hives
55. How many times does larvae of honey be molts?
 a. 2 times b. 3 times c. 6 times d. 4 to 5 times

56. What type of method/breeding is self pollination concerned to?
a. Inbreeding b. Cross breeding c. AI d. IVF
57. Which cell division is also known as helps in healing the wounds?
a. Mitosis b. Meiosis c. Amitosis d. Indirect
58. What is called the outermost cover of the heart?
a. Pleura b. Periosteum c. Perichondrium d. Pericardium
59. Which blood vessels carries the blood from lungs to the heart?
a. Pulmonary vein b. Pulmonary artery c. Aorta d. Superior vena cava
60. What is the main function of RBC?
a. Transport oxygen in body b. Fight against the germs
c. Healing the wounds d. Blood clotting
61. Which hydrocarbon is used to make a carbon tetrachloride?
a. Ethane b. Ethene c. Ethyne d. Methane
62. Which disease is caused by the deficiency of WBC?
a. Anaemia b. Thrombocytopenia c. Leukemia d. Thrombocytosis
63. Who is known as father of Biology?
a. Gregor John Mendel b. Aristotle c. Lamarckism d. Darwin
64. The union of a type of caterpillar with a specific fungi forms *Yarshagumba*. In this, what is the relation between caterpillar and fungi?
a. Predator b. Symbiotic c. Parasitic d. Sapaophytic
65. What is the scientific name of tulasi?
a. *Ocimum sanctum* b. *Justica adhatoda* c. *Azadirachta indica* d. *Adhatoda vasica*
66. Which part of *Yarshagumba* is primarily used in traditional medicines?
a. Fruiting body b. Stem c. Root d. Whole fungus
67. Which of the following is the value of g at the centre of the earth?
a. 9.78m/s^2 b. 9.81m/s^2 c. $0/\text{s}^2$ d. 9.83m/s^2
68. What is the new gravitational force between two objects when their masses are doubled, and their distance is made constant?
a. The force becomes 4 times of the initial b. The force becomes 9 times of the initial
c. The force becomes 16 times less of the initial d. The force becomes 2 times of the initial
69. What is S.I. unit of Power?
a. Newton (N) b. Watt (W) c. Hertz (Hz) d. Pascal (Pa)
70. Which one of the following is based on Pascal's law?
a. Lactometer b. Hydrometer c. Ship d. Hydraulic lift
71. Which of the following thermometer consists of kink?
a. Clinical b. Laboratory c. Digital d. Infrared radiation
72. What is the normal temperature of our body at Kelvin scale?
a. 273°K b. 373°K c. 310°K d. 100°K
73. Which of the following is the application of total dispersion of light?
a. Shining surface b. Fibre optic communication
c. Rainbow d. Endoscopy
74. At what condition the value of magnification will be one?
a. Object is placed at F b. Object is placed Between F and 2F
c. Object is placed beyond 2F d. Object is placed at 2F
75. Which of the following is the unit of Potential difference?
a. Tesla b. Ohm c. Volt d. Ampere
76. What type of reaction occurs in the sun?
a. Supernova explosion b. Nuclear fusion c. Nuclear fission d. Stellar evolution

77. How many bites are there in one byte?
a. 4 b. 8 c. 16 d. 32
78. What does being a digital citizen means?
a. Owning a digital service b. Having a online presence
c. Using social media frequently d. Using digital technology responsibly and ethically
79. Which one of the following is called alkaline earth metal?
a. Mg b. Na c. Br d. I
80. How many elements are there is short period?
a. 2 b. 4 c. 8 d. 18
81. Which one of the SI unit of amount of substance?
a. Newton b. Kelvin c. Candela d. Mole
82. Which one of following belongs to phylum Mollusca?
a. Cuttle fish b. Corals c. Jelly fish d. Starfish
83. To which class do egg laying animals with four chambered heart and body is covered with feather belongs?
a. Mammalia b. Reptiles c. Aves d. Amphibian
84. Which one of the following is vascular plant?
a. Spirogyra b. Volvox c. Moss d. Fern
85. Which bee contains only 16 chromosomes?
a. Drone b. Worker c. Queen d. Drone and worker
86. Which is the inactive stage of honey bee?
a. Egg b. Larva c. Pupa d. Adult
87. Who is the first test tube in Nepal?
a. Dolly b. O.M Tamang c. A. Fleming d. Louise Joy Brown
88. Which cell division is also known as reductional cell division?
a. Mitosis b. Meiosis c. Amitosis d. Indirect
89. What is the name of an organism when cross is made between donkey with horse?
a. Mule b. Zebroid c. Tigon d. Ligon
90. Which blood vessels carries the blood from heart to the lungs?
a. Pulmonary vein b. Pulmonary artery c. Aorta d. Superior vanacava
91. What is the medical term for the blockage of blood flow to the heart muscles?
a. Stroke b. Heart attack c. Heart failure d. Cardiac arrest
92. What is the normal range of blood pressure in adults?
a. 120/80mm of Hg b. 160/50mm of Hg c. 120/60mm of Hg d. 150/80mm of Hg
93. Which disease is caused by the deficiency of platelets?
a. Anaemia b. Thrombocytopenia c. Leukemia d. Thrombocytosis
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95. In which region of Nepal Yarshagumba is found?
a. Terai b. Himalayan c. Mid hills d. Mountain
96. What is the scientific name of Gurgo?
a. *Tinoapora cordifolia* b. *Justica adhatoda* c. *Azadirachta indica* d. *Adhatoda vasica*
97. Which part of Yarshagumba is primarily used in traditional medicines?
a. Fruiting body b. Steam c. Root d. Whole fungus
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99. What is the new gravitational force between two objects when their masses are doubled, and their distance is made halved?
- The force becomes 16 times of the initial
 - The force becomes $\frac{4}{9}$ times of the initial
 - The force becomes 16 times less of the initial
 - The force becomes 12 times of the initial
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 - Nuclear fission
 - Stellar evolution
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 - 32
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 - Having a online presence
 - Using social media frequently
 - Using digital technology responsibly and ethically
110. Which one of the following belongs to p-block?
- K
 - Na
 - Ca
 - P
111. What type of chemical reaction is the reaction between Calcium oxide and hydrochloric acid?
- Combination reaction
 - Decomposition reaction
 - Acid base reaction
 - Double displacement reaction
112. What product is formed when hydrogen reacts with nitrogen at necessary condition?
- Urea
 - Ammonium chloride
 - Ammonia Hydroxide
 - Ammonia
113. What is the dry ice?
- Solid carbondioxide at 78°C
 - Solid carbondioxide at 98°C
 - Solid sulphurdioxide at 78°C
 - Solid carbondioxide at -78°C
114. Which gas is used make in fire extinguisher?
- Carbondioxide
 - Ammonia
 - Nitrogen
 - Hydrogen
115. Which metal is extracted from bauxite ore?
- Iron
 - Aluminium
 - Copper
 - Silver
116. Which promoter is used in manufacture ammonia by Habers process?
- Iron
 - Molybdenum
 - Silica
 - Nickel
117. Which hydrocarbon is used to make chloroform?
- Ethane
 - Ethene
 - Ethyne
 - Methane
118. Which one of the following is first grade preservative?
- Salt
 - Sugar
 - Vinegar
 - oils

