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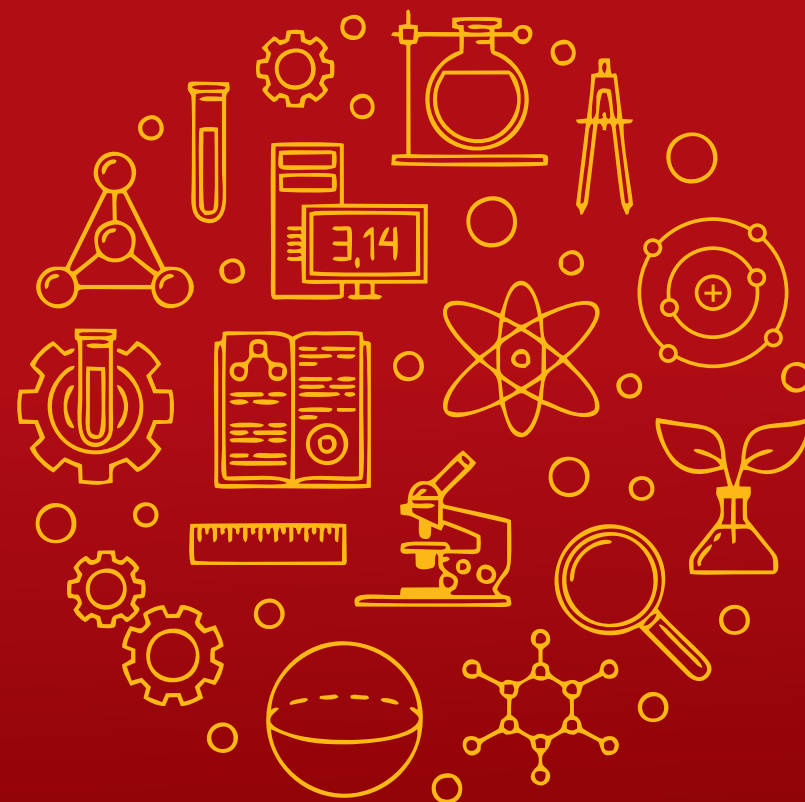
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PRACTICE QUESTIONS FOR **+2** SCIENCE

ENTRANCE EXAM

PREFACE

Dear Students

Our purpose in developing and distributing this +2 Entrance Exam practice question booklet is twofold: It is essentially to assist you all – post-SEE students – preparing for +2 Entrance Exams to gain entry to colleges of your choice including Trinity. Further, and importantly, it may also help you in getting scholarships in different colleges.

There are 4 Full Practice Tests with answers that will prove very useful for competing students. The essentials of English, Mathematics, and Science subjects have been covered simply and clearly. Most questions herein relate to current or latest trends alongside the set and continuing patterns in competitive colleges or SS in the country.

Despite all our care and best intentions, there might still be some technical shortcomings for which we render our apologies.

Wishing you all **GREAT SUCCESS** in the forthcoming +2 Entrance Exams!

Trinity International SS & College
April 2026

Disclaimer

This Booklet provides guidelines, common steps or tips, and study & practice materials. It is not a complete solution package for all +2 entrance exams. We suggest students to study relevant textbooks and consult reference materials for entrance preparation.

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Preparing for Entrance Exams

Getting Acquainted

Get to know all about these Entrance Exams.

Follow these steps:

- The +2 Entrance Exams for courses in Science & Management of most of the good colleges in Kathmandu valley vary in their structure, duration, and content. Their length is normally limited to 100 Multiple Choice Questions – MCQs – though the time allotted could be from 75 to 120 minutes. The coverage of topic areas in different subjects may vary from college to college. *Significantly, a mastery of MCQs is the key to success!*
- As a rule, such exams, including the Kathmandu Metropolitan City (KMC) scholarship tests for students from either private or community schools, are held ONLY after the publication of the SEE results.
- Students are advised to be absolutely clear about which +2 course they would like to do depending on their area of interest or need.
- Students should carefully consider the options available to them in terms of the colleges they would like to or could join.

Preparing Yourself

Entrance tests need solid and timely preparation. So, remember these steps:

- Start preparing early instead of waiting till the last few days.
- Give time to master the subject matter and question types.
- Work regularly, systematically, and hard.
- Collect sample entrance test papers provided by different colleges.
- See past question papers of the colleges you are interested to join.
- Be clear about the format and content of the exams.
- Consult relevant textbooks and reference material.
- Concentrate upon learning how to answer **MCQs** effectively.

Doing Your Best

To prepare for an exam with MCQs, consider the following steps:

- Begin studying as early as feasible alone or in a group.
- Exams with MCQs tend to focus on memorizing details.
- Learn a little bit each day and allow plenty of time for repeated reviews.
- Pay particular attention to fundamental terms and concepts.
- Study your class notes and assigned readings.
- Make further notes and lists or tables.
- Brainstorm possible questions with other students doing these exams.
- Practice on sample or likely questions.
- Study carefully & systematically before the actual exams.

During the Exams

Keep in mind these steps for *all* exams:

- Pacing is what matters.
- Survey the entire test or exam quickly.
- Answer the questions you find easy.
- Do the questions you have left out.
- Finish in time.

Acing the Practice Tests

The following steps will help in doing the Practice Tests in this booklet properly:

- Enter all the required information – name/ID number – on the answer sheet.
- Read the directions carefully.
- Jot down important formulas and mnemonics you might forget.
- Survey the test.
- Note whether some sections are worth more points than others.
- Plan using your time accordingly.
- Skip questions that take long to answer and come back to them later.
- Use the process of elimination (PoE) to eliminate wrong choices.
- Guessing is useful when you exhaust all other strategies.
- Utilize hints from questions you know to answer dissimilar MCQs.
- Remember that you are looking for the best answer.
- Note that *the* answer is always there in the choices.
- Change your answer only when you have a concrete reason.
- Keep in mind that often first choices turn out to be right.
- Remember positive choices are more likely to be true than negative ones.
- Remember correct answers are often choices with the most information.
- Fill the right bubbles or boxes for choices carefully on the answer sheet.
- Use the remaining time to check careless errors or double-check answers.
- Ensure you answer every MCQ to the best of your knowledge.

SCIENCE**SET – A****PHYSICS**

- Which of the following is not a correct pair of unit and physical quantity?
 A. Newton – Force
 B. Joule – Work
 C. Pascal – Pressure
 D. Watt – Momentum
- Which of the following vector operations is meaningful?
 A. Adding a vector and a scalar
 B. Multiplying a vector by a scalar
 C. Dividing a vector by another vector
 D. Adding two scalars
- A vehicle travels at 60 km/h for 2 hours and then at 30 km/h for 1 hour. What is the average speed?
 A. 40 km/h
 B. 45 km/h
 C. 50 km/h
 D. 55 km/h
- A stone is dropped from a height h , and the sound of impact is heard after 5 seconds. If speed of sound is 340 m/s and $g = 10 \text{ m/s}^2$, approximate height h is:
 A. 120 m
 B. 100 m
 C. 110 m
 D. 150 m
- A ball is thrown vertically upwards with speed 30 m/s. What is its maximum height attained by the ball? ($g = 10 \text{ m/s}^2$)
 A. 30 m
 B. 35 m
 C. 40 m
 D. 45 m
- Newton's first law of motion gives the definition of:
 A. Force
 B. Acceleration
 C. Velocity
 D. Momentum
- A particle of mass 1 kg is projected vertically upward with speed 20 m/s. At what height will its kinetic energy be half of its initial kinetic energy? (Take $g = 10 \text{ m/s}^2$)
 A. 5 m
 B. 10 m
 C. 15 m
 D. 20 m
- A diver experiences a pressure of $4 \times 10^5 \text{ Pa}$ at some depth in sea water. Taking atmospheric pressure as $1 \times 10^5 \text{ Pa}$ and $g = 10 \text{ m/s}^2$, density of sea water as 1000 kg/m^3 , the depth is approximately:
 A. 10 m
 B. 30 m
 C. 40 m
 D. 50 m

18. $\text{Mg(S)} + \text{H}_2\text{SO}_4(\text{aq}) \longrightarrow \text{MgSO}_4(\text{aq}) + \text{H}_2(\text{g})$. This reaction is an example of a:
- A. Combination reaction
B. Decomposition reaction
C. Single displacement reaction
D. Neutralization reaction
19. The rate of chemical reaction influenced by which one of the following factors?
- A. Temperature
B. Concentration of reactant
C. Using catalyst
D. All of them
20. A students mixed together aqueous solution of X and Y. A curdy white precipitate (solid) is formed. Solution X and Y are:
- A. Barium chloride & dil. sulfuric acid
B. sodium hydroxide & sodium chloride
C. Calcium carbonate & Hydrochloric acid
D. Hydrochloric acid & calcium sulphate
21. Which of the following colors is indicated by methyl-orange in acidic medium?
- A. Pink
B. Blue
C. Green
D. Red
22. Carbon dioxide gas is produced when marble chips is reacted with:
- A. Dil. HCl
B. conc. HCl
C. dil. H_2SO_4
D. HNO_3
23. Which one of the following gases is basic in nature?
- A. Carbon dioxide
B. Ammonia
C. SO_2
D. H_2S
24. The important ore from which silver metal can be extracted is:
- A. Hematite
B. Bauxite
C. Chalcocite
D. Horn silver
25. Read the following two statements i and ii, select one of the correct statements:
- i. Metal are good conductor of heat and electricity.
ii. Generally metals are electropositive.
- A. Statement i is correct.
B. Statement i and ii are correct.
C. Statement ii is correct.
D. Statement i and ii are incorrect.
26. Which of the following formulae represents the diethyl ether?
- A. $\text{C}_3\text{H}_8\text{O}$
B. $\text{C}_4\text{H}_{10}\text{O}$
C. $\text{C}_4\text{H}_{10}\text{O}_2$
D. $\text{C}_3\text{H}_{10}\text{O}$

27. Trihydric alcohol (Glycerin) has a molecular formula:
 A. $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$ B. $\text{C}_3\text{H}_{10}\text{O}$
 C. $\text{C}_3\text{H}_5(\text{OH})_3$ D. $\text{C}_3\text{H}_8\text{O}$
28. Which of the following formulae represents the alkene?
 A. C_nH_n B. C_nH_{2n}
 C. $\text{C}_n\text{H}_{2n+1}$ D. $\text{C}_n\text{H}_{2n+2}$
29. What is the molecular formula of urea?
 A. $(\text{NH}_4)_2\text{NO}_3$ B. $\text{CO}(\text{NH}_2)_2$
 C. CH_3COOH D. $(\text{NH}_4)_2\text{SO}_4$
30. Which one of the following pairs are not allotropes?
 A. Ortho and para Hydrogen
 B. Oxygen and ozone
 C. Yellow and Red phosphorous
 D. Nascent and atomic Hydrogen

BIOLOGY

31. Robert Brown is the scientist who discovered the
 A. Cell B. Nucleus
 C. Living cell D. Protoplasm
32. Mitochondria is known as 'Power house of Cell' because of its involvement in production of
 A. Glucose B. Protein C. Lipid D. ATP
33. Longest phase of cell cycle is
 A. Prophase B. Metaphase
 C. Interphase D. Anaphase
34. Multicellular photo-autotrophs are producers and have been placed in kingdom
 A. animalia B. protista
 C. monera D. plantae
35. The kingdom that includes unicellular eukaryotes
 A. Monera B. Protista
 C. Mycota D. Plantae
36. What is pollination by insect called?
 A. Malacophily
 B. Chiropterophily
 C. Entomophily
 D. Ornithophily

