Pokhara University
Faculty of Management Studies
Entrance Examination- 2024
Full Marks : 150
Master of Computer Information System
Time : 3Hrs
(March Intake)

PU Entrance curriculum for MCIS mainly covers common topics of all streams covering Verbal Ability, Quantitative Ability, Logical Reasoning and General Awareness

| Section | Course | Weightage (\%) |
| :---: | :--- | :---: |
| A | Verbal Ability | 40 |
| B | Quantitative Ability | 40 |
| C | Logical Reasoning | 40 |
| D | Computational Foundation | 30 |
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## Section A: Verbal Ability

Test of the student's command over the vocabulary of English Language. Questions include from sections like Synonyms Antonyms, General Vocabulary, Grammar, Passage Reading etc

## Section B: Quantitative Ability

Test of the student's basic mathematical concepts, ability to solve problems related to arithmetic, algebra, quantitative ability to reason quantitatively. Questions include from sections like numbers, percentage, average, time and work, series, permutation and combination, probability, interpretation of data etc

## Section C: Logical Reasoning

Test of the student's problem solving attitude and intelligence. Questions include from sections like Analogy, selecting odd answer, drawing of conclusion from the specified scenarios etc

## Section D: Computational Foundation

## 1. Loops and Decisions in C Programming

Introduction, for, while, do while loop, Case, break and continue statements, The if, if else, else-if and switch statements. Introduction, Returning a value from a function,

Sending a value to a function, Arguments, External Variables, Preprocessor Directives, C libraries, Macros, Header Files and Prototyping

## 2. Classes, Methods and Messages

Encapsulation, Inheritance, Polymorphism, Varieties of Classes, Interface and Implementation, Classes and Methods in C++, Message Passing Formalism, Message Passing Syntax in C++, Issues in Creation and Initialization, Memory Recovery, Pointers;

## 3. Computer Architecture and Organization

CPU organization, register organization, Instruction cycle, Computer Arithmetic, Instruction sets, addressing modes, Control Unit- hardwired control Unit, microprogrammed control unit, Cache memory- catch principle, mapping catch memory, write policy, replacement algorithms, Input-output organization- programmed I/O, interrupt driven I/O, Direct memory access, RISC vs. CISC, RISC pipelining, parallel processingparallelism in uni-processor system, multiprocessor system and their characteristics, Flynn's classification, Cache coherence, vector processing and array processor, multi-core organization, dual core and quad core processors.

## 4. Software Project Management Concepts

Software Crisis and Myths, Software Process and Process Models, Process Technology, Product and Process , People , Product, Project, Project Size, Effort and Cost Estimation

## 5. Relational Database

Database System, Data Independence. Three Levels of Architecture: External, Conceptual and Internal. Mappings. Database Administration, DBM, Data Communication, Manager, Client-Server Architecture, Distributed Processing, E-R Model, Data Dictionary

## 6. Operating System Structure

Introduction, Function of OS, Types of OS, Operating System Components, OS services, System Calls, System Programs, System Structure, Distributed Operating Systems

## 7. Computer Networks

Network topologies and architecture, Reference Model: TCP/IP, ISO/OSI, IP Addresses and Classes; Subnet and Subnet mask; Introduction of IPV6


## Nepal College of Information Technology

Balkumari, Lalitpur
Entrance Examination 2023
Master of Computer Information System (MCIS)

## Section I: Verbal Ability (Full Marks: 40)

Directions: For the following questions, select the best of the answer choices given. Tick (V) the correct answer on the separate answer sheet.

1. Select the pair of words that has the same relationship as lawyer : court

| A) | professor : university | B) | author : book |
| :--- | :--- | :--- | :--- |
| C) | wine : grapes | D) | volume : litre |
| E) | apple : orange |  |  |

2. Select the pair of words that has the same relationship as bee : hive

| A) | soldier : war | B) | goat : bleat |
| :--- | :--- | :--- | :--- |
| C) | cow : cave | D) | monk : monastery |
| E) | car : van |  |  |

3. Choose the closest meaning to the following word: Calumniate

| A) | to accuse falsely | B) | to accuse truthfully |
| :--- | :--- | :--- | :--- |
| C) | to denounce | D) | to ditch |
| E) | to hide |  |  |

4. Choose the closest meaning to the following word: Detest

| A) | to support | B) | to love |
| :--- | :--- | :--- | :--- |
| C) | to hate intensely | D) | neglect |
| E) | to test |  |  |

5. The man $\qquad$ my house was a cheat.

| A) | to whom I sell | B) | to who I sell |
| :--- | :--- | :--- | :--- |
| C) | who was sold to | D) | to whom I sold |
| E) | who sold was to |  |  |

6. He is too important $\qquad$ any delay.

| A) | to tolerate | B) | at tolerating |
| :--- | :--- | :--- | :--- |
| C) | to tolerating | D) | with tolerating |
| E) | No correction required |  |  |

7. $\qquad$ means extreme old age when a man behaves like a fool

| A) | Imbecility | B) | Senility |
| :--- | :--- | :--- | :--- |
| C) | Dotage | D) | Superannuation |
| E) | Grand dad |  |  |

8. $\qquad$ means that which cannot be corrected

| A) | Unintelligible | B) | Indelible |
| :--- | :--- | :--- | :--- |
| C) | Illegible | D) | Incorrigible |
| E) | Impossible |  |  |

9. The study of ancient societies is called $\qquad$

| A) | Anthropology | B) | Archaeology |
| :--- | :--- | :--- | :--- |
| C) | History | D) | Ethnology |
| E) | Chemistry |  |  |

10. A person of good understanding knowledge and reasoning power is called $\qquad$

| A) | Expert | B) | Intellectual |
| :--- | :--- | :--- | :--- |
| C) | Snob | D) | Literate |
| E) | Illiterate |  |  |