119. Which chemical is commonly found in soap?
 a. Lemon extract b. Ash c. Sodium hydroxide d. Sajiwan extract
120. Which blood vessels carries the blood from heart to the lungs?
 a. Pulmonary vein b. Pulmonary artery c. Hepatic artery d. Hepatic vein

Subject: English

1. Nobody responded my question, ----- ?
 a. do they b. will you c. did they d. didn't they
2. He ran as quickly as he -----
 a. can b. could c. would d. might
3. The driver was cautioned driving fast.
 a. against b. with c. in d. for
4. Energy produced in a bodyvirtue of its motion is kinetic energy.
 a. from b. by c. of d. off
5. She wishes that -----
 a. She were coming with us b. she will coming with us
 c. she would coming with us d. she would have come with us
6. The present situation ----- a drastic change in our country.
 a. calls in b. calls on c. calls for d. calls up
7. Hari and I are both ten years old. of the same years
 a. He is b. They are c. We are d. All are
8. Because of "Bandh". I've to go to office foot.
 a. by b. on c. at d. with
9. Hari and I are both ten years old. of the same years
 a. He is b. They are c. We are d. All are
10. her stupidity she passed the exam
 a. Despite b. However c. Although d. In spite
11. The trouble is that he doesn't like mathematics. Come to think of it, he doesn't enjoy geometry much,

 a. Either b. Whether c. Neither d. However
12. either of you a doctor? Or, you both engineers?
 a. Are/aren't b. Is/Is c. Are/Are d. Is/Are
13. I'm afraid I've terribly misjudged them both. The truth is that he can drive this machine very skillfully,
 and so -----
 a. Is he b. Am I c. Can his friend d. Do I
14. feeding these fish, please be careful with you give them.
 a. After / that b. When / what c. When / where d. Before / when
15. You took the wrong bus. It the wrong one. It has brought me to the right place, hasn't it?
 a. must have been b. should have been c. ought to have been d. can't have been
16. "Don't worry; one of the robbers ," said a policeman to the gathering crowd.
 a. is being pursued b. have been pursuing c. has been pursuing d. will be pursuing
17. Incidentally, theoretical neurolinguistics to be one of those pure sciences that indispensable for understanding the origins of mankind.
 a. happens / are b. happens / is c. happen / is d. happen / are
18. I asked to inform you that you're dismissed from your post as of today.
 a. have been b. used to be c. had d. would have

19. I've been meaning to ask you: This is the first time you are visiting Turkland, ?
 a. aren't you b. is it c. are you d. isn't it
20. I it on my own by then.
 a. had got used to using b. will never be able to get using
 c. was used to use d. am using
21. the laziest of the lazy would rather work than starve.
 a. Such as b. Even c. Because d. As soon as
22. She said that if I got out of her light she to see what she was doing.
 a. would be able b. had better c. were capable of d. had tried
23. Yes, we have a room for you," said the receptionist. Now, if you'd the register, please.
 a. to sign b. just sign c. signed d. been signing
24. His wife begged him not to drink too much he would have to drive them home later in the evening.
 a. as b. so c. that d. whether
25. If she catches you her diary, she'll be furious.
 a. that you are reading b. having read c. you are reading d. reading
26. I saw him enter the room, unlock the drawer, take out a document, photograph it put it back.
 a. as soon as b. and then c. before d. again
27. What a smart suit that is you've got on. It cost you a fortune to buy.
 a. ought to have b. needn't have c. should have d. must have
28. a married man, you'll have a lot more responsibilities from now on.
 a. As b. Been c. No matter what d. Because of
29. I'd rather have a room of my own, small it is, than share a room with a total stranger.
 a. as long as b. however c. no matter what d. whatever
30. The fat lady went down head over heels, made everyone burst into an uncontrollable laughter.
 a. that b. what c. this d. it
31. I understand that you've sent him an e-mail message. I think you him instead.
 a. ought to have phoned b. should phone c. couldn't have phoned d. had phoned
32. I promise that I will be here when you come back, but I'm afraid everyone else by then.
 a. were leaving b. left c. are leaving d. will have left
33. Do you have any idea what she at this time tomorrow?
 a. has done b. will be doing c. has been doing d. is doing
34. My Grandfather walks very
 a. quick b. proper c. fast d. fastly
35. Choose the correct word order.
 a. Why she did leave so early? b. Why did she leave so early?
 c. Why did so early she leave? d. All of above
36. Select same meaning of the underlined word: Take care not to get hurt with the steam from the Kettle.
 a. Burnt b. Bruised c. Cut d. Scalded
37. Which is the longest pause?
 a. Full-stop b. Dash c. Comma d. Hyphen
38. If you call to him and explain your problem, he will help. (Substitute the underlined part)
 a. No Substitution required b. Call at him c. Call upon him d. All of Above
39. Find the word with opposite meaning for happiness.
 a. Contentment b. Grief c. Renunciation d. Juvenile
40. I just paid him a left-hand compliment. What does a left-hand compliment mean here?
 a. An honest b. Well deserved c. Flattering d. An insincere
41. Choose the appropriate relative clause: That's the girl is in your class.
 a. Which b. Where c. Whose d. Who