37. Internal structure of plant is studied in
A. Genetics
B. Plant physiology
C. Cell biology
D. Plant anatomy
38. Nitrogenous bases found in DNA molecule are
A. Adenine, Guanine, Cytosine and Uracil
B. Adenine, Uracil, Cytosine and Thymine
C. Adenine, Guanine, Uracil and Thymine
D. Adenine, Guanine, Cytosine and Thymine
39. Which of the following is the main cause of acid rain?
A. CO₂
B. Chlorofluoro carbon
C. Oxides of nitrogen and sulphur
D. CH₄
40. Scientific name of rice plant is
A. *Triticum aestivum*
B. *Zea mays*
C. *Oryza sativa*
D. *Bambusa vulgaris*
41. Which of the following statements is true about sponges?
A. They have one mouth and innumerable exits.
B. They have innumerable mouths and one exit.
C. They possess a large spacious stomach.
D. Spicules are composed of chitin.
42. What is the common name of a molluscan devilfish?
A. Loligo
B. Sepia
C. Teredo
D. Octopus
43. Which of the following is NOT a stage in the honey bee life cycle?
A. Pupa
B. Drone Adult
C. Egg
D. Larva
44. Which of the following is NOT an endocrine gland?
A. Pituitary gland
B. Adrenal gland
C. Lacrimal gland
D. Thyroid gland
45. Which of the following hormones is NOT secreted by the anterior lobe of pituitary gland?
A. Human growth hormone (GH)
B. Follicle-stimulating hormone (FSH)
C. Parathyroid hormone (PTH)
D. Thyroid-stimulating hormone (TSH)
46. The superior vena cava and inferior vena cava both empty deoxygenated blood into which chamber of the heart?
A. Left atrium
B. Right atrium
C. Left ventricle
D. Right ventricle

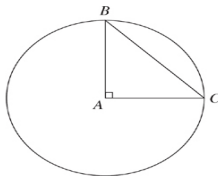
47. Which of the following is NOT a component of human blood?
 - A. Plasma
 - B. Red blood cells
 - C. Bone marrow
 - D. Platelets
48. Which of the following is NOT a primary function of epithelial tissue?
 - A. Protection
 - B. Secretion
 - C. Conduction of food
 - D. Absorption
49. The scientist who proposed the theory of 'inheritance of acquired characteristics' was:
 - A. Fisher
 - B. Lamarck
 - C. Mendel
 - D. Weismann
50. What is the main function of the nervous system?
 - A. Digestion of food
 - B. Regulation of body temperature
 - C. Communication and coordination of body functions
 - D. Production of hormones

MATHEMATICS

51. If $n(A) = 40$, $n(B) = 50$, $n(U) = 200$ and $n(A \cap B) = 20$, then $\overline{n(A \cup B)} =$
 - A. 20
 - B. 130
 - C. 40
 - D. 100
52. In a week a company produced 10, 000 computer disks, of which 30 are found to be defective. At this rate, if the factory produced 1,000,000 computer disks, how many would be defective?
 - A. 30
 - B. 300
 - C. 3,000
 - D. 30,000
53. A bag contains 4 red balls, 10 blue balls. If two balls are removed from the bag at random and no ball is returned to the bag after removal, what is the probability that both balls will be blue?
 - A. $\frac{25}{49}$
 - B. $\frac{24}{49}$
 - C. $\frac{45}{98}$
 - D. $\frac{45}{91}$
54. If $f(x) = x^2$ and $g(x) = x - 1$, what is the value of fog $(2x + 1)$?
 - A. $2x^2$
 - B. $4x^2 + 4x$
 - C. $4x^2$
 - D. $(2x - 1)^2$
55. What is radius of circle whose equation is $x^2 + y^2 - 6x + 8y = 0$?
 - A. 1
 - B. 2
 - C. 3
 - D. 5

56. In the figure, AC and AB are radii of the circle with centre A. If $\triangle ABC$ has area 18, what is the circumference of the circle?

- A. 6π
 B. 9π
 C. 12π
 D. 18π

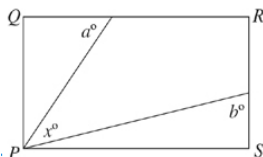


57. A cylindrical log of wood is cut into two equal halves vertically from its diameter. If its length and diameter are 200 cm and 140 cm respectively, calculate total surface area of one half.

- A. 87000cm^2
 B. 87200cm^2
 C. 87400cm^2
 D. 87600cm^2

58. In the rectangle PQRS, what is $a + b$ in terms of x ?

- A. $90 + x$
 B. $90 - x$
 C. $180 + x$
 D. $270 - x$



59. A researcher found that the number of bacteria in a certain sample doubles every hour. If there were 6 bacteria in the sample at the beginning, how many bacteria were there after 9 hours?

- A. 54
 B. 512
 C. 1536
 D. 3072

60. A value that satisfies the equation $\cos^2 x - 2\cos x = 0$ in degrees is

- A. 0
 B. 30
 C. 60
 D. 90

61. $\cot \theta - \frac{\cos 2\theta}{\sin \theta \cos \theta}$ is equal to

- A. $\sin \theta$
 B. $\cos \theta$
 C. $\tan \theta$
 D. $\sec \theta$

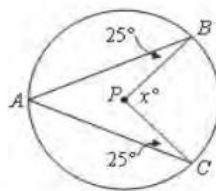
62. If $m > 1$, the maximum value of $2m \sin 2x$ is equal to

- A. 2
 B. m
 C. $2m$
 D. $4m$

63. If A is a matrix of 3×4 , B is another matrix such that AB and BA are both possible, the order of matrix B is

- A. 3×3
 B. 3×4
 C. 4×3
 D. 4×4

64. Let $\vec{a}$ and $\vec{b}$ are two given vectors such that $|\vec{a}| = \sqrt{3}$, $|\vec{b}| = 2$ and $\vec{a} \cdot \vec{b} = \sqrt{6}$, then what is the angle between the vectors?
- A. $\frac{\pi}{3}$ B. $\frac{\pi}{4}$
C. $\frac{\pi}{2}$ D. 0
65. In xy-plane, line l is perpendicular to line $4x - y = 1$ and contains the point $(0, 2)$, which one of the following is the equation of line l ?
- A. $x + 4y = 8$ B. $4x - y = 2$
C. $4x + y = -2$ D. $4x + y = 8$
66. $\sin(135^\circ + x) \cdot \sin(135^\circ - x)$ equals
- A. $\sqrt{2} \sin x$ B. $\sqrt{2} \cos x$
C. $2 \cos 2x$ D. $\frac{\cos 2x}{2}$
67. If the graphs of the equations $2x + 5y = 7$ and $6x + cy = 11$ are parallel lines, then what is c ?
- A. 3 B. 5 C. 10 D. 15
68. The first, second and last term of A.P. are a , b and $2a$, then the numbers of terms in the series is
- A. $\frac{b}{b-a}$ B. $\frac{b}{b+a}$
C. $\frac{a}{b-a}$ D. $\frac{a}{b+a}$
69. A car drives a distance of d miles at 30 mph and returns at 60 mph. What is its average rate for the round trip?
- A. 40 mph B. 43 mph
C. $\frac{2d}{35}$ mph D. $\frac{35}{2d}$ mph
70. If P is the centre of the circle in the figure shown. What is the value of x ?



- A. 50
B. 80
C. 90
D. 100

ENGLISH

71. Which one of the following definitions is NOT true?
- A. Modal verbs are never used alone.
B. Modals change according to the number or person of the subject.
C. Modals have no infinitive, present participle or past participle.
D. Modal verbs cannot be used in all tenses.

72. "They could not walk an inch forward as they were blinded by a dust storm." Which sentence is it?
 A. Simple sentence
 B. Compound sentence
 C. Complex sentence
 D. Compound-complex sentence
73. The passive of, 'Did they confess the crime?' is
 A. Had they confessed the crime?
 B. Was the crime confessed?
 C. Were they made to confess the crime?
 D. The crime was confessed by them.
74. It all day. I wonder when it will stop.
 A. has rained
 B. will rain
 C. has been raining
 D. is raining
75. Rabina newspaper reporter before hepolitics.
 A. was, was joining
 B. had been, joined
 C. were, could join
 D. was, had joined
76. A dead body of an animal is a
 A. carcass
 B. corpse
 C. chromatics
 D. morgue
77. What is called if a person who likes to keep silent as a habit?
 A. Indolent
 B. Bellicose
 C. Despondent
 D. Taciturn
78. The suitable analogy similar to "Bells: tinkle" is
 A. Clouds: Ripple
 B. Teeth: Clatter
 C. Coins: Jingle
 D. Wheels: Flap
79. The politician'sstatements were designed tothe public into thinking he supported their views.
 A. eloquent, persuade
 B. evasive, confuse
 C. fiery, inspire
 D. candid, challenge
80. Find the error:
Amid the crisis, hospital after hospital have been forced to close its doors. No error.
 A B C D
81. Which of the following words has a different pronunciation of vowel sound?
 A. Mere
 B. Bear
 C. Sphere
 D. Gear
82. Which of the following represents the phonetic transcription of "island"?
 A. /'aɪlənd/
 B. /'ɪslənd/
 C. /'aɪslənd/
 D. /'aɪzlənd/
83. Which of the following is NOT a plural noun?
 A. Glasses
 B. Binoculars
 C. Trousers
 D. Robotics

84. You dare not trespass this sensitive area, ... ?
A. do you B. don't you C. are you D. will you
85. That was indeed an important program for me. Unfortunately, I missed it.
I left home early.
A. shouldn't have B. wouldn't have
C. should have D. could have

Instructions: Read the passage and answer the questions (86-90) given below.

Generation Z, born between 1997 and 2012, is the first truly digital-native generation. They have grown up in a world dominated by smartphones, social media, and constant connectivity. While they are tech-savvy and socially aware, they face unique difficulties. The continuous comparison on social media can create unrealistic expectations for success and happiness, contributing to increased rates of anxiety and depression. Gen Z is also known for their social involvement, engaging in issues like climate change and racial inequality. They prioritize genuineness and transparency, especially from businesses. Gen Z values significant work, work-life balance, and inclusivity, reshaping a workforce that is both purpose-driven and aware of mental health needs.