$\square$
11. A person who insists on something is called $\qquad$

| A) | Disciplinarian | B) | Stickler |
| :--- | :--- | :--- | :--- |
| C) | Instantaneous | D) | Boaster |
| E) | Miser |  |  |

12. To keeps one's temper means $\qquad$

| A) | to become hungry | B) | to be in good mood |
| :--- | :--- | :--- | :--- |
| C) | to preserve ones energy | D) | to be aloof from |
| E) | None of these |  |  |

13. To catch a tartar means $\qquad$

| A) | To trap wanted criminal with great <br> difficulty | B) | To catch a dangerous person |
| :--- | :--- | :--- | :--- |
| C) | To meet with disaster | D) | To deal with a person who is more than <br> one's match |
| E) | None of these |  |  |

14. Read both the two statements and decide which of the following answer choice correctly depicts the relationship between these two statements.
I. Standard of living among the middle class society is constantly going up since part of few years.
II. Indian Economy is observing remarkable growth

| A) | Statement I is the cause and statement <br> II is its effect. | B) | Statement II is the cause and statement <br> I is its effect. |
| :--- | :--- | :--- | :--- |
| C) | Both the statements I and II are <br> independent causes. | D) | Both the statements I and II are effects <br> of independent causes. |
| E) | Both the statements I and II are effects <br> of some common cause |  |  |

ages three years ago?

| A) | 71 Years | B) | 72 Years |
| :--- | :--- | :--- | :--- |
| C) | 77 Years | D) | 74 Years |
| E) | 79 Years |  |  |

16. An institute organized a fete and $1 / 5$ of the girls and $1 / 8$ of the boys participated in the same. What fraction of the total number of students took part in the fete?

| A) | $2 / 13$ | B) | $13 / 40$ |
| :--- | :--- | :--- | :--- |
| C) | $21 / 89$ | D) | None of these |
| E) | Data is inadequate |  |  |

17. A pineapple costs Rs. 7 each. A watermelon costs Rs. 5 each. X spends Rs. 38 on these fruits. The number of pineapples purchased is $\qquad$

| A) | 2 | B) | 3 |
| :--- | :--- | :--- | :--- |
| C) | 4 | D) | 5 |
| E) | Data is not sufficient |  |  |

18. A woman says, "If you reverse my own age, the figures represent my husband's age. He is, of course, senior to me and the difference between our ages is one-eleventh of their sum." The woman's age is $\qquad$

| A) | 23 years | B) | 45 years |
| :--- | :--- | :--- | :--- |
| C) | 34 years | D) | 55 years |
| E) | None of these |  |  |

19. What is the product of all the numbers in the dial of a telephone?

| A) | $1,58,480$ | B) | $1,59,450$ |
| :--- | :--- | :--- | :--- |
| C) | $1,59,480$ | D) | $1,59,481$ |
| E) | None of these |  |  |

20. A is 3 years older to B and 3 years younger to C, while B and D are twins. How many
years older is C to D ?

| A) | 2 | B) | 3 |
| :--- | :--- | :--- | :--- |
| C) | 6 | D) | 12 |
| E) | 13 |  |  |

21. What comes next $120,99,80,63,48$, ?

| A) | 35 | B) | 38 |
| :--- | :--- | :--- | :--- |
| C) | 39 | D) | 40 |
| E) | 41 |  |  |

## 22.Correct the sentence:

When slugs contract their bodies making $\qquad$

| A) | Harder and more compact | B) | Their selves harder and more compact |
| :--- | :--- | :--- | :--- |
| C) | Themselves hard and them more <br> compact | D) | Itself harder and more compact |
| E) | It becomes harder and the more <br> compact |  |  |

23. Choose the word which best expresses the meaning of the word: Corpulent

| A) | Lean | B) | Gaunt |
| :--- | :--- | :--- | :--- |
| C) | Emaciated | D) | Obese |
| E) | Sedated |  |  |

24. Choose the word which best expresses the meaning of the word: Brief

| A) | Limited | B) | Small |
| :--- | :--- | :--- | :--- |
| C) | Little | D) | Short |
| E) | Few |  |  |

25. Choose the word which best expresses the meaning of the word: Embezzle

| A) | Misappropriate | B) | Balance |
| :--- | :--- | :--- | :--- |
| C) | Remunerate | D) | Clear |
| E) | Obtrusion |  |  |

26. Choose the word which is the exact opposite of the given word: ENORMOUS.

| A) | Soft | B) | Average |
| :--- | :--- | :--- | :--- |
| C) | Weak | D) | Tiny |
| E) | Small |  |  |

27. Choose the word which is the exact opposite of the given word: Artificial

| A) | Red | B) | Natural |
| :--- | :--- | :--- | :--- |
| C) | Truthful | D) | Solid |
| E) | Liquid |  |  |

28. Choose the word which is the exact opposite of the given word: Exodus

| A) | Influx | B) | Home-coming |
| :--- | :--- | :--- | :--- |
| C) | Return | D) | Restoration |
| E) | Family |  |  |

29. Choose the word which is the exact opposite of the given word: Relinquish

| A) | Abdicate | B) | Renounce |
| :--- | :--- | :--- | :--- |
| C) | Possess | D) | Deny |
| E) | Rule |  |  |

30. Choose the word which best expresses the meaning of the word: Vent

| A) | Opening | B) | Stodge |
| :--- | :--- | :--- | :--- |
| C) | End | D) | Past tense of go |
| E) | New |  |  |


|  |  |  |  |
| :--- | :--- | :--- | :--- |
| 31. The meaning of the phrase "To make clean breast of" is |  |  |  |
| A) | To gain prominence | B) | To praise oneself |
| C) | To confess without of reserve | D) | To destroy before it blooms |
| E) | To trap before it is freed |  |  |