42. **Select the most appropriate sentence among the following:**
 a. An one-eyed person was seen roaming about the streets.
 b. A one-eyed person was seen roaming about the streets.
 c. The one eyed person was seen roaming about a streets.
 d. The one-eyed person was seen roaming about the streets.
43. **What is the passive form of the sentence: Rahul will pass the message?**
 a. The message will passed by Rahul. b. The message would be passed by Rahul.
 c. The message is passed by Rahul. d. The message will be passed by Rahul.
44. **His hard work satisfied me. What is the passive form of the sentence?**
 a. I was satisfied for his hard work. b. I was satisfied at his hard work.
 c. I was satisfied by his hard work. d. I was satisfied with his hard work.
45. **Combine the following simple sentence into one appropriate simple sentence. Mahatma Gandhi was a great visionary. He realised the danger of communal conflicts. He sacrificed his life to bring about unity.**
 a. A great visionary, Mahatma Gandhi realised the danger of communal conflicts and sacrificed his life to bring about unity.
 b. Mahatma Gandhi, a great visionary, he sacrificed his life to bring about unity on realising the danger of communal conflicts.
 c. Mahatma Gandhi sacrificed his life to bring about unity when he realised the danger of communal conflicts.
 d. Having realised the danger of communal conflicts Mahatma Gandhi, a great visionary, sacrificed his life to bring about unity.
46. **Choose the words which is similar in meaning to the word: ACCOUTREMENTS**
 a. Relatives b. Companions c. Things d. Blemishes
47. **Select the correct antonym: Malevolent**
 a. Indifference b. Unwillingness c. Sympathy d. Friendship
48. **He has lost the equilibrium of his mind. What is the synonym of the underlined word?**
 a. Strength b. Energy c. Talent d. Balance
49. **What is a person who is easily deceived called?**
 a. Pessimist b. Optimist c. Indifferent d. Gullible
50. **What are people at sports called?**
 a. Audience b. Spectators c. Bellicose d. Elite
51. **The front door is _____ the top of the steps.**
 a. On b. At c. In d. By
52. **Choose the correct statement for the given question. How did you find the play?**
 a. Oh, I don't think it was a success. b. I could hardly get the tickets.
 c. My sister was also at the show. d. There was a sign "sold out".
53. **I got my uncle (mend) the pressure cooker.**
 a. Mending b. To mend c. Mend d. Mended
54. **Her thinking leans _____ democracy.**
 a. For b. Into c. With d. Towards
55. **Choose the correctly spelled word:**
 a. Response b. Respance c. Response d. Rosponse
56. **The Number of diphthong in English sound is:**
 a. 8 b. 24 c. 36 d. 12
57. **Which of the following has /e:/ sound?**
 a. But b. Arm c. About d. Pin
58. **A(n) _____ is comprised of our active vocabularies, our pronunciation of words, and our grammar and syntax when talking or writing.**
 a. Dialect b. Idiolect c. Syntax d. Connotation

59. Identify the meaning of the idiom "a bed of roses".
 a. A fragrant place b. An easy situation c. An impossible situation d. A very beautiful place
60. Who wrote the fantasy novel 'The Lord of the Rings'?
 a. C.S. Lewis b. Peter Jackson c. J.K. Rowling d. J. R.R. Tolkien
61. It's 10 o' clock. She ----- arrived in office by now.
 a. ought to b. ought to have c. ought d. ought have
62. The soldiers abandoned their fellow fighter..... the enemies.
 a. with b. to c. in d. if
63. The two countries broken their diplomatic relationship.
 a. of b. off c. into d. none
64. Narayan is the tallest boy ----- his family.
 a. of b. on c. in d. with
65. It is proposed that the authorities ----- attention to his issue.
 a. give b. gives c. should give d. must give
66. Nobody responded my question, ----- ?
 a. do they b. will you c. did they d. didn't they
67. There ----- both the challenge and the secret of his success.
 a. laid b. lain c. lay d. lied
68. ABJURE : Synonym
 a. discuss b. renounce c. run off d. secretly
69. He is under graduate scholar.
 a. a b. an c. the d. none of them
70. They live ----- the same roof
 a. under b. below c. beneath d. upon
71. There ----- both the challenge and the secret of his success.
 a. laid b. lain c. lay d. lied
72. We made the boy his copy.
 a. to correct b. corrected c. corrects d. correct
73. She didn't have chat with me and so ----- I.
 a. do b. did c. have d. had
74. She hasn't seen the new movie yet and I -----
 a. haven't either b. have either c. haven't d. also haven't either
75. He is under graduate scholar.
 a. a b. an c. the d. none of them

Subject: Mathematics

1. The factors of $a^2 + \frac{1}{a^2} - 11$ are
 a. $(a + \frac{1}{a} + 3)(a - \frac{1}{a} + 3)$ b. $(a - \frac{1}{a} - 3)(a - \frac{1}{a} + 3)$
 c. $(a - \frac{1}{a} - 3)(a + \frac{1}{a} + 3)$ d. $(a + \frac{1}{a} - 3)(a - \frac{1}{a} - 3)$
2. The equation $x^2 - 16 = 0$ is known as
 a. Affected quadratic equation b. pure quadratic equation
 c. General quadratic equation d. linear equation
3. Find two consecutive odd numbers if square of their sum is 202?
 a. 81 & 121 b. 83 & 119 c. 9 & 11 d. 10 & 11