86. What is a primary obstacle Gen Z encounters due to social media?
A. False representations of success and happiness
B. Excessive connection to reality
C. Avoidance of online comparisons
D. Lack of interaction with technology
87. How is Gen Z characterized in relation to technology?
A. As the first generation immersed in digital life
B. As indifferent to technological advancements
C. As preferring face-to-face communication
D. As overly reliant on traditional media
88. Which attribute of Gen Z is emphasized in the passage?
A. Reluctance to discuss social matters
B. Passion for causes like climate action and equality
C. Preference for personal gain and financial growth
D. Avoidance of authentic self-expression
89. What outcome is linked to continuous exposure to online content?
A. Lower levels of emotional stress
B. Increased rates of mental health issues like anxiety
C. Strengthened sense of self-confidence
D. Greater connection with offline activities

90. The tone of the passage can be described as:
- | | |
|-------------------------------|---------------------------|
| A. Cautious and introspective | B. Cynical and dismissive |
| C. Lighthearted and humorous | D. Alarmist and harsh |

GENERAL KNOWLEDGE

91. How many heritage properties of Nepal are listed in the World Heritage List?
- | | |
|-------|-------|
| A. 5 | B. 10 |
| C. 15 | D. 20 |
92. Who was the first to use the phrase 'Jai Nepal'?
- | | |
|--------------------------|----------------------------|
| A. Dharma Bhakta Mathema | B. Dasarath Chandra Thakur |
| C. Gangalal Shrestha | D. Shukraraj Shastri |
93. What is the national game of Nepal?
- | | |
|--------------|---------------|
| A. Dandibiyo | B. Volleyball |
| C. Football | D. Cricket |
94. What is called the blank sheet on the front and back of the book?
- | | |
|--------------|--------------|
| A. Fly Leaf | B. Soft Leaf |
| C. Fly Cover | D. Hard Leaf |
95. What is the total installed electricity capacity in Nepal by March 2025?
- | | |
|------------|------------|
| A. 2602 MW | B. 3602 MW |
| C. 3502 MW | D. 3402 MW |
96. How many trade points have been opened between Nepal and India?
- | | |
|-------|-------|
| A. 12 | B. 17 |
| C. 22 | D. 27 |
97. By which treaty did the First World War end?
- | | |
|----------------------------|-----------------------|
| A. Treaty of Versailles | B. Treaty of Dublin |
| C. Treaty of Washington DC | D. Treaty of Brooklyn |
98. Who discovered that the Earth revolves around the sun?
- | | |
|--------------------|------------------------|
| A. Galileo Galilei | B. Nicolaus Copernicus |
| C. Aristotle | D. Edwin Hubble |
99. Who was the first woman to win a Nobel Prize?
- | | |
|--------------------|----------------------|
| A. Marie Curie | B. Ernest Rutherford |
| C. Albert Einstein | D. Lise Meitner |
100. Which is the smallest district of Nepal after local level division?
- | | |
|------------|--------------|
| A. Manang | B. Bajura |
| C. Pyuthan | D. Bhaktapur |



Exam Date: _____

Exam Time: _____

Name in BLOCK LETTERS

[illegible]

Card Number				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

INSTRUCTIONS FOR STUDENTS

1. Write the Card number in digits in the boxes and mark the bubble on the corresponding number in the box below the digit.
2. Do not alter or erase your answer.
3. Use only black pen.
4. Fill the circle completely while bubbling the answer.
5. Do not mark any stray mark or rough work on the sheet.

Wrong Methods

Right Methods



Ⓐ Ⓑ ● Ⓓ

INVIGILATOR'S SIGNATURE

APPLICANT'S SIGNATURE

Stream: _____

Room No.: _____

Question SET **A**

Q No. 1 - 25

1. (A) (B) (C) (D)
2. (A) (B) (C) (D)
3. (A) (B) (C) (D)
4. (A) (B) (C) (D)
5. (A) (B) (C) (D)
6. (A) (B) (C) (D)
7. (A) (B) (C) (D)
8. (A) (B) (C) (D)
9. (A) (B) (C) (D)
10. (A) (B) (C) (D)
11. (A) (B) (C) (D)
12. (A) (B) (C) (D)
13. (A) (B) (C) (D)
14. (A) (B) (C) (D)
15. (A) (B) (C) (D)
16. (A) (B) (C) (D)
17. (A) (B) (C) (D)
18. (A) (B) (C) (D)
19. (A) (B) (C) (D)
20. (A) (B) (C) (D)
21. (A) (B) (C) (D)
22. (A) (B) (C) (D)
23. (A) (B) (C) (D)
24. (A) (B) (C) (D)
25. (A) (B) (C) (D)

Q No. 26 - 50

26.

A	B	C	D
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 27.

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 28.

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 29.

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 30.

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 31.

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 32.

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 33.

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 34.

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 35.

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A	B	C	D
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 37.

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 38.

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 39.

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 40.

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 41.

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 42.

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 43.

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 44.

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 46.

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 47.

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 48.

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 49.

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 50.

A	B	C	D
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Q No. 51 - 75

- | | | | | |
|-----|---|---|---|---|
| 51. | A | B | C | D |
| 52. | A | B | C | D |
| 53. | A | B | C | D |
| 54. | A | B | C | D |
| 55. | A | B | C | D |
| 56. | A | B | C | D |
| 57. | A | B | C | D |
| 58. | A | B | C | D |
| 59. | A | B | C | D |
| 60. | A | B | C | D |
| 61. | A | B | C | D |
| 62. | A | B | C | D |
| 63. | A | B | C | D |
| 64. | A | B | C | D |
| 65. | A | B | C | D |
| 66. | A | B | C | D |
| 67. | A | B | C | D |
| 68. | A | B | C | D |
| 69. | A | B | C | D |
| 70. | A | B | C | D |
| 71. | A | B | C | D |
| 72. | A | B | C | D |
| 73. | A | B | C | D |
| 74. | A | B | C | D |
| 75. | A | B | C | D |

Q No. 76 - 100

- | | | | | |
|------|---|---|---|---|
| 76. | A | B | C | D |
| 77. | A | B | C | D |
| 78. | A | B | C | D |
| 79. | A | B | C | D |
| 80. | A | B | C | D |
| 81. | A | B | C | D |
| 82. | A | B | C | D |
| 83. | A | B | C | D |
| 84. | A | B | C | D |
| 85. | A | B | C | D |
| 86. | A | B | C | D |
| 87. | A | B | C | D |
| 88. | A | B | C | D |
| 89. | A | B | C | D |
| 90. | A | B | C | D |
| 91. | A | B | C | D |
| 92. | A | B | C | D |
| 93. | A | B | C | D |
| 94. | A | B | C | D |
| 95. | A | B | C | D |
| 96. | A | B | C | D |
| 97. | A | B | C | D |
| 98. | A | B | C | D |
| 99. | A | B | C | D |
| 100. | A | B | C | D |

DO NOT WRITE OR SCRIBBLE HERE

SCIENCE**SET – B****PHYSICS**

1. Which of the following has the same unit as that of impulse?
A. Force
B. Momentum
C. Work
D. Energy
2. If a vector lies entirely along the x-axis, then its y-component is:
A. Zero
B. Infinity
C. One
D. Equal to its x-component
3. A particle completes one full round along a circular track of radius 70 m in 60 seconds. What is the average velocity? (Use $\pi = 3$, if required)
A. 7 m/s
B. 3.5 m/s
C. 1.17 m/s
D. 0 m/s
4. Two trains of length 150 m and 250 m are moving in opposite directions at speeds of 36 km/h and 54 km/h respectively. How long will they take to completely cross each other?
A. 16 s
B. 18 s
C. 20 s
D. 22 s
5. The force that will produce acceleration of 1 m/s^2 on a body of mass 1 kg is called:
A. 1 dyne
B. 1 Pascal
C. 1 Erg
D. 1 Newton
6. A rocket moves forward by ejecting gases backwards at high speed. This is an example of:
A. Newton's First Law
B. Newton's Second Law
C. Newton's Third Law
D. Law of Conservation of Energy
7. A body of mass 2 kg is thrown vertically upwards with 40 J of kinetic energy. The maximum height it can reach is:
A. 2 m
B. 4 m
C. 6 m
D. 8 m
8. When a solid body is completely immersed in a liquid, the loss in weight equals:
A. Actual weight of body
B. Weight of liquid displaced
C. Apparent weight
D. Density of the liquid

9. If mass of Earth becomes 4 times and radius becomes 2 times, the acceleration due to gravity on the surface becomes:
 - A. Doubled
 - B. Quadrupled
 - C. Halved
 - D. Same as before
10. If a temperature is 77°F, its approximate Celsius equivalent is:
 - A. 10°C
 - B. 20°C
 - C. 25°C
 - D. 30°C
11. A substance with low specific heat capacity will:
 - A. Heat up and cool down quickly
 - B. Retain heat for longer time
 - C. Require large amount of heat for small temperature rise
 - D. Take long time to melt
12. A light ray makes an angle of 30° with the normal while entering water ($\mu = 1.33$). The angle of refraction is:
 - A. 22°
 - B. 30°
 - C. 40°
 - D. 45°
13. Which of the following is the correct relation between EMF (E), terminal potential difference (V), current (I), and internal resistance (r) of a cell?
 - A. $E = V - Ir$
 - B. $E = V + Ir$
 - C. $V = E + 2Ir$
 - D. $E = Ir - V$
14. In an experiment, if the frequency of source is doubled, keeping medium constant, the speed of sound:
 - A. Doubles
 - B. Remains same
 - C. Halves
 - D. Becomes four times
15. The shape of the Milky Way galaxy is:
 - A. Irregular
 - B. Elliptical
 - C. Spherical
 - D. Spiral

CHEMISTRY

16. The electronic configuration of Calcium ion (Ca^{++}) is
 - A. 2,8,5
 - B. 2,8,8
 - C. 2,8,4
 - D. 2,8,7
17. An element X has a valency 3. What will be its formula with carbonate ion?
 - A. $\text{X}_2(\text{CO}_3)_3$
 - B. X_2CO_3
 - C. XCO_3
 - D. $\text{X}(\text{CO}_3)_3$
18. In presence of heat the following reaction occurs, $\text{CaCO}_3 \longrightarrow \text{CaO} + \text{CO}_2$. This reaction is an example of
 - A. Combination reaction
 - B. Displacement reaction
 - C. Double displacement reaction
 - D. Decomposition reaction

19. Haber's process is used for the
A. Manufacture of H_2SO_4
B. Manufacture of CO_2
C. Manufacture of NH_3
D. Manufacture of HNO_3
20. In the salt, NaCl , which one of the statements is correct?
A. Na^+ is basic radical & Cl^- is acid radical.
B. Na^+ is Acid radical & Cl^- is basic radical.
C. Both Na^+ and Cl^- are acid radical.
D. Both Na^+ and Cl^- are basic radical.
21. Among the following, which one is NOT an indicator?
A. Litmus paper
B. Phenolphthalein
C. Methyl orange
D. Methyl alcohol
22. Industrially, urea gas is prepared by:
A. Reacting CO_2 and HCl
B. Reacting CaCO_3 and H_2SO_4
C. Reacting CO_2 and NH_3
D. By heating NH_4NO_3 at very high temperature
23. gas is used as a coolant in refrigerator & air condenser.
A. CO_2
B. NH_3
C. H_2
D. O_2
24. The important ore of iron is:
A. Haematite
B. Chalcocite
C. Silver copper glance
D. Both A & B
25. In Aqua-regia the ratio of mixture of conc. hydrochloric acid and conc. nitric acid is:
A. 1:3 ratio
B. 3:1 ratio
C. 1:1 ratio
D. 3:3 ratio
26. Unsaturated hydrocarbons that is *alkene* can be represented by a formula:
A. C_nH_{2n}
B. $\text{C}_n\text{H}_{2n+2}$
C. $\text{C}_n\text{H}_{2n+4}$
D. $\text{C}_n\text{H}_{2n+2}$
27. The functional group of aldehydes is:
A. $-\text{OH}$
B. $-\text{O}-$
C. $-\text{CHO}$
D. $-\text{NH}_2$
28. The Violet colored glass can be prepared by mixing:
A. Cu_2O
B. MnO_2
C. NiO
D. Fe_2O_3

29. The percentage of lead in pencil is:
A. 50% B. 20% C. 10% D. 0%
30. Protium and Deuterium are:
A. Isotones of Hydrogen B. Allotropes of Hydrogen
C. Isotopes of Hydrogen D. Isobars of Hydrogen

BIOLOGY

31. Who is honoured as the Father of Botany?
A. Aristotle B. Carolus Linnaeus
C. Theophrastus D. G. Mendel
32. Which of the following is called semi-autonomous cell organelle?
A. Golgi complex B. Endoplasmic reticulum
C. Ribosome D. None of them
33. What happens in interphase of mitotic cell division?