32. The meaning of the phrase "To hit the nail right on the head" is $\qquad$

| A) | To hit the nail right on the head | B) | To destroy one's reputation |
| :--- | :--- | :--- | :--- |
| C) | To announce one's fixed views | D) | To teach someone a lesson |
| E) | None of these |  |  |

33. The meaning of the phrase "To set one's face against" is $\qquad$

| A) | To oppose with determination | B) | To judge by appearance |
| :--- | :--- | :--- | :--- |
| C) | To get out of difficulty | D) | To look at one steadily |
| E) | None of these |  |  |

34. Ancient cities were $\qquad$ destroyed, but archeologists have found sufficient information to demonstrate an occasionally $\qquad$ but generally complete picture in Tan Era.

| A) | Mostly fragmentary | B) | Obviously necessary |
| :--- | :--- | :--- | :--- |
| C) | Unwittingly whole | D) | Partially famous |
| E) | Fully necessary |  |  |

35. To be a true leader, a manager must not be too $\qquad$ any effective leader depends on the ability of other people to $\qquad$ with each other

| A) | Popular agree | B) | Adventurous communicate |
| :--- | :--- | :--- | :--- |
| C) | Independent cooperate | D) | Self-confident argue |
| E) | Pragmatic disagree |  |  |

company, but the effort taken to improve service can often be $\qquad$

| A) | Difficult | B) | Expected |
| :--- | :--- | :--- | :--- |
| C) | Diversified | D) | Unpredictable |
| E) | Promising |  |  |

37. Unlike birds that simply spread viruses from an animal to another animal, pigs are the ___ " vessel" where viruses swap genes and become $\qquad$ , deadly germs.

| A) | Comprehensive small | B) | Complicated general |
| :--- | :--- | :--- | :--- |
| C) | Frustrated important | D) | Mixing new |
| E) | Lethal big |  |  |

## 38. It has been established that

## P: Einstein was

Q : although a great scientist
R : weak in arithmetic
S : right from his school days
The proper sequence should be:

| A) | SRPQ | B) | QPRS |
| :--- | :--- | :--- | :--- |
| C) | QPSR | D) | RQPS |
| E) | RQSP |  |  |

## 39. When he

P: did not know
Q : he was nervous and
R: heard the hue and cry at midnight
S: what to do
The proper sequence should be:

| A) | RQPS | B) | QSPR |
| :--- | :--- | :--- | :--- |
| C) | SQPR | D) | PQRS |
| E) | PQSR |  |  |


|  |  |  |  |
| :--- | :--- | :--- | :--- |
| 40. Then |  |  |  |
| P: it struck me |  |  |  |
| Q: of course |  |  |  |
| R: suitable it was |  |  |  |
| S : how eminently |  |  |  |
| The proper sequence should be: |  |  |  |
| A) | SPQR |  |  |
| C) | PSRQ | B) | QSRP |
| E) | QPRS | D) | QPSR |

Section II: Quantitative Reasoning (Full Marks: 40)

Directions: For the following questions, select the best of the answer choices given. Tick ( $\sqrt{ }$ ) the correct answer on the separate answer sheet.
41. A recipe requires $3 / 2$ cups of sugar and makes 2 dozen cakes $(1$ dozen $=12$ )

Quantity A
The amount of sugar required for the 2 cups

| A) | Quantity A is greater | B) | Quantity B is greater |
| :--- | :--- | :--- | :--- |
| C) | The two quantities are equal | D) | The relationship cannot be determined <br> from the information given. |
| E) | The question is wrong |  |  |

42. $(x-2 y)(x+2 y)=4$

Quantity A

$$
x^{2}-4 y^{2}
$$

| A) | Quantity A is greater. | B) | Quantity B is greater. |
| :--- | :--- | :--- | :--- |
| C) | The two quantities are equal. | D) | The relationship cannot be determined <br> from the information given |
| E) | The question is wrong |  |  |

$$
\text { 43. } 7 x+3 y=12 \quad 3 x+7 y=6
$$

If $x$ and $y$ satisfy the system of equations above, what would be the value of $x-y$ ?

| A) | $2 / 3$ | B) | $3 / 2$ |
| :--- | :--- | :--- | :--- |
| C) | 1 | D) | 4 |
| E) | 6 |  |  |

44. In triangle ABC , the measure of angle A is $25^{\circ}$ and the measure of angle B is greater than $90^{\circ}$. Which of the following could be the measure of angle C ? Indicate all possible values.

| A) | 12 degrees | B) | 15 degrees |
| :--- | :--- | :--- | :--- |
| C) | 45 degrees | D) | 50 degrees |
| E) | 70 degrees |  |  |

45. What is the least integer ' n ' such that $1 / 2^{\mathrm{n}}<0.001$ ?

| A) | 10 | B) | 11 |
| :--- | :--- | :--- | :--- |
| C) | 500 | D) | 501 |
| E) | 111 |  |  |

46. In the sunshine, an upright pole 12 feet tall is casting a shadow 8 feet long. At the same time, a nearby upright pole is casting a shadow 10 feet long. If the lengths of the shadows are proportional to the heights of the poles, what is the height, in feet, of the taller pole?

| A) | 10 | B) | 12 |
| :--- | :--- | :--- | :--- |
| C) | 14 | D) | 15 |
| E) | 18 |  |  |

47. If a is the smallest prime number greater than 21 and b is the largest prime number less than 16 , then $\mathrm{ab}=$

| A) | 299 | B) | 323 |
| :--- | :--- | :--- | :--- |
| C) | 330 | D) | 345 |
| E) | 351 |  |  |

48. The income of A, B and C are in the ratio 7:9:12 and their expenditure are in the ratio $8: 9$ : 15. If A saves $1 / 4$ of his income. Find the ratio of savings of $A, B$ and $C$.