4. Which one of the following is sub triplicate ratio of $\frac{x}{y}$?
- a. $\frac{\sqrt[3]{x}}{\sqrt[3]{y}}$ b. $\frac{x^3}{y^3}$ c. $\frac{x}{y}$ d. none
5. If $\frac{a}{b} = \frac{c}{d}$ then $\frac{b}{a} = \frac{d}{c}$ is called
- a. Alternendo b. Componendo c. Dividendo d. Invertendo
6. The mean of 20 observations is 35 later it is found that two items 44 and 23 is misread as 34 and 3. Then what will be the correct mean?
- a. 33.5 b. 35 c. 36.5 d. 37
7. What is the y – intercept of the line given by $3a - b = 4$?
- a. $\frac{3}{4}$ b. $\frac{1}{4}$ c. 3 d. -4
8. Which one of the following does not have as a factor?
- a. $x^2 + y^2$ b. $x^3 + y^3$ c. $x^2 - y^2$ d. $x^2 + xy$
9. If $x^2 - 6x - 1 = 0$, Then the value of $x^2 + \frac{1}{x^2}$ is
- a. 30 b. 36 c. 38 d. 40
10. What is the total surface of a square based pyramid having length l and slant height s and height is h ?
- a. $2sl$ b. $2sl + l^2$ c. $2hl + l^2$ d. $\frac{1}{3}hl^2$
11. The HCF of xyz and xz is:
- a. xyz b. xz c. yz d. xyz
12. The degree of quadratic equation is
- a. 1 b. 2 c. 3 d. 0
13. Which are the roots of $mx^2 - n = 0$?
- a. $\pm\sqrt{\frac{m}{n}}$ b. $\pm\sqrt{\frac{n}{m}}$ c. $\sqrt{\pm\frac{m}{n}}$ d. $\sqrt{\pm\frac{n}{m}}$
14. What is the sum of odd numbers from 1 to 50.
- a. 625 b. 525 c. 425 d. 2250
15. The sum of first n natural number is calculated by the formula
- a. $\frac{n(n-1)}{2}$ b. $\frac{n(n+1)}{2}$ c. $\frac{n+(n+1)}{2}$ d. $\frac{n-(n-1)}{2}$
16. If the common difference of an AP is 4 having the first term 7 and the last term 37, the fourth mean is
- a. 22 b. 23 c. 15 d. 11
17. $2x, 45, 13x$ are the first three terms of the arithmetic sequence then what is the value of x ?
- a. 3 b. 15 c. 5 d. 6
18. A room is 8 m long, 6m wide and 4.5m high. It has one door measuring 2.5 by 1m and three windows each measuring 1m by 80 cm, Calculate the area of the walls excluding door and windows.
- a. 121.1 sq m b. 126 sq m c. 124.5 sq m d. 130.9 sq m
19. The perimeter of a triangular shaped pond is 120 m and its sides are in the ratio of 5:12:13. Find the longest side?
- a. 20 m b. 48 m c. 52 m d. 50 m
20. A conical tent having a diameter 28 m and vertical height is 48 m is given then find its slant height?
- a. 40 m b. 14 m c. 50 m d. 56 m

21. Which of the following is the properties of rectangle?
a. Opposite sides are equal
b. Diagonal are equal
c. Diagonal bisects each other at 90°
d. All of above.
22. The value of a refrigerator which was purchased 2 years ago, depreciates at 12% per annum and its value becomes Rs 9680. At what price was the refrigerator purchased?
a. Rs 12000
b. Rs 12500
c. Rs 13000
d. Rs 14500
23. 2 years ago, the population of a town was 150000. Now, it is 168540. The growth rate each year was fixed. What was the growth rate? Calculate.
a. 5%
b. 7%
c. 6%
d. 8%
24. The yearly compound amounts of a sum of money in 2 years and 3 years are Rs. 324000 and Rs. 388800 respectively. Find the rate of interest.
a. 20%
b. 10%
c. 12%
d. 15%
25. A bank provides the interest at 5 paisa per rupee per month then find the rate of compound interest?
a. 5%
b. 10%
c. 60%
d. 20%
26. A sum of money becomes 2.25 times of itself in 2 years compounded yearly. Find the rate of compound interest.
a. 2%
b. 25%
c. 50%
d. 20%
27. If $3^x \times 3^y = 3^{100}$ what is the arithmetic mean of x and y.
a. 50
b. 100
c. 25
d. 200
28. What percentage of itself must be added from 60 to get 75.
a. 30%
b. 25%
c. 35%
d. 40%
29. A dealer gains the selling price of 10 radio sets by selling 60 sets. His profit% will be
a. 10%
b. 15%
c. 20%
d. 25%
30. A dealer gains the selling price of 10 radio sets by selling 60 sets. His profit% will be
a. 10%
b. 15%
c. 20%
d. 25%
31. If the population of a town become 4 times in 2 years, what is the rate of growth of population per year?
a. 2%
b. 3%
c. 4%
d. 5%
32. What is the area of the square whose diagonal is 4 cm?
a. 16 sq cm
b. 8 sq cm
c. 12 sq cm
d. 6 sq cm
33. A prism with square base of side 6 cm has a height of 5 cm. The lateral surface area of prism is.....
a. 120 cm^2
b. 30 cm^2
c. 60 cm^2
d. 36 cm^2
34. If $r = 7 \text{ cm}$ and $h = 21 \text{ cm}$ then what is the volume of the cone?
a. 1070 cm^3
b. 1080 cm^3
c. 1078 cm^3
d. 544 cm^3
35. A square of 4 inches on a side is cut up into smaller squares of 1 inch on a side. What is the maximum number of such squares that can be formed.
a. 4
b. 8
c. 16
d. 64
36. If $x + \frac{1}{x} = 3$ then the value of $x^2 + \frac{1}{x^2}$ is
a. 7
b. 9
c. 3
d. 12
37. If $a + b = 5$, $b + c = 7$ and $c + a = 6$ then find the value of a.
a. 2
b. 3
c. 4
d. 6
38. The sum of even numbers between 1 to 30 is
a. 240
b. 230
c. 220
d. 210
39. If $\sin 3\theta = \cos \theta$ then find the value of θ
a. 45°
b. 30°
c. $22\frac{1}{2}^\circ$
d. 15°
40. The slope of the line $\frac{x}{a} + \frac{y}{b} = 1$ is
a. $-\frac{a}{b}$
b. $-\frac{b}{a}$
c. ab
d. $-\frac{1}{ab}$