A.	Number of chromosomes remains same	Amount of DNA remains same
B.	Number of chromosome doubles	Amount of DNA remains same
C.	Number of chromosomes remains same	Amount of DNA becomes double
D.	Number of chromosome doubles	Amount of DNA becomes double

34. In five kingdom system of classification, X have been placed in kingdom Y

	X	Y
A.	Unicellular prokaryotes	Protista
B.	Multicellular prokaryotes	Monera
C.	Unicellular eukaryotes	Protista
D.	Multicellular eukaryotes	Monera

35. Fern plant has been placed in :
A. Algae B. Angiosperm
C. Bryophyta D. Pteridophyta
36. Radius of each double helical B-DNA molecule is :
A. 10 Å B. 20 Å C. 2 Å D. 1 Å
37. Greenhouse effect is caused due to :
A. global warming
B. trapping of solar radiation on earth surface
C. air pollution
D. ozone layer depletion

38. During day time, plants lose water in the form of vapour from its aerial parts. This process is called :
A. Osmosis
B. Respiration
C. Photosynthesis
D. Transpiration
39. Correct way of writing scientific name of pea plant is :
A. *Pisum sativum*
B. *PISUM SATIVUM*
C. Pisum sativum
D. *Pisum Sativum*
40. Which of the following is NOT a part of grassland ecosystem?
A. Rabbit
B. Camel
C. Eagle
D. Grasshopper
41. Which type of symmetry is exhibited by Coelenterates?
A. Bilateral Symmetry
B. Radial Symmetry
C. Asymmetry
D. Spherical Symmetry
42. Which of the following diseases is NOT caused by nematodes (Nemathelminths)?
A. Filariasis
B. Elephantiasis
C. Ascariasis
D. Malaria
43. During which stage of the honey bee life cycle do worker bees feed the royal jelly and bee bread to growing ones?
A. Egg
B. Larva
C. Pupa
D. Adult
44. What is the primary function of the thyroid gland?
A. Secretion of prolactin
B. Secretion of oxytocin
C. Producing insulin
D. Secretion of thyroxin and calcitonin
45. Iodine is essential for the synthesis of which hormone(s)?
A. Aldosterone
B. Thyroid hormone
C. Cortisol
D. ADH
46. The valve located between the right atrium and the right ventricle is:
A. Tricuspid valve
B. Bicuspid valve
C. Mitral valve
D. Semilunar valve
47. What is the primary function of platelets (thrombocytes) in the blood?
A. Transporting oxygen
B. Fighting infection
C. Blood clotting
D. Regulating body temperature

48. Which of the following is NOT a type of connective tissue?
- | | |
|-----------|-----------|
| A. Blood | B. Bone |
| C. Muscle | D. Tendon |
49. According to Darwin's theory of evolution, what is the primary driver of the "struggle for existence" in populations?
- A. Overproduction of individuals and limited resources
- B. Genetic drift
- C. Sudden mutations
- D. Environmental catastrophes
50. What is the primary function of the cerebellum?
- A. Vision
- B. Hearing
- C. Motor control, coordination, posture and balance
- D. Breathing

MATHEMATICS

51. In the xy - plane, the graph of the function $f(x) = x^2 + 5x + 4$ has two x -intercepts. What is the distance between the x -intercepts?
- | | | | |
|------|------|------|------|
| A. 1 | B. 2 | C. 3 | D. 4 |
|------|------|------|------|
52. $-3x + y = 6$
 $ax + 2y = 4$
- In the system of equations above, a is a constant. For which of the following values of a does the system have no solution?
- | | |
|-------|-------|
| A. -6 | B. -3 |
| C. 3 | D. 6 |
53. $2x + 3y = 1200$
 $3x + 2y = 1300$
- Based on the system of equations above, what is the value of $5x + 5y$?
- | | |
|---------|---------|
| A. 500 | B. 1000 |
| C. 2300 | D. 2500 |
54. If $u + t = 5$ and $u - t = 2$, what is the value of $(u - t)(u^2 - t^2)$?
- | | | | |
|-------|-------|-------|-------|
| A. 10 | B. 20 | C. 25 | D. 50 |
|-------|-------|-------|-------|
55. A book was on sale for 40% off its original price. If the sale price of the book was Rs 18, what was the original price of the book?
- | | |
|--------------|--------------|
| A. Rs. 7.20 | B. Rs. 10.80 |
| C. Rs. 30.00 | D. Rs. 45.00 |

56. A right circular cone has a volume of 24π cubic inches. If the height of the cone is 2 inches, what is the radius, in inches, of the base of the cone?

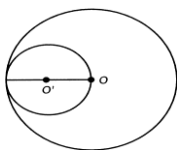
A. $2\sqrt{3}$ B. 6
C. 12 D. 36

57. Which of the following gives the radius of the sphere in terms of the volume of the sphere?

A. $\sqrt{\frac{V}{4\pi}}$ B. $\sqrt{\frac{3V}{4\pi}}$ C. $\sqrt[3]{\frac{3V}{4\pi}}$ D. $\frac{V}{\sqrt[3]{4\pi}}$

58. Circles O and O' are internally tangent to each other. Circle O' passes through the center of O. If the area of circle O is 16, the area of circle O' is

A. $2\sqrt{2}$
B. 2
C. $2\sqrt{\pi}$
D. 4

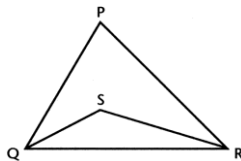


59. A boy grew in one year from a height of x inches to a height of y inches. The percent of increase was:

A. $\frac{100(y-x)}{y}$ B. $\frac{100(y-x)}{x}$
C. $\frac{y-x}{x}$ D. $\frac{y-x}{100}$

60. Given $\triangle PQR$, $\angle P = 70^\circ$, QS bisects $\angle Q$, and RS bisects $\angle R$ and $\angle S =$

A. 125°
B. 120°
C. 115°
D. 110°



61. If $f(x) = 5x - 3$ and $f(t) = 7$, what is the value of t?

A. 0 B. 1 C. 2 D. 32

62. Let x be the angle formed by the diagonal of the face of a cube and the diagonal of the cube, drawn from the same vertex. $\cos^2 x =$

A. $\frac{2}{3}$ B. $\frac{1}{3}$
C. $\frac{1}{2}$ D. 1

63. $\tan \frac{A}{2} + \cot \frac{A}{2}$ is equivalent to
 A. $2 \sin A$
 B. $2 \cos A$
 C. $2 \sec A$
 D. $2 \operatorname{cosec} A$
64. For $0 \leq x \leq \pi$ and $\cos x = -1$, then what is the value of $\cos \frac{x}{2}$?
 A. $-\frac{\sqrt{3}}{2}$
 B. $-\frac{1}{2}$
 C. 0
 D. $\frac{\sqrt{3}}{2}$
65. If two unbiased dice are rolled once, what is the probability that the number of dots on the two faces will be 4?
 A. $\frac{1}{4}$
 B. $\frac{1}{12}$
 C. $\frac{1}{18}$
 D. $\frac{1}{36}$
66. If t_1, t_2, t_3 are in AP, then $\frac{t_1}{k}, \frac{t_2}{k}, \frac{t_3}{k}, \dots$ are in
 A. AP
 B. GP
 C. HP
 D. None of them
67. If $A = \begin{pmatrix} 2 & 1 \\ 4 & -1 \end{pmatrix}$, then $A^2 - A$ is equal to
 A. I
 B. 2I
 C. 6I
 D. O
68. The population of a town increases at the rate of 5% per annum and the present population of the town is 185220. What was the population of town 3 years ago?
 A. 160000
 B. 170000
 C. 180000
 D. 150000
69. A flask contains 40 grams of solution that is 25% sugar by weight. How much sugar must be added to the flask so that the resulting solution is 40% sugar by weight?
 A. 6
 B. 8
 C. 10
 D. 15
70. If $n(A - B) = 327$ and $n(B - A) = 217$ and $n(A \cup B) = 600$, find $n(A \cap B)$.
 A. 56
 B. 46
 C. 66
 D. 36

ENGLISH

71. A person who never gets tired is
 A. Worker B. Workaholic
 C. Indefatigable D. Uxorious
72. He remained _____ even in the face of criticism, demonstrating his _____ in his beliefs.
 A. uncertain, flexibility B. indifferent, disinterest
 C. resolute, confidence D. discouraged, weakness
73. Find the error:
 It is the dream of every participating nations to win the World Cup. No error.
 A B C D
 A. A B. B C. C D. D
74. Which one of the following sentences expresses 'prohibition'?
 A. None shall leave the hall.
 B. None can lift this bag.
 C. None has denied the allegations.
 D. None has been prohibited to attend the seminar.
75. Which one of the following does not fall under the function of modal verbs?
 A. Expressing probability B. Explaining possibility
 C. Stating facts D. Drawing logical necessity
76. The silent letter in the word 'poignant' is
 A. i B. g C. o D. t
77. The study of earthquakes is
 A. Archeology B. Seismology
 C. Graphology D. Entomology
78. The suitable analogy similar to "Cat: Kitten" is
 A. Deer: Fawn B. Goose: Leveret
 C. Goat: Calf D. Sheep: Tadpole
79. The passive voice of "Help the poor" is
 A. You are ordered to help the poor B. The poor must be helped.
 C. Let the poor be helped. D. The poor were helped.
80. The child drank the milk. The underlined word is a/an
 A. Transitive Verb B. Intransitive Verb
 C. Linking Verb D. Auxiliary Modal Verb
81. Which of the following words has a different vowel sound in its ending?
 A. story B. destroy C. toy D. employee

82. Which of the following represents the phonetic transcription of "college"?
A. /'kælɪdʒ/ B. /'kalɪdʒ/ C. /'kɒledʒ/ D. /'kɒlɪdʒ/
83. Which of the following words is not an example of the irregular plural noun?
A. Children B. Cacti C. Oxen D. Tomatoes
84. The mice ran deeper into the hole, ...?
A. did they B. didn't they
C. did it D. didn't it
85. Had I not checked the email, I ... missed the deadline of form submission.
A. shouldn't have B. wouldn't have
C. should have D. could have

Instructions: Read the passage and answer the questions (86-90) given below.

Recent studies indicate that about 50% of individuals struggle with managing anger in their daily lives. Unchecked anger can lead to physical health problems like high blood pressure and heart disease, as well as psychological issues such as anxiety and depression. Evidence suggests that anger management techniques, including cognitive therapy and mindfulness, reduce anger levels by an average of 35% within 6 months. However, only 25% of those advised to seek help actually pursue therapy. Interestingly, many individuals continue to underestimate the impact of chronic anger on their overall health.