| A) | $56: 99: 69$ | B) | $69: 56: 99$ |
| :--- | :--- | :--- | :--- |
| C) | $99: 56: 69$ | D) | $99: 69: 56$ |
| E) | $89: 98: 55$ |  |  |

49. The profit earned when a calculator is sold for 1600 is 20 times the loss incurred when it is sold for Rs. 550. At what price should the calculator be sold if it is desired to make a profit of $25 \%$ ?

| A) | 800 | B) | 900 |
| :--- | :--- | :--- | :--- |
| C) | 650 | D) | 750 |
| E) | 544 |  |  |

50. If $x / 3=y / 5=z / 8$ then what is $(x+y+z) / z$

| A) | 3.15 | B) | 5.25 |
| :--- | :--- | :--- | :--- |
| C) | 4.5 | D) | 2 |
| E) | 56 |  |  |

51. If the dice are thrown simultaneously then the probability of sum appearing on the dice is equal to and less than 3 ?

| A) | $5 / 11$ | B) | $6 / 13$ |
| :--- | :--- | :--- | :--- |
| C) | $1 / 36$ | D) | $1 / 12$ |
| E) | $2 / 12$ |  |  |

52. If Jim goes to the office from his house at a speed of $16 \mathrm{~km} / \mathrm{h}$, he reaches the office 5 minutes late. If he goes at a speed of $20 \mathrm{~km} / \mathrm{h}$, he reaches 10 minutes earlier than the office time. The distance of his office from his house is?

| A) | 22 km | B) | 20 km |
| :--- | :--- | :--- | :--- |
| C) | 18 km | D) | 16 km |
| E) | 45 km |  |  |

53. Study the table below and answer the questions given below:

Percentage Profit or Loss $=\frac{\text { Income }- \text { Expenditure }}{\text { Expenditure }} \times 100$


## (Expenditure and Income in Crores)

What is the percentage profit/loss put together by companies 1 and 7 ? (M)

| A) | $10 \%$ loss | B) | $12.5 \%$ profit |
| :--- | :--- | :--- | :--- |
| C) | $14 \%$ profit | D) | $34 \%$ loss |
| E) | No profit or loss |  |  |

54. If c and d are positive integers and m is the greatest common factor of c and d , then m must be the greatest common factor of c and which of the following integers?

| A) | $\mathrm{c}+\mathrm{d}$ | B) | $2+\mathrm{d}$ |
| :--- | :--- | :--- | :--- |
| C) | cd | D) | 2 d |
| E) | $\mathrm{d}^{2}$ |  |  |

55. List R: 28, 23, 30, 25, 27 List S: 22, 19, 15, 17, 20

The median of numbers in list R is how much greater than the median of the numbers in list S ?

| A) | 8 | B) | 10 |
| :--- | :--- | :--- | :--- |
| C) | 12 | D) | 13 |
| E) | 15 |  |  |

56. A sphere of radius 12 cm is dropped into a cylindrical vessel partly filled with water. The radius of the vessel is 16 cm . If the sphere is submerged completely, then the surface of the water rises by:

| A) | 7 cms | B) | 8 cms |
| :--- | :--- | :--- | :--- |
| C) | 9 cms | D) | 10 cms |
| E) | 13 cms |  |  |

57. If 30 technicians working 5 hours a day can repair 12 bikes in 11 days, in how many days will 22 technicians working 3 hours a day repair 36 bikes?

| A) | 75 | B) | 65 |
| :--- | :--- | :--- | :--- |
| C) | 45 | D) | 84 |
| E) | 88 |  |  |

58. The successive discount of $20 \% 40 \%$ and $10 \%$ is equivalent to a single discount of

| A) | $70 \%$ | B) | $60 \%$ |
| :--- | :--- | :--- | :--- |
| C) | $43.5 \%$ | D) | $48 \%$ |
| E) | $45 \%$ |  |  |

59. A car was sold at $10 \%$ loss. If it was sold at Rs 460 , there would have been a profit of $15 \%$. Find the selling price

| A) | 360 | B) | 400 |
| :--- | :--- | :--- | :--- |
| C) | 380 | D) | 420 |
| E) | 346 |  |  |

60. A $50 \mathrm{~m} \times 30 \mathrm{~m}$ rectangular field has a 3 m wide path outside the field. What is the area of the path?

| A) | $700 \mathrm{~m}^{2}$ | B) | $500 \mathrm{~m}^{2}$ |
| :--- | :--- | :--- | :--- |
| C) | $2100 \mathrm{~m}^{2}$ | D) | $500 \mathrm{~m}^{3}$ |
| E) | $2101 \mathrm{~m}^{2}$ |  |  |

61. Frank tosses a coin 10 times. What is the probability that he will get exactly 5 heads and 5 tails?

| A) | $1 / 32$ | B) | $63 / 256$ |
| :--- | :--- | :--- | :--- |
| C) | $1 / 4$ | D) | $1 / 2$ |
| E) | $193 / 256$ |  |  |

62. Bagmati province wants to issue license plates with 4 letters and 3 numbers. If the numbers and letters are allowed to repeat, how many different license plates can be created?

| A) | $456,976,000$ | B) | $258,336,000$ |
| :--- | :--- | :--- | :--- |
| C) | 388,800 | D) | 26000 |
| E) | Infinite |  |  |

63. Ram goes to the movies again with 5 of his friends. There are only 3 seats available in the front row. How many different seating arrangements can Ram and his friends create?

| A) | 243 | B) | 123 |
| :--- | :--- | :--- | :--- |
| C) | 60 | D) | 120 |
| E) | 15 |  |  |

64. Shyam travelled Y percent of the total distance at an average speed of 30 mph and travelled the rest of the distance at an average speed of $20 \mathrm{~m} / \mathrm{s}$. In terms of Y what was Shyam's average speed for the entire trip?