41. Diagonals are equal in
 a. Rhombus b. Rectangle c. Trapezium d. All of above
42. Which is the largest chord of a circle?
 a. Segment b. Secant c. Diameter d. Circumference
43. A couple has 3 children, what is the probability of having at least 2 daughters?
 a. $\frac{1}{4}$ b. $\frac{3}{8}$ c. $\frac{7}{8}$ d. $\frac{1}{2}$
44. Find the median of 10, 12, 13, 8, 9, and 15?
 a. 9 b. 11 c. 15 d. 12
45. The average weight of 20 girls is 25 kg and the average weight of 30 boys is 40 kg. Find the average weight of all of them.
 a. 20 kg b. 25 kg c. 34 kg d. 35 kg
46. Which of the following is not the axiom of congruent?
 a. S.A.S b. R.H.S c. S.S.S d. A.A.A
47. How many diagonals can be formed from regular octagon?
 a. 8 b. 20 c. 16 d. 16
48. If number of proper subset of set A is 31 then $n(A) = \dots\dots$
 a. 4 b. 5 c. 6 d. 7
49. If $n_o(A) = 3x\%$, $n_o(B) = 4x\%$, $n(A \cap B) = x\%$ and $n(\overline{A \cup B}) = 2x\%$, the value of $n(A \cap B)$ in percentage is
 a. 20% b. 40% c. 10% d. none of them
50. What does 1 unit of electricity mean?
 a. 1000 watt/hour b. 100 watt/hour c. 1000 watt/minute d. 10 KW/hour
51. If a tourist bought an article with certain percent of discount and adding some percent of VAT. What amount does he/she gets return back in airport while he/she returns back to his/her country?
 a. Discount amount b. VAT amount c. S.P d. SP with VAT
52. What is the area of equilateral triangle whose a side is 'x' cm?
 a. $\frac{\sqrt{3}}{4} a^2$ b. $\frac{\sqrt{3}}{2} a^2$ c. $\frac{\sqrt{2}}{3} x^2$ d. $\frac{\sqrt{3}}{4} x^2$
53. Which formula do you use to find the volume of the prism?
 a. $\frac{1}{3} \text{ base area} \times \text{height}$ b. base area $\times$ height
 c. Perimeter $\times$ height d. all of them
54. If the volume of the wall is 'V' m^3 and volume of the brick is 'v' m^3 , the number of bricks is
 a. 1000 b. $V \times v$ c. $V^2 \div v$ d. $V \div v$
55. The formula to find p% is
 a. $\frac{SP-CP}{CP} \times 100\%$ b. $\frac{SP-CP}{SP} \times 100\%$ c. $\frac{CP-SP}{CP} \times 100\%$ d. $\frac{CP-SP}{SP} \times 100\%$
56. CSA of cylinder is
 a. $\pi r^2 h$ b. $2\pi rh$ c. $2\pi r(r + h)$ d. πrl
57. The sum of interior angles of a triangle is
 a. 180° b. supplementary c. two right angle d. all of them
58. If two sides of a triangle are equal, then the triangle is
 a. equilateral triangle b. isosceles triangle c. scalene triangle d. none of them
59. Which is not the properties of parallelogram?
 a. Opposite sides of parallelogram parallel b. Opposite sides are equal
 c. Diagonals are equal d. Opposite angles are equal
60. In which quadrant does the point (-1, -3) lie?
 a. third quadrant b. first quadrant c. fourth quadrant d. second quadrant
61. If $\sum fx = 30a^2$ and $N = 6a^2$, what is the mean of the data?
 a. a^2 b. 5 c. 6 d. 5a

62. The position of median of the discrete data is
 a. $\left(\frac{n+1}{4}\right)^{th} \text{ term}$ b. $\left(\frac{n-1}{4}\right)^{th} \text{ term}$ c. $\left(\frac{n+1}{2}\right)^{th} \text{ term}$ d. $3\left(\frac{n+1}{4}\right)^{th} \text{ term}$
63. A is amount, R is the rate of interest and T is time are given then $P =$
 a. $\frac{A \div 100}{100 \times RT}$ b. $\frac{A \times 100}{TR}$ c. $\frac{A+100}{100+TR}$ d. $\frac{A \times 100}{100+TR}$
64. Find the rate of interest when the interest is 4 paisa per rupee per year
 a. 10% b. 4% c. 12% d. 20%
65. If 45% of the students in a class are boys and 33 are girls, the number of boys is
 a. 27 b. 45 c. 55 d. 33
66. The interior angle of a regular polygon is.....
 a. 105° b. 90° c. 108° d. 110°
67. For what value of x the algebraic expression $\frac{5}{5x-1}$ is undefined?
 a. 1 b. 5 c. $2/5$ d. $1/5$
68. If A and B are mutually exclusive then probability of A or B.
 a. $P(A \cup B) = P(A) + P(B)$ b. $P(A) + P(B) + P(A \cap B)$
 c. $P(A) + P(B) - P(A \cap B)$ d. $P(A) \cdot P(B)$
69. If H and T are two mutually exclusive events while tossing a coin, then.....
 a. $P(H \text{ or } T) = P(H) - P(T)$ b. $P(H \text{ or } T) = P(H) \times P(T)$
 c. $P(H \text{ or } T) = P(H) + P(T)$ d. All
70. The roots of general quadratic equation $ax^2 + bx + c = 0$ are
 a. $\frac{\pm b - \sqrt{b^2 - 4ac}}{2a}$ b. $\frac{b \pm \sqrt{b^2 - 4ac}}{2a}$ c. $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ d. $\pm \sqrt{\frac{b}{a}}$
71. Ram said to Sita, 'I am twice as old as you were when I was as old as you are. The sum of their present ages is 49 yrs. Then their ages in years are...
 a. 28 and 21 b. 26 and 23 c. 32 and 17 d. 29 and 20
72. For Central values, mean, median and mode which one of the following relations is correct?
 a. Mode = 3 median – 2 mean b. Mode = 3 median – 2 median
 c. Mode = 3 median + 2 mean d. Mode = 2 median – 3 mean
73. The mean of 20 numbers is 9. If 3 is added to every number, what will be the mean?
 a. 12 b. 10 c. 9.15 d. 9
74. What is the total surface of a cone having radius r and slant height h ?
 a. $\pi r l$ b. $\pi r l^2$ c. $\pi r(r + l)$ d. $\frac{1}{3} \pi r l^2$
75. It is given that $n(A) = 15$, $n(B) = 12$ and $n(A \cup B) = 20$, what is the value of $n(A \cap B)$.
 a. 47 b. 7 c. 17 d. 23