86. Based on the passage, which of the following is the most significant barrier to individuals seeking help for anger management?
A. A lack of awareness about the consequences of chronic anger
B. The high cost and accessibility of therapy services
C. The perception that anger is a normal and manageable emotion
D. The belief that anger management techniques don't work for most people
87. Which of the following is not directly attributed to chronic anger in the passage?
A. Heart disease B. Anxiety
C. Sleep disturbances D. High blood pressure
88. What is most likely to influence the effectiveness of anger management techniques, based on the passage?
A. Frequency of anger episodes
B. The individual's openness to therapy
C. Duration of therapy sessions
D. Social support during treatment

89. What conclusion can be drawn about the public perception of anger management based on the passage?
- People underestimate the health risks of chronic anger.
 - Most individuals actively seek therapy after being advised to.
 - Anger is mostly viewed as a temporary and inconsequential emotion.
 - Therapy is considered the primary solution for all anger-related issues.
90. The 35% decrease in anger levels after therapy likely represents:
- A temporary change that recovers quickly
 - A decrease that is linked to long-term lifestyle changes
 - A short-term improvement, requiring continual effort
 - A minimal change with little impact on overall well-being

GENERAL KNOWLEDGE

91. Who was the first person to climb Mount Everest without both hands?
- Pasang Lamhu Sherpa
 - Kamirita Sherpa
 - Aangrita Sherpa
 - Sudarshan Gautam
92. Which is the nation with the most borders in the world?
- China
 - India
 - Brazil
 - Russia
93. Who is the first Nepalese athlete to represent Nepal at the Olympic Games?
- Deepak Bista
 - Bidhan Lama
 - Tanka Bahadur Karki
 - Bijay Sinjali
94. Which country has won the most World Cup trophies in cricket history?
- India
 - Pakistan
 - West Indies
 - Australia
95. Who is the CEO of Tesla Inc?
- Warren Baffet
 - Donald Trump
 - Elon Musk
 - Ratan Tata
96. Who is the current president of Nepal?
- K P Sharma Oli
 - Ram Chandra Paudel
 - Puspa Kamal Dahal
 - Bidhya Devi Bhandari
97. How many international airports are there in Nepal?
- Five
 - Four
 - Three
 - Two
98. Who was the second person to land on moon?
- Buzz Aldrin
 - Pete Conrad
 - Neil Armstrong
 - Yuri Gagarin
99. Who was the famous Nepalese writer who was born and died on the same date?
- Laxmi Prasad Devkota
 - Siddicharan Shrestha
 - Bal Krishna Sama
 - Moti Ram Bhatta
100. Which is the hottest country in the world?
- Greenland
 - Canada
 - Burkina Faso
 - United Arab Emirates



DO NOT WRITE OR SCRIBBLE HERE

ANSWER SHEET - SET B

Exam Date: _____

Exam Time: _____

Name in BLOCK LETTERS

FIRST	MIDDLE	LAST

Card Number				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

INSTRUCTIONS FOR STUDENTS

1. Write the Card number in digits in the boxes and mark the bubble on the corresponding number in the box below the digit.
2. Do not alter or erase your answer.
3. Use only black pen.
4. Fill the circle completely while bubbling the answer.
5. Do not mark any stray mark or rough work on the sheet.

Wrong Methods



Right Methods



INVIGILATOR'S SIGNATURE

APPLICANT'S SIGNATURE

Question SET (B)

Stream: _____

Room No.: _____

Q No. 1 - 25

1. A B C D
2. A B C D
3. A B C D
4. A B C D
5. A B C D
6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D
11. A B C D
12. A B C D
13. A B C D
14. A B C D
15. A B C D
16. A B C D
17. A B C D
18. A B C D
19. A B C D
20. A B C D
21. A B C D
22. A B C D
23. A B C D
24. A B C D
25. A B C D

Q No. 26 - 50

26. A B C D
27. A B C D
28. A B C D
29. A B C D
30. A B C D
31. A B C D
32. A B C D
33. A B C D
34. A B C D
35. A B C D
36. A B C D
37. A B C D
38. A B C D
39. A B C D
40. A B C D
41. A B C D
42. A B C D
43. A B C D
44. A B C D
45. A B C D
46. A B C D
47. A B C D
48. A B C D
49. A B C D
50. A B C D

Q No. 51 - 75

51. A B C D
52. A B C D
53. A B C D
54. A B C D
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69. A B C D
70. A B C D
71. A B C D
72. A B C D
73. A B C D
74. A B C D
75. A B C D

Q No. 76 - 100

76. A B C D
77. A B C D
78. A B C D
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96. A B C D
97. A B C D
98. A B C D
99. A B C D
100. A B C D

DO NOT WRITE OR SCRIBBLE HERE

SCIENCE**SET – C****PHYSICS**

- Which of the following pairs represent units of the same physical quantity?
A. Newton and Joule
B. Watt and Joule per second
C. Pascal and Joule
D. Coulomb and Watt
- The scalar (dot) product of two vectors is maximum when the angle between them is:
A. 0°
B. 45°
C. 90°
D. 180°
- Two cars start from points 60 km apart and move towards each other at 40 km/h and 20 km/h respectively. What is the time taken to meet?
A. 3 hours
B. 2 hours
C. 1.5 hours
D. 1 hour
- A train 200 m long passes a platform 300 m long in 30 seconds. What is the speed of the train?
A. 50 km/h
B. 60 km/h
C. 70 km/h
D. 80 km/h
- A constant force of 600 N is acting on a car moving with velocity 5 m/s in straight line, then power developed by the engine of car is:
A. 1500 W
B. 3000 W
C. 6000 W
D. None of them
- Two different forces act separately on two bodies of different masses for the same time. If both bodies start from rest and acquire the same momentum, which force was larger?
A. Force on the heavier body
B. Force on the lighter body
C. Both forces were equal
D. Cannot be determined
- A 3 kg body is moving with speed 6 m/s. What constant force is required to stop it in 4 m?
A. 6.75 N
B. 9 N
C. 13.5 N
D. 18 N
- A piece of metal weighs 800 N in air and 650 N in water. The buoyant force is:
A. 1450 N
B. 800 N
C. 650 N
D. 150 N

9. If the radius of Earth shrinks to half, but mass remains same, acceleration due to gravity on its surface becomes:

A. g	B. $2g$
C. $4g$	D. $g/2$
10. Two objects A and B of equal mass are heated. If $C_A = 2C_B$ and both absorb same heat energy Q , then the rise in temperature of A compared to B is:

A. Double	B. Half
C. Same	D. One-fourth
11. A 10 kg block of a metal requires 5000 J of heat to raise its temperature by 10°C . Its specific heat capacity is:

A. $50 \text{ J/kg}^\circ\text{C}$	B. $5000 \text{ J/kg}^\circ\text{C}$
C. $500000 \text{ J/kg}^\circ\text{C}$	D. $5 \text{ J/kg}^\circ\text{C}$
12. For total internal reflection to occur, the light must travel:

A. From rarer to denser medium	B. From air to glass
C. In vacuum	D. From denser to rarer medium
13. When a cell of EMF 2V and internal resistance 1Ω supplies a current of 0.5A, the terminal potential difference is:

A. 2V	B. 1.5V
C. 1V	D. 2.5V
14. The time taken for sound to travel 340 m in air at room temperature is approximately:

A. 1 s	B. 0.5 s
C. 2 s	D. 1.5 s
15. The Hubble Space Telescope is primarily used for observing:

A. The Earth's surface	B. The Sun
C. Distant galaxies and stars	D. The Moon

CHEMISTRY

16. The electronic configuration of phosphorus is:

A. 2,8,3	B. 2,8,4
C. 2,8,5	D. 2,8,6
17. The metal M forms a salt with Nitrate ion is $\text{M}(\text{NO}_3)$. The Valency of metal is:

A. 1	B. 2
C. 3	D. 4

18. $\text{H}_2\text{SO}_4(\text{aq}) + \text{CaO}(\text{s}) \longrightarrow \text{CaSO}_4(\text{aq}) + \text{H}_2\text{O}(\text{l})$. This reaction is an example of :
- A. Combination reaction
B. Decomposition reaction
C. Displacement
D. Neutralization reaction
19. In the following reaction
- $$2\text{KClO}_3 \xrightarrow[\text{MnO}_2]{240^\circ \text{C}} 2\text{KCl} + 3\text{O}_2$$
- Manganese dioxide (MnO_2) act as :
- A. Positive catalyst
B. Negative catalyst
C. Auto catalyst
D. Induced Catalyst
20. What happens when dilute hydrochloric acid is added to marble chips?
- A. Produce CO_2 , H_2O and CaCl_2 .
B. Produce CO_2 , H_2O and CaCl_2 .
C. Produce CO_2 , H_2O and CaCl_3
D. Produce CO , H_2O and CaCl_2
21. Which of the following colours is indicated by phenolphthalein in acidic medium?
- A. Blue
B. Red
C. Pink
D. Colourless
22. Which of the following gases can change the colour of wet red litmus paper?
- A. Hydrogen
B. Oxygen
C. Ammonia
D. Carbon dioxide
23. Which one of the following statements is not correct for an acid?
- A. Acid gives off hydrogen ion(H^+) in solution.
B. Acid has a sour taste.
C. Acid produces salt and water with base.
D. Acid produces oxygen gas when react with metal like Mg, Zn, etc.
24. The important ore of iron is.
- A. Bauxite
B. Chalcopyrite
C. Magnetite
D. Argentite
25. Which of the following statements is not correct?
- A. Water and air have no effect on gold.
B. Gold is used to prepare gold leaf electroscope.
C. Gold is active metal.
D. Gold dissolve in aqua regia.
26. Which of the following are members of the same homologous series?
- A. CH_4 & C_2H_4
B. CH_3Cl & $\text{C}_2\text{H}_5\text{OH}$
C. $\text{C}_2\text{H}_5\text{OH}$ & $\text{C}_3\text{H}_7\text{OH}$
D. CH_3OCH_3 & $\text{C}_2\text{H}_5\text{OH}$

27. Which of the following formulae represents the Butane?
 A. C_2H_6 B. C_3H_8 C. C_4H_{10} D. C_4H_{12}
28. Cement is the mixture of :
 A. Calcium silicate and Calcium aluminate
 B. Calcium silicate and Calcium chloride
 C. Calcium carbonate and Calcium sulphate
 D. Calcium chloride and Calcium aluminate
29. Soap is a _____ salt of fatty acid.
 A. Sodium or Potassium B. Calcium
 C. Magnesium D. Aluminium
30. Diamond and Graphite are the _____ carbon.
 A. Isotopes B. Allotropes C. Isobars D. Isotones

BIOLOGY

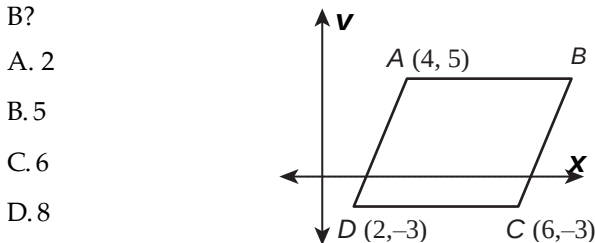
31. Who is credited for discovering the cell for the first time?
 A. A. V. Leeuwenhoek B. R. Hooke
 C. R. Brown D. Purkinje
32. In an eukaryotic cell, which of the following two cell organelles are semi-autonomous in nature?
 A. Mitochondrion and Chloroplast B. Mitochondrion and Nucleus
 C. Nucleus and mitochondrion D. Nucleus and ribosome
33. Which of the following types of chromosome has centromere at the centre of its length?
 A. Submetacentric B. Metacentric
 C. Acrocentric D. Acentric
34. All herbivores in an ecosystem are :
 A. Primary consumers B. Secondary consumers
 C. Tertiary consumers D. Producers
35. Plant hormone auxin is responsible for :
 A. cell elongation B. stem elongation
 D. breaking seed dormancy D. ripening of fruit
36. Transfer of pollen grains to stigma of flower is caused by wind in :
 A. entomophily B. ornithophily
 C. anaemophily D. hydrophily
37. Study of internal structure of plant is :
 A. Plant physiology B. Plant morphology
 C. Ecology D. Plant anatomy

38. Primary function of chloroplast is :
 - A. to maintain balance of oxygen and CO₂ in air.
 - B. to maintain greenery in surrounding.
 - C. to prepare food by the process of photosynthesis.
 - D. to prevent earth from global warming.
39. Two monomer units of sucrose are :
 - A. Glucose and fructose
 - B. Glucose and galactose
 - C. Fructose and galactose
 - D. Glucose and glucose
40. Mode of nutrition of organisms belonging to secondary consumer can be:
 - A. Omnivorous only
 - B. Carnivorous only
 - C. Herbivorous only
 - D. Carnivorous as well as omnivorous
41. Platyhelminthes are characterized by which of the following?
 - A. Triploblastic, acoelomate, and bilaterally symmetrical
 - B. Diploblastic, coelomate, and radially symmetrical
 - C. Triploblastic, pseudocoelomate, and bilaterally symmetrical
 - D. Diploblastic, acoelomate, and radially symmetrical
42. In annelids, the primary excretory organs are:
 - A. Malpighian tubules
 - B. Flame cells
 - C. Nephridia
 - D. Green glands
43. What do we call the male honey bees?
 - A. Drones
 - B. Workers
 - C. Soldiers
 - D. Larvae
44. The "master gland" of the endocrine system, which controls many other endocrine glands, is :
 - A. Epithalamus
 - B. Pineal gland
 - C. Pituitary gland
 - D. Thymus gland
45. Hypersecretion of growth hormone in children during their growing years leads to :
 - A. Myxedema
 - B. Gigantism
 - C. Pituitary dwarfism
 - D. Acromegaly
46. Pulmonary veins carry oxygenated blood from the lungs to which chamber of the heart?
 - A. Right atrium
 - B. Right ventricle
 - C. Left atrium
 - D. Left ventricle