| A) | $100 /(\mathrm{Y}+45)$ | B) | $(200-\mathrm{Y}) / 2$ |
| :--- | :--- | :--- | :--- |
| C) | $6000 /(300-\mathrm{Y})$ | D) | $9000 /(200-\mathrm{Y})$ |
| E) | $9000 /(200+\mathrm{Y})$ |  |  |

65. The owner of a store keeps only cats and dogs. Of the 60 pets in the store, 38 are cats, 28 have black fur and 14 are neither black furred nor cats. What percentage of the store's dogs are black furred?

| A) | $13.3 \%$ | B) | $23.3 \%$ |
| :--- | :--- | :--- | :--- |
| C) | $36.4 \%$ | D) | $57.1 \%$ |


| E) | $63.6 \%$ |  |  |
| :--- | :--- | :--- | :--- |

66. Hari has 10 Liter of a $30 \%$ solution of salt in water. He adds enough salt to create a $50 \%$ solution. How much water will Hari need to add to the solution to get it back to a $30 \%$ solution?

| A) | 7 Liters | B) | $91 / 3$ Liters |
| :--- | :--- | :--- | :--- |
| C) | 10 Liters | D) | $132 / 3$ Liters |
| E) | 15 Liters |  |  |

67. Students in Henry's class took a geometry test. The girl's scores in the class averaged $90 \%$, the boy's scores in the class averaged $82 \%$ while the overall class average was $85 \%$ what is the ratio of boys to girls in the class?

| A) | $3: 5$ | B) | $9: 8$ |
| :--- | :--- | :--- | :--- |
| C) | $5: 4$ | D) | $8: 5$ |
| E) | $5: 3$ |  |  |

68. Ram and Shyam both work for the same sales company. Ram's commission rate is $20 \%$ and Shyam's commission rate is $30 \%$. if Ram sold Rs. 55000 worth of goods and Shyam sold Rs. 80000 worth of goods, what is their combined average commission rate?

| A) | $15 \%$ | B) | $24.1 \%$ |
| :--- | :--- | :--- | :--- |
| C) | $25 \%$ | D) | $25.9 \%$ |
| E) | $35 \%$ |  |  |

69. Milk carton A and milk jug B each contain milk. The capacity of jug B is $40 \%$ greater than that of carton A. How much more milk is in carton A than in jug B?

| A) | When full container B holds 7 L of <br> milk | B) | When full container B holds 9 L of <br> milk |
| :--- | :--- | :--- | :--- |
| C) | Container A is 4/5 full and container <br> B is $2 / 7$ full | D) | Container A is $1 / 5$ full and container B <br> is $2 / 8$ full |
| E) | Container A is $3 / 5$ full and container <br> B is $12 / 7$ full |  |  |

70. If $t$ is the tens digit and $u$ is the units digit of a two digit number, what is the value of this number?

| A) | $\mathrm{t}+\mathrm{u}=9$ | B) | $\mathrm{t}-\mathrm{u}=-5$ |
| :--- | :--- | :--- | :--- |
| C) | $-\mathrm{t}+\mathrm{u}=9$ | D) | $\mathrm{t}+\mathrm{u}=-9$ |
| E) | $\mathrm{t}+\mathrm{u}=19$ |  |  |

71. If the vertices of a triangle ABC have coordinates $(0,1),(0,-4)$ and $(x, 0)$ is the area of the triangle greater than 13 ?

| A) | $\mathrm{x}<3$ | B) | Triangle ABC is a right triangle |
| :--- | :--- | :--- | :--- |
| C) | $\mathrm{x}>3$ | D) | Triangle ABC is not a right triangle |
| E) | $\mathrm{x}>10$ |  |  |

72. If $a, b, c$ and $d$ are positive prime numbers and the product of $a b c d=210$ what is the value of b ?

| A) | $b+c=d$ | B) | $c+d=a^{2}$ |
| :--- | :--- | :--- | :--- |
| C) | $b-c=d$ | D) | $b+c=d^{2}$ |
| E) | $b+c=d^{2}$ |  |  |

73. What is the radius of the circle that circumscribes a triangle whose sides measure $41,40,9$ ?

| A) | 9 | B) | 20.5 |
| :--- | :--- | :--- | :--- |
| C) | 20 | D) | 41 |
| E) | 45 |  |  |

74. What is the lowest positive integer that is divisible by each of the integers 1 through 8 inclusive?

| A) | 420 | B) | 840 |
| :--- | :--- | :--- | :--- |
| C) | 2520 | D) | 5040 |
| E) | 40320 |  |  |

75. If S is an integer which of the following must be odd?

| A) | $\mathrm{S}+1$ | B) | $2 \mathrm{~S}-1$ |
| :--- | :--- | :--- | :--- |
| C) | $\mathrm{S}^{2}+2$ | D) | $\mathrm{S}+2$ |
| E) | 2 S |  |  |

76. If abc $>0$, then which of the following must be true?

| A) | $\mathrm{a} / \mathrm{b}<0$ | B) | $\mathrm{a}>0$ |
| :--- | :--- | :--- | :--- |
| C) | $\mathrm{ab} / \mathrm{c}>0$ | D) | $\mathrm{bc}<0$ |
| E) | $\mathrm{a}>\mathrm{bc}$ |  |  |

77. The sum of prime numbers that are between 110 and 125 is

| A) | 113 | B) | 119 |
| :--- | :--- | :--- | :--- |
| C) | 232 | D) | 240 |
| E) | 353 |  |  |

78. if $27^{x+2} 25^{y}=3^{9} 5^{x-3}$, what is the value of $y$ ?