Subject: Optional Maths

1. If A and B are two non empty sets, $A - B = A$, $B - A = B$ then what is the relation of set A and set B?
 a. Equal sets b. equivalent sets c. overlapping sets d. disjoint sets
2. If A and B are two non empty sets, $n(A \cup B) = n(A) + n(B)$ then what is the relation of set A and B?
 a. Equal sets b. equivalent sets c. overlapping sets d. disjoint sets
3. If the difference between mean and mode is 48 and median is 12 what is mean?
 a. 38 b. 28 c. 42 d. 50
4. What is the mean of range, mode and median of the data 5,10,3,6,4,8,9,3,15,2,9,4,19,11,4?
 a. 10 b. 12 c. 8 d. 9
5. In which condition the parabola having an equation $ax^2 + bx + c = 0$ in graph is open upwards?
 a. $a > 0$ b. $a < 0$ c. $a = 0$ d. $a = b$

6. In which condition the parabola having an equation $ax^2+bx+c=0$ in graph is open downwards?
 a. $a > 0$ b. $a < 0$ c. $a = 0$ d. $a = b$
7. In Geometric sequence if $r = \left(\frac{b}{a}\right)^{\frac{1}{n+1}}$ then what does n mean?
 a. Number of terms b. number of means
 c. number of common ratio d. number of sequence
8. AM and GM are arithmetic mean and geometric mean of two numbers respectively, then what is the relation of AM NA GM?
 a. $AM = GM$ b. $AM > GM$ c. $GM > AM$ d. $AM < GM$
9. What does $A \Delta B$ mean if A and B are two non empty sets?
 a. $n(A - B) + n(B - A)$ b. $n(A) + n(B)$ c. $n(A \cup B) + n(A \cap B)$ d. $n(A) - n(B)$
10. If p and q are integers and $\frac{p}{q}$ is represented in the form of $\frac{p}{q}$, what are p and q ?
 a. Whole numbers b. rational Numbers c. natural numbers d. even numbers
11. How many roots of a polynomial of degree n ?
 a. Only one root b. at least n root c. more than n roots d. at most n roots
12. If $x - 2$ is a factor of the polynomial $x^2 + 2x + k$, then what is the value of k ?
 a. 10 b. -10 c. 8 d. -8
13. If the lines are $2x + 3ky = 5$ and $3x - 5y = 0$ are parallel, what is the value of k ?
 a. -10 b. $\frac{10}{9}$ c. $\frac{9}{10}$ d. $-\frac{10}{9}$
14. If an algebraic function is expressed in the form of $y = x$ then what is function called?
 a. Identity function b. constant function c. composite function d. quadratic function
15. If $f(x) = 4x + 3$, $g(x) = x^2 + 4$, then what is the value of $f \circ g(2)$?
 a. 25 b. 35 c. -25 d. -35
16. If $f(x) = 7x - 4$, then what is the value of $f^{-1}(4)$?
 a. $\frac{8}{7}$ b. $\frac{7}{8}$ c. $\frac{2}{3}$ d. $\frac{5}{9}$
17. What are the roots $x^3 - 13x - 12 = 0$?
 a. 3, 1, 4 b. -3, 1, 4 c. -3, -1, 4 d. -3, -1, -4
18. If AM and GM of two numbers are 10 and 8 respectively, what are the numbers?
 a. 1 and 64 b. 1 and 16 c. 4 and 64 d. 4 and 16
19. What is the 12th term of the sequence $4, 2, \frac{1}{2}, \frac{1}{4}, \dots$?
 a. $\frac{1}{512}$ b. $\frac{1}{216}$ c. $\frac{1}{256}$ d. $\frac{1}{16}$
20. What is the sum of n natural number?
 a. n^2 b. $n(n+1)$ c. $a + (n-1)d$ d. $\frac{n}{2}(n+1)$
21. What is the sum of n odd number?
 a. n^2 b. $n(n+1)$ c. $a + (n-1)d$ d. $\frac{n}{2}(n+1)$
22. What is the sum of n even number?
 a. n^2 b. $n(n+1)$ c. $a + (n-1)d$ d. $\frac{n}{2}(n+1)$
23. What is the general term of arithmetic sequence?
 a. n^2 b. $n(n+1)$ c. $a + (n-1)d$ d. $\frac{n}{2}(n+1)$
24. What is the vertex of the parabola whose equation given by $y = ax^2$?
 a. (0,0) b. (1,0) c. (0, 1) d. (1,1)