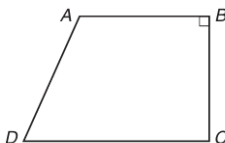
47. The iron-containing molecule within red blood cells responsible for oxygen binding and carrying is called :
 A. Albumin
 B. Fibrinogen
 C. Hemoglobin
 D. Globulin
48. Which type of muscle tissue is voluntary and striated?
 A. Cardiac muscle
 B. Smooth muscle
 C. Skeletal muscle
 D. Involuntary muscle
49. Charles Darwin's theory of evolution by natural selection was first formulated in which book?
 A. Zoology
 B. The Descent of Man
 C. On the Origin of Species
 D. The Voyage of the Beagle
50. Which of the following is NOT a part of the central nervous system?
 A. Brain
 B. Spinal cord
 C. Cranial nerves
 D. Brainstem

MATHEMATICS

51. If A and B are any two sets such that $n(A) = 17$, $n(A \cup B) = 38$, $n(A \cap B) = 2$, then $n(A - B) =$
 A. 21
 B. 15
 C. 23
 D. 51
52. If n is an odd integer, which one of the following is an even integer?
 A. $2n + n$
 B. $2n + 1$
 C. n^3
 D. $n(n + 3)$
53. In the figure, ABCD is a parallelogram, what is the x-coordinate of point B?



54. In the figure, ABCD is a trapezoid with area 50 square units. If the length of AB is 6 units and the length of BC is 5 units, what is the length of CD?
- A. 4
 B. 7
 C. 10
 D. 14



55. If the volume of a cone is 24π cubic feet and its height is 2 feet, what is the diameter of the base in feet?
- A. 3
B. 6
C. 12
D. 24
56. What is the area of the circle whose equation is $(x - 3)^2 + (y + 5)^2 = 18$?
- A. 9π
B. 18π
C. 72π
D. 81π
57. A sphere is inscribed inside a cube. What is the probability that a point that is inside the cube is also inside the sphere?
- A. $\frac{1}{\pi}$
B. $\frac{\pi}{8}$
C. $\frac{\pi}{6}$
D. $\frac{\pi}{4}$
58. John's six test scores are given. What is the positive difference between the mean of the scores and the median of the scores: 86, 72, 92, 62, 99, 93?
- A. 5
B. 6
C. 7
D. 37
59. If $\tan\alpha = \frac{1}{2}$, $\tan\beta = \frac{1}{3}$, then $\alpha + \beta$ is equal to
- A. $\pi/2$
B. $\pi/3$
C. $\pi/4$
D. $\pi/6$
60. Two poles stand on opposite sides of a level street that is 12 meters wide. If one pole is 5 meters taller than the other, what is the angle of elevation between the tops of the poles?
- A. $\sin^{-1} \frac{5}{12}$
B. $\sin^{-1} \frac{1}{5}$
C. $\tan^{-1} \frac{5}{12}$
D. $\tan^{-1} \frac{5}{13}$
61. If $f(x) = 3x + 5$ and $f(g(x)) = 6x - 4$, what is $g(x)$?
- A. $2x - 9$
B. $2x - 3$
C. $3x - 9$
D. $3x - 3$
62. What is the tenth term of the arithmetic sequence whose first term is x and its third term is $x + 6a$?
- A. $33a$
B. $x + 24a$
C. $x + 27a$
D. $x + 30a$

63. If $A = \begin{bmatrix} K & 1 \\ 4 & K \end{bmatrix}$ is a singular matrix, then the value of K is
 A. 1
 B. 2
 C. 3
 D. 4
64. $\frac{5(x+1)}{(x-1)(x+4)} = \frac{A}{x-1} + \frac{3}{x+4}$, the value of A is
 A. 1
 B. 2
 C. 3
 D. -3
65. If $2^{x+4} = 32$, what is the value of 3^{-x} ?
 A. $\frac{1}{3}$
 B. 3
 C. $\frac{1}{9}$
 D. 1
66. If OACB is a parallelogram with $\overrightarrow{OC} = \vec{a}$ and $\overrightarrow{AB} = \vec{b}$ then $\overrightarrow{OA} = \dots$
 A. $\vec{a} + \vec{b}$
 B. $\vec{a} - \vec{b}$
 C. $\frac{1}{2} (\vec{a} + \vec{b})$
 D. $\frac{1}{2} (\vec{a} - \vec{b})$
67. If Rs 300 is invested at 20 %, compounded continuously, how long (to the nearest year) will it take for the money to double?
 A. 3
 B. 4
 C. 5
 D. 6
68. If p lb of salt are dissolved in q lb of water, the percent of salt in the resulting solution is
 A. $\frac{100p}{p+q}$
 B. $\frac{p}{p+q}$
 C. $\frac{100 p}{q}$
 D. $\frac{100 q}{pq}$
69. The selling price of a TV is Rs. 18000. If there is a discount of 10%, what is the marked price?
 A. Rs. 19000
 B. Rs. 20000
 C. Rs.17000
 D. Rs. 21000
70. A fraction becomes $\frac{4}{5}$ if 2 is added to the numerator. If 1 is subtracted from the denominator, the fraction becomes $\frac{3}{4}$. What was the original fraction?
 A. $\frac{18}{25}$
 B. $\frac{20}{25}$
 C. $\frac{24}{25}$
 D. $\frac{25}{18}$

ENGLISH

71. The government run by wealthy is called
 A. oligarchy
 B. autocracy
 C. plutocracy
 D. aristocracy
72. Her ... response to the news was completely unexpected, as everyone anticipated a more ... reaction.
 A. joyful, somber
 B. calm, emotional
 C. indifferent, compassionate
 D. dramatic, reserved
73. Find the error.
 While returning back to the apartment, he accidentally met his friends. No Error.
 A B C D
 A. A B. B C. C D. D
74. Which of the following sentences correctly uses a modal verb to indicate past probability?
 A. She might have been the one who took the last cookie.
 B. They might arrive late, but it's improbable.
 C. You ought to have seen the doctor sooner.
 D. I must have forgotten my keys at home.
75. Which of the following sentences uses a modal verb incorrectly?
 A. She can drive a car.
 B. We must leave now to catch the train.
 C. You will need to bring your own lunch.
 D. He could studied harder if he wanted better grades.
76. The ending sound in the word 'gigantic' is
 A. /s/ B. /z/ C. /iz/ D. /j/
77. Fear of being in confined places is
 A. agoraphobia
 B. claustrophobia
 C. xenophobia
 D. acrophobia
78. He sang continuously for hours at the concert. The underlined word is
 A. transitive verb
 B. intransitive verb
 C. linking verb
 D. auxiliary modal verb
79. The active voice of "I am being followed" is
 A. Someone has been following me.
 B. Someone has followed me.
 C. Someone is following me.
 D. Someone was following me.
80. Which of the following words has a different vowel sound?
 A. Stone B. Alone C. Phone D. Done

81. The phonetic transcription of the word 'comb' is
A. /kəʊm/ B. /komb/ C. /kaʊmb/ D. /kumb/
82. Neither Krish nor his friends ... going to watch the movie.
A. are B. is
C. was D. has been
83. None of them knew where the venue was, ...?
A. do they B. don't they
C. did they D. didn't they
84. Which of the following words is incorrectly pluralized?
A. Childrens B. Oxen
C. Sheep D. Mice
85. The information ... social media is not always reliable.
A. in B. on C. at D. within

Instructions: Read the passage and answer the questions (86-90) given below.

Exam stress is a common issue faced by students of all ages, particularly as exams approach. Research shows that a significant number of students experience high levels of anxiety during exams, which can affect both their academic performance and overall well-being. While some students thrive under pressure, many struggle to cope with the mounting expectations. The pressure to achieve high grades, coupled with fear of failure, often leads to physical symptoms such as headaches, sleeplessness, and digestive issues. Experts suggest that managing exam stress involves a combination of healthy study habits, proper time management, and relaxation techniques. Activities like mindfulness, regular physical exercise, and staying connected with friends and family are recommended to help alleviate stress. However, despite these strategies, many students still find it challenging to manage their stress effectively.

86. Which symptom is commonly associated with stress during exams?
A. Insomnia B. Nausea
C. Weight gain D. Euphoria
87. What is the main factor that contributes to stress during exams?
A. High grades B. Lack of sleep
C. Poor diet D. Fear of failure
88. Which of the following is not suggested as a way to reduce stress?
A. Mindfulness B. Exercise
C. Isolation D. Time management

89. Which activity is recommended to help alleviate stress?
 A. Meditation B. Exercise
 C. Studying D. Rest
90. Despite using strategies, many students still have difficulty managing:
 A. Focus B. Stress C. Sleep D. Grades

GENERAL KNOWLEDGE

91. Who is known as 'The Tiger of the House' in Nepal?
 A. Mandev B. Bir Shamsher
 C. Chandra Shamsher D. Bhimsen Thapa
92. How many municipalities are there in Nepal?
 A. 256 B. 276 C. 512 D. 421
93. Which country is going to host FIFA World Cup 2026?
 A. Canada B. United States
 C. Mexico D. All of them
94. Which of the following sports is Jerlin Anika associated with?
 A. Tennis B. Badminton C. Squash D. Chess
95. What is the full form of SMS?
 A. Simple Message System B. Simple Mathematics Solution
 C. Short Message Service D. Short Message System
96. Which famous personality does the phrase "Nothing is impossible, the word itself says, 'I'm possible!'" belong to?
 A. Audrey Hepburn B. Estee Lauder
 C. Dalai Lama D. Oscar Wilde
97. Which is the longest continental mountain range in the world?
 A. Himalayas B. Andes Mountains
 C. Rocky Mountains D. Ural Mountains
98. Who invented the Electric Generator?
 A. Sir Alexander Graham Bell B. Thomas Alva Edison
 C. Alfred B. Nobel D. Michael Faraday
99. Who is the author of the narrative poetry *Muna Madan*?
 A. Laxmi Prasad Devkota B. Narayan Wagle
 C. B.P. Koirala D. Lekhnath Poudel
100. Which of the following is the largest organ in the human body?
 A. Heart B. Liver
 C. Skin D. Brain



DO NOT WRITE OR SCRIBBLE HERE

ANSWER SHEET - SET C

Exam Date: _____

Exam Time: _____

Name in BLOCK LETTERS

FIRST	MIDDLE	LAST

Card Number				
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

INSTRUCTIONS FOR STUDENTS

1. Write the Card number in digits in the boxes and mark the bubble on the corresponding number in the box below the digit.
2. Do not alter or erase your answer.
3. Use only black pen.
4. Fill the circle completely while bubbling the answer.
5. Do not mark any stray mark or rough work on the sheet.