| A) | -3 | B) | -1 |
| :--- | :--- | :--- | :--- |
| C) | -2 | D) | 0.5 |
| E) | 2 |  |  |

79. Shyam's age is 5 more than twice Ram's age. In 20 years, Ram's age tripled will be 7 more than Shyam's age doubled. How old will Shyam be 10 years from now?

| A) | 21 | B) | 24 |
| :--- | :--- | :--- | :--- |
| C) | 30 | D) | 31 |
| E) | 62 |  |  |

80. If $x$ is a product of all integers from 2 to 24 , inclusive, what is the greatest integer $y$ for which $35^{y}$ is a factor of $x$ ?

| A) | 2 | B) | 3 |
| :--- | :--- | :--- | :--- |
| C) | 5 | D) | 7 |
| E) | 9 |  |  |

## Section III: Logical Reasoning (Full Marks: 40)

Directions: For the following questions, select the best of the answer choices given. Tick (V) the correct answer on the separate answer sheet.
81. If BAD is coded as YZW and FIGHT is coded as URTSG then HAG will be coded as

| A) | GAH | B) | SZT |
| :--- | :--- | :--- | :--- |
| C) | WAG | D) | RST |
| E) | RTS |  |  |

82. If DF WY HJ SU stands for EXIT then DF MO SU DF QS stands for

| A) | FRUIT | B) | ENTER |
| :--- | :--- | :--- | :--- |
| C) | MOUSE | D) | TREES |
| E) | TEASE |  |  |

83. If $2 \times 3=812$ and $4 \times 5=1620$ then $6 \times 7=$

| A) | 6677 | B) | 6767 |
| :--- | :--- | :--- | :--- |
| C) | 2428 | D) | 2824 |
| E) | 3467 |  |  |

84. Given the sequence of numbers $2,5,11,14,17,21$ circle the odd one

| A) | 21 | B) | 17 |
| :--- | :--- | :--- | :--- |
| C) | 3 | D) | 14 |
| E) | 54 |  |  |

85. Given the sequence of numbers $1,2,6,15,31,56,91$ circle the wrong one

| A) | 31 | B) | 91 |
| :--- | :--- | :--- | :--- |
| C) | 56 | D) | 15 |
| E) | 1 |  |  |

86. If HOTEL is coded as 60 then BAR is coded as

| A) | 2118 | B) | 56 |
| :--- | :--- | :--- | :--- |
| C) | 21 | D) | 26 |
| E) | 55 |  |  |

87. Based on the first two statements find out if the third statement is true, false or uncertain
I. Apples cost more than banana
II. Apples cost less than oranges
III. Oranges cost more than both banana and apples

If the first two statements are true then the third statement is

| A) | True | B) | False |
| :--- | :--- | :--- | :--- |
| C) | Uncertain | D) | Partially true |
| E) | The question is wrong |  |  |

88. Based on the first two statements find out if the third statement is true, false or uncertain
I. I run faster than Heather
II. Brandy runs faster than me
III. Heather runs faster than Brandy

If the first two statements are true then the third statement is

| A) | True | B) | False |
| :--- | :--- | :--- | :--- |
| C) | Uncertain | D) | Partially true |
| E) | The question is wrong |  |  |

89. Select the odd one in the following groups of words

| A) | Buffalo | B) | Sparrow |
| :--- | :--- | :--- | :--- |
| C) | Cow | D) | Goat |
| E) | The question is wrong |  |  |

## 90. Statements:

I. The prices of petrol and diesel in the domestic market have remained unchanged for the past few months.
II. The crude oil prices in the international market have gone up substantially in the last few months.

| A) | Statement I is the cause and statement <br> II is its effect | B) | Statement II is the cause and statement <br> I is its effect |
| :--- | :--- | :--- | :--- |
| C) | Both the statements I and II are <br> independent causes | D) | Both the statements I and II are effects <br> of independent causes |
| E) | Both the statements I and II are effects <br> of some common cause |  |  |

## 91. Statements:

I. The Reserve Bank of Nepal has recently put restrictions on few small banks in the country.
II. The small banks in the private and co-operative sector in Nepal are not in a position to withstand the competitions of the bigger in the public sector.

| A) | Statement I is the cause and statement <br> II is its effect | B) | Statement II is the cause and statement <br> I is its effect |
| :--- | :--- | :--- | :--- |
| C) | Both the statements I and II are <br> independent causes | D) | Both the statements I and II are effects <br> of independent causes |
| E) | Both the statements I and II are effects <br> of some common cause |  |  | | 92. Statement: In a one day cricket match, the total runs made by a team were 200. Out of <br> these 160 runs were made by spinners. <br> Conclusions: <br> 1. 80\% of the team consists of spinners. <br> 2. The opening batsmen were spinners. <br> A)Only conclusion I follows |
| :--- |


| C) | Either I or II follows | D) | Neither I nor II follows |
| :--- | :--- | :--- | :--- |
| E) | Both I and II follow |  |  |

93. If the legislature decides to fund the agricultural subsidy program, national radio, and the small business loan program, the only other single program that can be funded is $\qquad$

| A) | hurricane preparedness. | B) | harbor improvements. |
| :--- | :--- | :--- | :--- |
| C) | school music program. | D) | senate office building remodeling. |
| E) | international airport. |  |  |

## 94. Statements: No women teacher can play. Some women teachers are athletes. Conclusions:

I. Male athletes can play.
II. Some athletes can play.

| A) | Only conclusion I follows | B) | Only conclusion II follows |
| :--- | :--- | :--- | :--- |
| C) | Either I or II follows | D) | Neither I nor II follows |
| E) | Both I and II follow |  |  |

95. Statements: All bags are cakes. All lamps are cakes.

## Conclusions:

I. Some lamps are bags.
II. No lamp is bag.

| A) | Only conclusion I follows | B) | Only conclusion II follows |
| :--- | :--- | :--- | :--- |
| C) | Either I or II follows | D) | Neither I nor II follows |
| E) | Both I and II follow |  |  |