25. What does (a, b) mean?
 a. Open interval b. close interval c. left close interval d. right close interval
26. What is the determinant of a square matrix given by $A = [-4]$?
 a. 0 b. 1 c. 4 d. -4
27. If A and B are 2×2 square matrix and $AB = BA = I$ where, I is also 2×2 square matrix then what is the relation between matrices A and B?
 a. Inverse matrix b. column matrix c. diagonal matrix d. row matrix
28. What is the equation of a straight line which is perpendicular to the line $2x - 3y + 4 = 0$ and passes through the point (2,1)?
 a. $2x - 3y - 8 = 0$ b. $3x + 2y - 8 = 0$ c. $2x + 3y + 8 = 0$ d. $3x - 2y - 8 = 0$
29. For what value of k, the lines $3x + 4y - 7 = 0$ and $kx - 3y + 5 = 0$ are perpendicular?
 a. 1 b. 2 c. 3 d. 4
30. What is an acute angle between two straight line represented by $y - (2 + \sqrt{3})x - 5 = 0$ and $y - (2 - \sqrt{3})x - 2 = 0$?
 a. 0° b. 45° c. 60° d. 90°
31. What is the angle between a pair of lines represented by $5x^2 + 24xy - 5y^2 = 0$?
 a. 90° b. 60° c. 45° d. 0°
32. What is the name of conic section formed by a plane with right circular cone parallel to its generator?
 a. Circle b. parabola c. hyperbola d. ellipse
33. What is the name of conic section formed by a plane with right circular cone when the double cone is cut with a plane parallel to its axis?
 a. Circle b. parabola c. hyperbola d. ellipse
34. What is the center of the circle represented by $x^2 + y^2 + 4x - 6y + 4 = 0$?
 a. (-2, 3) b. (2, 3) c. (2, -3) d. (-2, -3)
35. If $\sin A = \frac{1}{2}$, what is the value of $\cos 2A$?
 a. $\frac{2}{3}$ b. $\frac{5}{6}$ c. $\frac{1}{2}$ d. $\frac{4}{3}$
36. If $\cos 30^\circ = \frac{\sqrt{3}}{2}$, what is the value of $\sin 15^\circ$?
 a. $\frac{\sqrt{3}-1}{2}$ b. $\frac{\sqrt{3}+1}{2}$ c. $\frac{\sqrt{3}-1}{2\sqrt{2}}$ d. $\frac{\sqrt{3}+1}{2\sqrt{2}}$
37. What is the value of $\cos 75^\circ + \cos 15^\circ$?
 a. $\frac{\sqrt{3}}{2}$ b. $\sqrt{\frac{3}{2}}$ c. $\frac{1}{2}$ d. $\frac{3}{\sqrt{2}}$
38. What is the angle between two vectors $\vec{a}$ and $\vec{b}$ if $\vec{a} \cdot \vec{b} = 12$, $|\vec{a}| = 4$ and $|\vec{b}| = 3\sqrt{2}$?
 a. 0° b. 30° c. 45° d. 60°
39. What is the coordinate of image of a point P(2, -1) under the enlargement with centre (2,3) and scale factor 2?
 a. (2, -5) b. (2, 5) c. (-2, -5) d. (-5, 2)
40. What is the distance of inverse of the points which at a distance 3 units from the centre O of the circle with radius 6 units?
 a. 6 b. 12 c. 4 d. 10
41. Which transformation is represented by the matrix $\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$?
 a. Refelction on X-axis b. rotation of $+90^\circ$ c. reflection on $Y = x$ line d. enlargement

42. Which transformation is represented by the matrix $\begin{pmatrix} 3 & 0 \\ 0 & 3 \end{pmatrix}$?
- a. Refelction on X-axis b. rotation of $+90^\circ$ c. reflection on $Y = x$ line d. enlargement
43. What is the mean deviation of the data: 20, 30, 40, 50, 60, 70, 80?
- a. 17.14 b. 14.17 c. 11.47 d. 74.11
44. If the numerical value of circumference and area of a circle are equal what is its radius?
- a. 1 unit b. 2 units c. 3 units d. 4 units
45. What is called the probability of event equal to zero?
- a. Sure event b. dependent event c. impossible event d. independent event
46. If two dice are thrown in the air, what is the probability that getting sum as 3 on the top?
- a. $\frac{1}{18}$ b. $\frac{1}{17}$ c. $\frac{2}{17}$ d. $\frac{3}{17}$
47. If the mean of the data a, a+3, a+6, a+9 and a+12 is 10, the what is the value of a?
- a. 1 b. 2 c. 3 d. 4
48. What is the empirical relationship between the three measures of central tendency?
- a. 3 median = mode + 2 mean b. 2 median = mode + 2 mean
c. 3 median = mode + mean d. 3 median = mode – 2 mean
49. What is the formula of $\sin(A+B) + \sin(A - B)$?
- a. $2\sin A \cos B$ b. $2\cos A \sin B$ c. $2\sin A \sin B$ d. $2\cos A \cos B$
50. What is the name of matrix in which number of row and number of column are equal?
- a. Rectangular matrix b. square matrix c. column matrix d. row matrix

Subject: Accounting

1. The process of entering all transactions from the journal to the ledger is called...
- a. Accounting b. Posting c. Entry d. None of above
2. Cash, goods or assets invested by the proprietor in the business for earning profit is called...
- a. Profit b. Capital c. Assets d. None of these
3. If the trial balance does not tally after many effort then theaccount is opened
- a. Purchase a/c b. Suspense a/c c. Sales a/c d. None of above
4. Book keeping is
- a. An Art b. A science c. Both art and science d. None of these
5. The purpose of preparing final account is to ascertain
- a. Profit and loss and financial position b. Profit and loss
c. Capital d. The value of assets
6. Full form of ATM is:
- a. Anytime money b. All time money
c. Automated Teller Machine d. Automatic teller machine
7. Father of accountancy in the world is considered as:
- a. Luna Caprio b. Luka Paciolo c. Lunear Lamp d. Linear Capital
8. Balance sheet is prepared:
- a. Any time b. End of fiscal year c. Monthly d. Semi- annually
9. Excess of income over expenditure is called:
- a. Surplus b. Dificit c. Revenue d. Liabilities
10. Nepal Rastra Bank is the:
- a. Central bank b. Commercial bank c. Development bank d. Industrial bank
11. Present accounting system followed by government of Nepal is:
- a. New accounting system b. Syaha accounting system
c. Form accounting system d. Nepal accounting system

12. **Trial balance is a statement of:**
 - a. Assets & liabilities
 - b. Income & expenditure
 - c. Debit & Credit balances
 - d. Profit & loss
13. **Journal is a:**
 - a. Primary book
 - b. Secondary book
 - c. Ledger book
 - d. Principal book
14. **The first bank of Nepal is:**
 - a. Rastriya Baninya Bank
 - b. Nepal Rastra Bank
 - c. Nepal Bank Ltd.
 - d. Krishi Bikash Bank
15. **Final account is prepared before:**
 - a. Trial balance
 - b. Ledger
 - c. Subsidiary book
 - d. None of the above
16. **'Calls in advance' is shown under.....**
 - a. share capital
 - b. reserve and surplus
 - c. current liabilities
 - d. loans and advances
17. **A loan can be described as a short-term loan if the period is**
 - a. three years
 - b. less than one year
 - c. over one year
 - d. more than two years
18. **The Total Tax of an assessee has been computed as Rs. 36,523.40. After rounding off, the total tax will be taken as...**
 - a. Rs. 36520
 - b. Rs. 36,525
 - c. Rs. 36,530
 - d. None of these
19. **In the absence of any agreement, partners are liable to receive interest on their loans@**
 - a. 12%
 - b. 10%
 - c. 6%
 - d. 8%
20. **Companies profit divided among shareholder is...**
 - a. interest
 - b. reserve
 - c. dividend
 - d. surplus