Wrong Methods



Right Methods



Question SET ☐ C

INVIGILATOR'S SIGNATURE

APPLICANT'S SIGNATURE

Stream: _____

Room No.: _____

Q No. 1 - 25

1. A B C D
2. A B C D
3. A B C D
4. A B C D
5. A B C D
6. A B C D
7. A B C D
8. A B C D
9. A B C D
10. A B C D
11. A B C D
12. A B C D
13. A B C D
14. A B C D
15. A B C D
16. A B C D
17. A B C D
18. A B C D
19. A B C D
20. A B C D
21. A B C D
22. A B C D
23. A B C D
24. A B C D
25. A B C D

Q No. 26 - 50

26. A B C D
27. A B C D
28. A B C D
29. A B C D
30. A B C D
31. A B C D
32. A B C D
33. A B C D
34. A B C D
35. A B C D
36. A B C D
37. A B C D
38. A B C D
39. A B C D
40. A B C D
41. A B C D
42. A B C D
43. A B C D
44. A B C D
45. A B C D
46. A B C D
47. A B C D
48. A B C D
49. A B C D
50. A B C D

Q No. 51 - 75

51. A B C D
52. A B C D
53. A B C D
54. A B C D
55. A B C D
56. A B C D
57. A B C D
58. A B C D
59. A B C D
60. A B C D
61. A B C D
62. A B C D
63. A B C D
64. A B C D
65. A B C D
66. A B C D
67. A B C D
68. A B C D
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71. A B C D
72. A B C D
73. A B C D
74. A B C D
75. A B C D

Q No. 76 - 100

76. A B C D
77. A B C D
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97. A B C D
98. A B C D
99. A B C D
100. A B C D

DO NOT WRITE OR SCRIBBLE HERE

SCIENCE**SET – D****PHYSICS**

- Which of the following is not a base unit in SI system?
 A. Candela
 B. Kelvin
 C. Volt
 D. Mole
- If two non-zero vectors are parallel, their cross product will be:
 A. Maximum
 B. Minimum
 C. Equal to dot product
 D. Zero
- A person drives from X to Y at 80 km/h and returns at 120 km/h. What is the average velocity for the round trip?
 A. 96 km/h
 B. 100 km/h
 C. 102 km/h
 D. None of these
- A ball **P** is thrown vertically upward with 40 m/s from ground. At the same time, another ball **Q** is dropped from a height of 80 m. After how much time will they meet? (Take $g=10 \text{ m/s}^2$)
 A. 1 s
 B. 2 s
 C. 1.5 s
 D. 0.8 s
- A 20 kg weight is accelerating from rest to 30 m/s in 2 second, then force acting in the body is :
 A. 600 N
 B. 300 N
 C. 150 N
 D. 0 N
- If the mass of an object is doubled and the applied force is also doubled, what happens to its acceleration?
 A. Becomes half
 B. Becomes double
 C. Remains same
 D. Becomes four times
- A 5 kg block falls freely through 10 m. The work done by gravity is:
 A. 500 J
 B. 400 J
 C. 100 J
 D. 50 J
- The pressure exerted by the atmosphere at sea level is approximately:
 A. 10^7 Pa
 B. 10^6 Pa
 C. 10^5 Pa
 D. 10^4 Pa
- Which is the correct expression for mass of Earth in terms of g , R and G ?
 A. $\frac{g^2 R}{G}$
 B. $\frac{G R^2}{g}$
 C. $\frac{G R}{g}$
 D. $\frac{g R^2}{G}$

10. If a temperature difference is 27°C , what is the same temperature difference in Kelvin and Fahrenheit?

A. 27 K and 48.6° F	B. 30 K and 50° F
C. 25 K and 45° F	D. 27 K and 30° F
11. Which of the following is correct regarding specific heat?
 - A. It is the same for all substances
 - B. It is the heat required to change the state of the substance
 - C. It is different for different substances
 - D. It is measured in kg/m^3
12. The refractive index of glass is 1.5. What is the speed of light in glass? (Speed of light in air = $3 \times 10^8\text{ m/s}$)

A. $6 \times 10^8\text{ m/s}$	B. $3 \times 10^8\text{ m/s}$
C. $2 \times 10^8\text{ m/s}$	D. $1 \times 10^8\text{ m/s}$
13. A wire of resistance $50\ \Omega$ is cut into 5 equal parts and connected in parallel. The effective resistance is:

A. $10\ \Omega$	B. $5\ \Omega$
C. $2.5\ \Omega$	D. $2\ \Omega$
14. A sound wave of frequency 512 Hz travels with speed 340 m/s . Its wavelength is:

A. 0.66 m	B. 0.5 m
C. 0.75 m	D. 1 m
15. The closest galaxy to the Milky Way is:

A. Triangulum Galaxy	B. Andromeda Galaxy
C. Whirlpool Galaxy	D. Sombrero Galaxy

CHEMISTRY

16. The electronic configuration of sodium ion is

A. 2,8,1	B. 2,8
C. 2, 8,2	D. 2,8,4
17. An element R has valency equals to 2. What will be its formula with phosphate ion?

A. RPO_4	B. R_2PO_4
C. $\text{R}_3(\text{PO}_4)_2$	D. $\text{R}(\text{PO}_4)_2$
18. $\text{C} + \text{O}_2 \xrightarrow{\Delta} \text{CO}_2 + \text{Heat}$. This reaction is an example of

A. Exothermic reaction	B. Endothermic reaction
C. Endo and exothermic reaction	D. Photochemical reaction

19. One mole of oxygen gas contains how many numbers of gas molecules?
A. 6.023×10^{20} B. 6.023×10^{21}
C. 6.023×10^{23} D. 6.023×10^{24}
20. Atomic mass of carbon is 12 amu but 1 amu equal to
A. 1.66×10^{-20} gm B. 1.66×10^{-22} gm
C. 1.66×10^{-24} gm D. 1.66×10^{-23} gm
21. Which one of the following statements is correct for basic radical?
A. Basic radical contains -ve charge.
B. Basic radical is obtained from Acid.
C. Basic radical is +ve charge particals obtained from base
D. Basic radical is Blue in colour
22. The correct molecular formula of baking soda is
A. Na_2CO_3 B. NaHCO_3
C. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ D. NaCO_3
23. phenolphthalein indicator becomes pink in
A. Acidic medium B. Neutral medium
C. Alkaline medium D. Salt solution
24. Which gas turns moist blue litmus paper red and produce white precipitate when bubbled through calcium hydroxide solution?
A. Carbon monoxide B. Carbon dioxide
C. Ammonia D. Hydrogen chloride
25. Iron is extracted from
A. Haematite B. Bauxite
C. Felspar D. Chalcopyrite
26. Which of the following pairs are the member of the same homologous series?
A. CH_4 & C_2H_4 B. CH_3OH & CH_3Cl
C. $\text{C}_2\text{H}_5\text{OH}$ & $\text{C}_3\text{H}_7\text{OH}$ D. CH_3OCH_3 & $\text{C}_2\text{H}_5\text{OH}$
27. Which of the following is used for the preparation of high-quality toilet soaps & cosmetics goods?
A. Methyl alcohol B. Glycerol
C. Ethyl alcohol D. Ether
28. Cement is the mixture of
A. Calcium carbonate and calcium chloride
B. Calcium silicate and calcium aluminate
C. Calcium sulphate & sodium chloride
D. Calcium oxide & carbon

29. Ordinary glass is also called as
A. Hard glass
B. Boro-silicate glass
C. Soft glass
D. Lead crystal glass
30. Chemicals used to control the harmful insects are called
A. Chemical fertilizer
B. Insecticides
C. Fertilizers
D. Pesticides

BIOLOGY

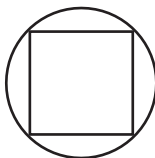
31. "Law of independent assortment" is proposed by :
A. G. Mendel
B. M. J. Schleiden and T. Schwann
C. Bentham and Hooker
D. Farmer and Moore
32. Which of the following is also called Kitchen of the cell?
A. Chromoplast
B. Chloroplast
C. Proteinoplast
D. Leucoplast
33. Which of the following phase of cell cycles is also called resting phase?
A. Prophase
B. Telophase
C. Anaphase
D. Interphase
34. All consumers in an ecosystem are :
A. Saprophytes
B. Heterotrophs
C. Parasites
D. Sanguivores
35. Which one of the following is an example of vascular plant?
A. Fern
B. Algae
C. Blue green algae
D. *Marchantia*
36. Which of the following is the main cause of ozone layer depletion?
A. Oxides of sulphur
B. HNO_3 in atmosphere
C. Chlorofluorocarbon
D. CO_2 in air
37. In ornithophily, pollination is facilitated by :
A. bird
B. insect
C. mammals
D. bat
38. Which of the following are not the components of pond ecosystem?
A. Xerophytes
B. Algae
C. Lotus
D. Lily
39. The basic unit of glycogen is :
A. α -glucose
B. β -glucose
C. α -fructose
D. β -fructose

40. All types of mushrooms belong to kingdom :
A. protista
B. plantae
C. animalia
D. mycota
41. Which of the following is a characteristic of round worms?
A. Segmented body
B. Presence of pseudocoelom
C. Complete digestive system
D. both B & C
42. Excretion in Arthropods primarily takes place through:
A. Kidneys
B. Flame cells
C. Nephridia
D. Malpighian tubules
43. What is the scientific term for raising honeybees?
A. Horticulture
B. Apiculture
C. Sericulture
D. Pisciculture
44. Which hormone is responsible for the "fight-or-flight"- emergency response?
A. Insulin
B. Glucagon
C. Epinephrine
D. Melatonin
45. When blood calcium levels are high, which hormone is released from the thyroid gland to lower them?
A. Parathyroid hormone
B. Calcitonin
C. Oxytocin
D. Glucagon
46. Which chamber of the heart has the thickest wall due to its responsibility of pumping blood to the entire body?
A. Right ventricle
B. Left ventricle
C. Right atrium
D. Left atrium
47. Red blood cells are also known as:
A. Erythrocytes
B. Monocytes
C. Hemocytes
D. Leukocytes
48. Which of the following is the primary function of adipose tissue?
A. Transporting oxygen
B. Storing energy as fat
C. Transmitting nerve impulses
D. Providing structural support to bones
49. In natural selection, the species that survive are the ones that are best :
A. better workers
B. better adapted
C. better at camouflage
D. better trained

50. Which part of the brain is responsible for conscious thought and decision-making?
- A. Cerebellum
B. Brainstem
C. Cerebrum
D. Medulla oblongata

MATHEMATICS

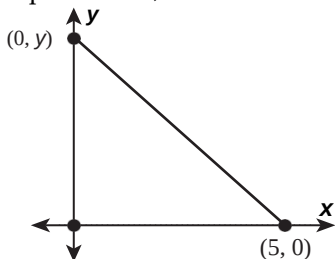
51. If A and B are any two non-empty sets then $A \cap (A \cup B)'$ is equal to
A. B
B. A
C. ϕ
D. $A \cap B$
52. If $a = b + \frac{1}{2}$, $b = 2c + \frac{1}{2}$ and $c = 3d + \frac{1}{2}$, which of the following is an expression for d in terms of a?
A. $\frac{a-2}{6}$
B. $\frac{2a-3}{6}$
C. $\frac{2a-3}{12}$
D. $\frac{3a-2}{18}$
53. The relationship between the area A of a circle and its circumference is given by the formula
 $A = kC^2$, where k is constant. What is the value of k?
A. $\frac{1}{4\pi}$
B. $\frac{1}{2\pi}$
C. $\frac{1}{4}$
D. $4\pi^2$
54. A man can do a job in h hours alone and his son can do it in 2h hours alone. Together, how many hours will it take them to do the job?
A. $\frac{1}{3h}$
B. $\frac{h}{3}$
C. $\frac{3h}{4}$
D. $\frac{2h}{3}$
55. If m% of 300 is 150, what is m% of 180?
A. 45
B. 90
C. 120
D. 360
56. If the radius of circle is decreased by 30% by what percent will the area of circular region be decreased?
A. 70%
B. 60%
C. 49%
D. 51%
57. If the volume of a cone is 24π cubic feet and its height is 2 feet, what is the diameter of the base in feet?
A. 3
B. 6
C. 12
D. 24
58. What is the ratio of area of a square to the area of a circle if the square of 10 unit length is inscribed in the circle?