96. Statements: All mangoes are golden in colour. No golden-coloured things are cheap. Conclusions:
I. All mangoes are cheap.
II. Golden-coloured mangoes are not cheap.

| A) | Only conclusion I follows | B) | Only conclusion II follows |
| :--- | :--- | :--- | :--- |
| C) | Either I or II follows | D) | Neither I nor II follows |


| E) | Both I and II follow |  |  |
| :--- | :--- | :--- | :--- |

97. Statements: Some doctors are fools. Some fools are rich.

## Conclusions:

I. Some doctors are rich
II. Some rich are doctors.

| A) | Only conclusion I follows | B) | Only conclusion II follows |
| :--- | :--- | :--- | :--- |
| C) | Either I or II follows | D) | Neither I nor II follows |
| E) | Both I and II follow |  |  |

98. The attainment of individual and organisational goals is mutually interdependent and linked by a common denominator - employee work motivation. Organisational members are motivated to satisfy their personal goals, and they contribute their efforts to the attainment of organisational objectives as means of achieving these personal goals.
The passage best supports the statement that motivation -

| A) | encourages an individual to give <br> priority to personal goals over <br> organisational goals. | B) | is crucial for the survival of an <br> individual and organisation. |
| :--- | :--- | :--- | :--- |
| C) | is the product of an individual's <br> physical and mental energy. | D)is the external force which induces an <br> individual to contribute his efforts. |  |
| E) | makes organisation and society <br> inseparable. |  |  |

99. One of the important humanitarian by-products of technology is the greater dignity and value that it imparts to human labour. In a highly industrialized society, there is no essential difference between Brahmin and Dalit, Muslim and Hindu; they are equally useful and hence equally valuable for in the industrial society individual productivity fixes the size of the pay cheque and this fixes social status.
The passage best supports the statement that:

| A) | technology decides individual's social <br> status. | B) | castes and religions are man-made. |
| :--- | :--- | :--- | :--- |
| C) | human labour has dignity and value. | D) | all individuals, irrespective of caste and <br> creed, are born equal. |
| E) | industrial society is a great leveller of <br> men. |  |  |

100 . Odometer is to mileage as compass is to $\qquad$

| A) | Speed | B) | Hiking |
| :--- | :--- | :--- | :--- |
| C) | Needle | D) | Direction |
| E) | Depth |  |  |

101. Marathon is to race as hibernation is to $\qquad$

| A) | Winter | B) | Bear |
| :--- | :--- | :--- | :--- |
| C) | Dream | D) | Sleep |
| E) | Awake |  |  |

102. Cup is to coffee as bowl is to $\qquad$
A) $\quad$ Dish
C) Spoon
D) Food
E) Fork
103. Exercise is to gym as eating is to

| A) | Food | B) | Dieting |
| :--- | :--- | :--- | :--- |
| C) | Fitness | D) | Restaurant |
| E) | House |  |  |

104. Careful is to cautious as boastful is to

| A) | Arrogant | B) | Humble |
| :--- | :--- | :--- | :--- |
| C) | Joyful | D) | Suspicious |
| E) | Respect |  |  |

105. Pen is to poet as needle is to

| A) | Thread | B) | Button |
| :--- | :--- | :--- | :--- |
| C) | Sewing | D) | Tailor |


| E) | Swing |  |  |
| :--- | :--- | :--- | :--- |

106. One of the warmest winters on record has put consumers in the mood to spend money. Spending is likely to be the strongest in thirteen years. During the month of February, sales of existing single-family homes hit an annual record rate of 4.75 million.
This paragraph best supports the statement that

| A) | consumer spending will be higher <br> thirteen years from now than it is <br> today. | B) | more people buy houses in the month <br> of February than in any other month. |
| :--- | :--- | :--- | :--- |
| C) | during the winter months, the prices <br> of single-family homes are the lowest. | D) | there were about 4 million homes for <br> sale during the month of February. |
| E) | warm winter weather is likely to affect <br> the rate of home sales. |  |  |

107. In the past, consumers would rarely walk into an ice cream store and order low-fat ice cream. But that isn't the case today. An increasing health consciousness combined with a much bigger selection of tasty low-fat foods in all categories has made low-fat ice cream a very profitable item for ice cream store owners.
This paragraph best supports the statement that

| A) | low-fat ice cream produces more <br> revenue than other low-fat foods. | B) | ice cream store owners would be better <br> off carrying only low-fat ice cream. |  |
| :--- | :--- | :--- | :--- | :---: |
| C) | ice cream store owners no longer <br> think that low-fat ice cream is an <br> unpopular item. | D) | low-fat ice cream is more popular than <br> other kinds of ice cream. |  |
| E) | consumers are fickle and it is <br> impossible to please them |  |  |  |
|  |  |  |  |  |
| 108. SCD, TEF, UGH,__, WKL | B) | UJI |  |  |
| A) | CMN | D) | IJT |  |
| C) | VIJ |  |  |  |
| E) | TIJ |  |  |  |


| C) | LLMA | D) | KLLA |
| :--- | :--- | :--- | :--- |
| E) | MLLA |  |  |

110. Look at this series: $58,52,46,40,34, \ldots$ What number should come next?

| A) | 26 | B) | 28 |
| :--- | :--- | :--- | :--- |
| C) | 30 | D) | 32 |
| E) | 34 |  |  |

111. Look at this series: $5.2,4.8,4.4,4, \ldots$ What number should come next?

| A) | 3 | B) | 3.3 |
| :--- | :--- | :--- | :--- |
| C) | 3.5 | D) | 3.6 |
| E) | 3.8 |  |  |

112. Which word does NOT belong with the others?

| A) | Tyre | B) | Steering wheel |
| :--- | :--- | :--- | :--- |
| C) | Engine | D) | Car |
| E) | Wind shield |  |  |