Subject: Computer

1. **Which of the following is not a form of data?**
 - a. numbers and characters
 - b. images
 - c. sound
 - d. none of above
2. **Which of the following is internal memory?**
 - a. Disks
 - b. Pen Drives
 - c. RAM
 - d. CDs
3. **Which of the following memories needs refreshing?**
 - a. SRAM
 - b. DRAM
 - c. ROM
 - d. All of above
4. **Which of the following port is used to connect DB-25 pin Modems or Scanners?**
 - a. Serial Ports
 - b. Parallel Port
 - c. PS/2 Port
 - d. USB Port
5. **The time taken to move an access arm to a certain track on a disk is**
 - a. Seek Time
 - b. Head Switching Time
 - c. Search Time
 - d. Data Transfer time
6. **Which of the following is not purely output device?**
 - a. Screen
 - b. Printer
 - c. Speaker
 - d. Plotter
7. **The control unit of a microprocessor**
 - a. Stores data in the memory
 - b. Accepts input data from keyboard
 - c. Performs arithmetic/logic function
 - d. None of above
8. **Which operation is not performed by computer?**
 - a. Inputting
 - b. Processing
 - c. Controlling
 - d. Understanding
9. **Floppy disks which are made from flexible plastic material are also called?**
 - a. Hard disks
 - b. High-density disks
 - c. Diskettes
 - d. Templates
10. **A collection of related instructions organized for a common purpose is referred to as**
 - a. File
 - b. Database
 - c. Program
 - d. None of above
11. **What is the acronym name of HTTP?**
 - a. Hypertext transfer protocol
 - b. Highly transferred protocol
 - c. Hypertext transfer procedure
 - d. Hypertext transported programme

12. **A disk is divided into several concentric circles called**
a. Track b. Sector c. Cylinder d. Cluster
13. **The time taken to move an access arm to a certain track on a disk is**
a. Seek Time b. Head Switching Time c. Search Time d. Data Transfer time
14. **The rotational delay time or latency time is also known as**
a. Seek Time b. Head Switching Time c. Search Time d. Data Transfer time
15. **Which of the following is not a magnetic storage medium?**
a. Floppy Disk b. Hard Disk c. Digital Versatile Disks d. Cassettes and Cartridges
16. **Which of the following term do not refer to an expansion card?**
a. Controller Cards b. Adapters c. Daughterboard d. Motherboard
17. **Which of the following is not a form of data?**
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25. **A collection of related instructions organized for a common purpose is referred to as:**
a. File b. Database c. Program d. None of above

Subject: General Knowledge

1. **Which is the longest river in the world?**
a) Amazon b) Nile c) Yellow river d) Karnali
2. **Which is the oldest temple in Nepal?**
a) Pashupati b) Krishna mandir c) Swayambhunath d) Mankamana temple
3. **Which one is the longest bone of our body?**
a) Femur b) Tibia c) Humorous d) Ulna
4. **What is the name of the son of the Hunuman?**
a) Makardhoj b) ugrasen c) Menaka d) Uluk
5. **Who is known as "Aadi kabi" in Nepali literature?**
a) Laxmi Prasad Devkota b) Bhanu Bhakta Acharya
c) Moti Ram Bhatta d) Bhairav Aryal
6. **Who invented steam engine?**
a) Michal Faraday b) James Watt c) Albert Einstein d) Sir Isaac Newton
7. **What is called the study of the insect?**
a) Ecology b) Entomology c) Primatology d) Astrology
8. **Which planet is known as red planet?**
a) Jupiter b) Saturn c) Neptune d) Mars

9. **Who said “Give me a place to stand and I will move the Earth”**
a) Albert Einstein b) Archimedes c) Blaise Pascal d) Newton
10. **What is called the fair of the girl?**
a) Gynophobia b) Biblophobia c) Hydrophobia d) none of the above
11. **What percentage of total land is covered by Himalayan region of Nepal?**
a. 20.94% b. 62.06% c. 18% d. 17%
12. **When was Prithvi Narayan Shah victory over Nuwakot?**
a. 1801 Asoj 15 b. 1801 Asoj 21 c. 1803 Asoj 15 d. 1804 Asoj 15
13. **What is the average distance between the sun and the Earth?**
a. 1.5×10^8 km b. 1.5×10^{11} m c. 1.5×10^9 km d. both a and b
14. **Which herb is related to the term “yellow living gold”?**
a. Harro barro b. Dhature c. Yarshagumba d. Amala
15. **Which of the following gas is known as laughing gas?**
a. Carbon dioxide b. Hydrogen peroxide c. Phosphorous Pentoxide d. Nitrous oxide
16. **The world environment day is celebrated on:**
a. December 10 b. June 5 c. January 5 d. April 1
17. **Who is the miss world 2019?**
a. Shrinkhala Khatiwoda b. Toni-Annsingh c. Ophely Mezino d. Rolene Strauss
18. **What is the full form of MCC?**
a. Millennium Challenge Corporate b. Millennium Challenge Corporation
c. Millennium currency Corporate d. Money Challenge Corporate
19. **Who is the author of famous book “Origin Of Species”?**
a. Laxmi Prasad Devkota b. Charles Darwin c. Lamarck d. Aristotle
20. **What is the only one manmade object that can be seen from the moon?**
a. Rani Mahal b. The great wall c. Potala Darbar d. Bruch Khalifa Dubai
21. **Which game is known as ‘Royal Game’?**
a. Polo b. Golf c. Cricket d. Baseball
22. **What is called the study of earthquake?**
a. Ecology b. Seismology c. None of the above d. Numismatics
23. **Which animal has no vocal chords?**
a. Lion b. Zebra c. Dolphin d. Giraffes
24. **The largest country of the world by geographical area is:**
a. Australia b. USA c. Russia d. Vatican city
25. **In which country ICC Mens' T20 Cricket World Cup 2024 going to be held?**
a. America & Nepal b. America & India
c. West Indies & England d. America & West Indies