- A. $\pi : 2$
B. $1 : \pi$
C. $1 : 2$
D. $2 : \pi$

59. If the area of the triangle shown is 30 square units, what is the value of y ?

- A. 5
B. 6
C. 10
D. 12



60. If $f(2x) = x + 5$ and $f(g(6)) = 13$, then $2g(6) =$

- A. 6
B. 16
C. 32
D. 36

61. If sum of first 6 terms of a G.P. is 9 times the sum of its first three terms, then common ratio of the series is

- A. 1
B. $\frac{3}{2}$
C. 2
D. -2

62. If 6, 9, 14, $2a - 8$, $2a + 10$, 38, 47, 50 are in ascending order and their median is 25 then value of a will be

- A. 13
B. 12
C. 11
D. 14

63. A bag contains 4 white and 6 black balls. Two balls are drawn in succession. Find the probability that both the balls are differently colored if first ball is not replaced?

- A. $\frac{8}{15}$
B. $\frac{3}{15}$
C. $\frac{4}{15}$
D. $\frac{1}{24}$

64. If y is the measure of an acute angle such that $\sin y = \frac{a}{5}$, then $\tan y =$

- A. $\frac{\sqrt{25-a^2}}{5}$
B. $\frac{a}{\sqrt{25-a^2}}$
C. $\frac{1}{\sqrt{a^2+25}}$
D. $\frac{5}{\sqrt{25-a^2}}$

65. Value of $\sqrt{\frac{1-\sin x}{1+\sin x}}$ is equal to

- A. $\tan\left(\frac{x}{2} + \frac{\pi}{4}\right)$
B. $\tan\left(\frac{x}{2} - \frac{\pi}{4}\right)$
C. $\cot\left(\frac{x}{2} + \pi\right)$
D. $\tan\left(\frac{\pi}{4} - \frac{x}{2}\right)$

66. Value of $4\sin A \cos^3 A - 4\cos A \sin^3 A =$

A. $\cos 8A$

B. $\sin 2A$

C. $\cos 4A$

D. $\sin 4A$

67. If $3^{2x+1} = 81$, then $x =$

A. 1

B. $\frac{3}{2}$

C. 2

D. $\frac{5}{2}$

68. Which of the following matrix does not have inverse matrix?

A. $\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$

B. $\begin{pmatrix} 5 & 3 \\ 1 & 7 \end{pmatrix}$

C. $\begin{pmatrix} 2 & -4 \\ 3 & -5 \end{pmatrix}$

D. $\begin{pmatrix} 2 & 3 \\ 4 & 6 \end{pmatrix}$

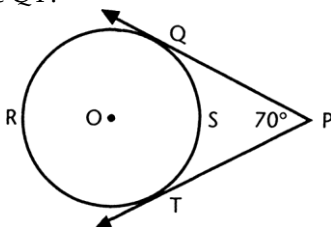
69. PQ and PT are tangent to circle O. If angle P measures 70° , how many degrees are in minor arc QT?

A. 110

B. 120

C. 125

D. 140



70. The average of 34 students in a class is 13 years. If the age of a teacher is included, the average is increased by 1 year. What is the age of the teacher in year?

A. 40

B. 48

C. 55

D. 65

ENGLISH

71. Which word is the 'odd man out'?

A. Elation

B. Contentment

C. Dejection

D. Delight

72. The boss got them ... the task on time.

A. complete

B. completed

C. to complete

D. to have completed

73. She is so restless now as she ... waiting for him for hours.

A. has been

B. is

C. was

D. will be

74. Each of the textbooks ... distributed to the students.
A. was
B. were
C. have been
D. are
75. The active voice of "He was sentenced to life imprisonment" is
A. The court sentence him to life imprisonment.
B. The court sentenced him to life imprisonment.
C. The court will sentence him to life imprisonment.
D. The court had sentenced him to life imprisonment.
76. Which of the following words has a different vowel sound pronunciation?
A. Loss
B. Cross
C. Boss
D. Gross
77. I can't leave. It's raining cats and dogs. If only I ... an umbrella.
A. had
B. have
C. have had
D. had had
78. She asked him if he was okay, ...?
A. did she
B. didn't she
C. was he
D. wasn't he
79. Find the correctly spelt word.
A. Definitely
B. Difinitely
C. Definately
D. Defenitely
80. Every new generation is ... than the previous one.
A. more smarter
B. smarter
C. smartest
D. much more smarter
81. The analogy that is similar to "Huge: Tiny" is
A. Sad: Gloomy
B. Chaotic: Confused
C. Strong: Weak
D. Great: Grand
82. "The early bird catches the worm" is logically similar to
A. The first person to act often has the best chance of success.
B. It's better to take your time and make thoughtful decisions.
C. Success is determined by the people you know.
D. Time is irrelevant when it comes to success.
83. The ... of the play's dialogue, filled with sharp wit and humor, made the audience ... with laughter.
A. dryness, disheartened
B. complexity, perplexed
C. simplicity, confused
D. brilliance, roar

84. The organizer strongly recommended ... the event.
 A. to join
 B. joining
 C. to have joined
 D. to be joining
85. The error in the sentence "Doing morning exercises are considered the best form of maintaining fitness." is
 A. Doing morning exercises
 B. are
 C. the best form
 D. No error

Instructions: Read the passage and answer the questions (86-90) given below.

Despite the growing popularity of online education, many argue that traditional in-person learning provides a unique sense of connection and engagement. Research suggests that face-to-face interactions foster deeper understanding and encourage collaboration, which can be difficult to replicate virtually. However, online platforms offer flexibility and accessibility that traditional methods cannot. While some students excel in virtual environments, others struggle with self-discipline and a lack of personal interaction. The debate continues as educational systems strive to balance the benefits of both approaches in order to create the most effective learning experience.

86. What is implied about traditional in-person learning?
 A. It is outdated.
 B. It promotes deeper connections.
 C. It is less effective than online learning.
 D. It is more flexible.
87. Which of the following best describes the tone of the passage?
 A. Optimistic
 B. Skeptical
 C. Neutral
 D. Critical
88. According to the text, what is a major drawback of online learning?
 A. Lack of accessibility
 B. Insufficient flexibility
 C. Poor self-discipline in students
 D. Reduced technological innovation
89. What does the passage suggest is necessary for an effective learning experience?
 A. Exclusively virtual tools
 B. A balance of traditional and online methods
 C. Complete reliance on face-to-face learning
 D. More stringent grading systems

GENERAL KNOWLEDGE

90. How does the passage characterize online learning?

A. Disconnected	B. Challenging
C. Accessible and flexible	D. Outdated
91. Which of the following is the first Nepali film?

A. Aama	B. Satya Harischandra
C. Maitighar	D. Chhaka Panja
92. Who is known as the father of the nation of Nepal?

A. Jang Bahadur Rana	B. Tribhuvan Bir Bikram Shah
C. Prithivi Narayan Shah	D. Jayathiti Malla
93. Which of the following has developed artificial intelligence chatbot Bard"?

A. Google	B. Microsoft
C. Facebook	D. Twitter
94. Which ball is used in table tennis?

A. Football	B. Basketball
C. Tennis	D. Ping-Pong
95. Who invented the first electric bulb?

A. Michael Faraday	B. Thomas Alva Edison
C. Sir Alexander Graham Bell	D. Albert Einstein
96. Which of the following is the oldest country in the world?

A. India	B. China
C. Egypt	D. Japan
97. Who is the captain of the Nepali cricket team?

A. Paras Khadka	B. Gyanendra Malla
C. Sandeep Lamichhane	D. Rohit Poudel
98. When Nepal became a member of the World Trade Organization (WTO)?

A. April 23, 2004	B. September 2, 1953
C. August 03, 1945	D. April 13, 2024
99. Which famous personality does the phrase "Education is what remains after one has forgotten what one has learned in school." belong to?

A. John Dewey	B. Albert Einstein
C. William S. Burroughs	D. Martin Luther King Jr.
100. Which of the following organizations is responsible for conducting the Secondary Education Examination (SEE) in Nepal?

A. National Education Board	B. Nepal Examination Board
C. National Examination Board	D. Nepali Examination Board



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ANSWER SHEET - SET D

Exam Date: _____

Exam Time: _____

Name in BLOCK LETTERS

FIRST	MIDDLE	LAST

Card Number				
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2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

INSTRUCTIONS FOR STUDENTS

- Write the Card number in digits in the boxes and mark the bubble on the corresponding number in the box below the digit.
- Do not alter or erase your answer.
- Use only black pen.
- Fill the circle completely while bubbling the answer.
- Do not mark any stray mark or rough work on the sheet.

Wrong Methods



Right Methods



Question SET (D)

INVIGILATOR'S SIGNATURE

APPLICANT'S SIGNATURE

Stream: _____

Room No.: _____

Q No. 1 - 25

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Q No. 51 - 75

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Q No. 76 - 100

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ANSWER KEYS**SET – A**

Answer Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	D	B	C	C	D	A	B	B	A	B	C	A	B	D	B
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	B	C	C	D	A	D	A	B	D	B	B	C	B	B	D
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	B	D	C	D	B	C	D	D	C	C	B	D	B	C	C
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	B	C	C	B	C	B	C	D	C	D	C	C	A	D	D
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	C	C	C	B	A	D	D	A	A	D	B	C	B	C	B
	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
	A	D	C	B	B	B	A	D	C	C	A	A	B	B	A
	91	92	93	94	95	96	97	98	99	100					
	B	D	B	A	B	D	A	B	A	B					

SET - B

Answer Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	B	A	D	A	D	C	A	B	D	C	A	A	B	B	D
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	B	A	D	C	A	D	C	B	A	B	A	C	B	D	C
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	C	D	C	C	D	A	B	D	A	B	B	D	B	D	B
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	A	C	C	A	C	C	A	D	B	C	B	C	C	B	A
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	C	A	D	C	B	A	C	A	C	A	C	C	B	A	C
	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
	B	B	A	C	B	A	D	D	B	D	C	C	B	A	C
	91	92	93	94	95	96	97	98	99	100					
	D	A	B	D	C	B	C	A	D	C					

SET – C

Answer Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	B	A	D	B	B	C	C	D	C	B	A	D	B	A	C
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	C	A	D	A	B	D	C	D	C	C	C	C	A	A	B
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	B	A	B	A	A	C	D	C	A	D	A	C	A	C	B
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	C	C	C	C	C	B	D	D	D	C	B	C	A	C	A
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	B	C	B	B	A	D	D	A	B	A	A	B	A	A	D
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	
B	B	B	C	D	A	A	C	A	B	A	D	C	B	B	
91	92	93	94	95	96	97	98	99	100						
D	B	D	B	C	A	B	D	A	C						

SET – D

Answer Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	C	D	D	B	B	C	A	C	D	A	C	C	D	A	B
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	B	C	A	C	C	C	B	C	B	A	C	B	B	C	B
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	A	B	D	B	A	C	A	A	A	D	D	D	B	C	B
	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	B	A	B	B	C	C	A	A	D	B	D	C	D	D	C
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
	C	B	A	B	D	D	B	D	A	B	C	C	A	A	B
	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
	D	A	B	A	B	C	A	D	B	B	B	C	C	B	C
	91	92	93	94	95	96	97	98	99	100					
	B	C	A	D	B	C	D	A	B	C					