113. Which word does NOT belong with the others?

| A) | Tulip | B) | Rose |
| :--- | :--- | :--- | :--- |
| C) | Bud | D) | Daisy |
| E) | Violet |  |  |

114. Which word does NOT belong with the others?

| A) | Book | B) | Index |
| :--- | :--- | :--- | :--- |
| C) | Glossary | D) | Chapter |
| E) | Table of contents |  |  |

$\square$
115. Which word does NOT belong with the others?

| A) | Leopard | B) | Cougar |
| :--- | :--- | :--- | :--- |
| C) | Elephant | D) | Lion |
| E) | Cheetah |  |  |

116. Which word does NOT belong with the others?

| A) | Couch | B) | Rug |
| :--- | :--- | :--- | :--- |
| C) | Table | D) | Chair |
| E) | Sofa |  |  |

117. The miser gazed $\qquad$ at the pile of gold coins in front of him.

| A) | Avidly | B) | Admiringly |
| :--- | :--- | :--- | :--- |
| C) | Thoughtfully | D) | Earnestly |
| E) | Honestly |  |  |

118. I saw a $\qquad$ of cows in the field.

| A) | Group | B) | Herd |
| :--- | :--- | :--- | :--- |
| C) | Swarm | D) | Flock |
| E) | Team |  |  |

119. He is so $\qquad$ that he immediately believe my story of ghosts.

| A) | Innocent | B) | Credulous |
| :--- | :--- | :--- | :--- |
| C) | Vociferous | D) | Credible |
| E) | Miser |  |  |
|  |  |  |  |
| 120. Do you know __? | B) | where does she come from |  |
| A) | where she comes from | D) | from where does she come |
| C) | where from she comes |  |  |

E) from does she come where

## Section IV: General Awareness (Full Marks: 30)

Directions: For the following questions, select the best of the answer choices given. Tick (V) the correct answer on the separate answer sheet.
121. The full form of HTTP is $\qquad$ .

| A) | Hypertext Transmit Protocol | B) | Hypersource Transfer Protocol |
| :--- | :--- | :--- | :--- |
| C) | Hypertext Transfer Protocol | D) | Hypertext Transit Protocol |
| E) | Hypertext Transfer Problem |  |  |
|  |  |  |  |

122. Which of the following is not used in a Data Flow Diagram?

| A) | Arrow (Data Flow) | B) | Cartinality |
| :--- | :--- | :--- | :--- |
| C) | External Entity | D) | Process |
| E) | Data Store |  |  |
|  |  |  |  |

123. Which one of the following is an Operating System?

| A) | Ruby | B) | Python |
| :--- | :--- | :--- | :--- |
| C) | Small Talk | D) | Android |
| E) | Java |  |  |

124. Which one of the following is a valid phase of Waterfall Model?

| A) | Prototyping | B) | Analysis |
| :--- | :--- | :--- | :--- |
| C) | Backlog | D) | Sprint Session |
| E) | JAD |  |  |
|  |  |  |  |
| $125 . \_$is a memory used to hold data permanently. |  |  |  |
| A) | ROM | B) | Screen |
| C) | RAM | D) | Peripheral Device |


| E) | Output Hardware |  |  |
| :--- | :--- | :--- | :--- |

126. A Router connects two or more $\qquad$ .

| A) | Screen | B) | Pixles |
| :--- | :--- | :--- | :--- |
| C) | Clocks | D) | Speakers |
| E) | Networks |  |  |

127. $\qquad$ words comprise of 32 bits.

| A) | Two | B) | Three |
| :--- | :--- | :--- | :--- |
| C) | One | D) | Zero |
| E) | Four |  |  |

128. Octal number system has a base value equal to

| A) | 2 | B) | 16 |
| :--- | :--- | :--- | :--- |
| C) | 4 | D) | 8 |
| E) | 6 |  |  |

129. Which one of the following is not a valid email address format?

| A) | user.example.com | B) | use1 @example.com |
| :--- | :--- | :--- | :--- |
| C) | user@example.com | D) | user2@example.com |
| E) | ALL |  |  |

130. $\qquad$ is a valid data type in C programming language.

| A) | Paragraph | B) | Float |
| :--- | :--- | :--- | :--- |
| C) | Characters | D) | Sentence |
| E) | Triple |  |  |
|  |  |  |  |
| 131. A website is a collection of related___. |  |  |  |


| A) | House pages | B) | Title pages |
| :--- | :--- | :--- | :--- |
| C) | Web pages | D) | Cover pages |
| E) | Entry pages |  |  |

132. URL stands for $\qquad$ .

| A) | Unified Resource Loader | B) | Universal Resource Locator |
| :--- | :--- | :--- | :--- |
| C) | Uniform Revolution Location | D) | Unmatched Resource Location |
| E) | Uniform Relay Line |  |  |

133. A compiler converts a program into $\qquad$ language.

| A) | Programming | B) | Conversion |
| :--- | :--- | :--- | :--- |
| C) | Machine | D) | Debugger |
| E) | Translation |  |  |

134. $\qquad$ is an example of application software

| A) | Windows | B) | Powerpoint |
| :--- | :--- | :--- | :--- |
| C) | Linux | D) | Compiler |
| E) | Linker |  |  |

135. The $\qquad$ computers used Integrated Circuits (ICs) $\qquad$ .

| A) | Second Generation | B) | First Generation |
| :--- | :--- | :--- | :--- |
| C) | Third Generation | D) | Fourth Generation |
| E) | Fifth Generation |  |  |

136. $\qquad$ is used to hold multiple values of the same type

| A) | Character | B) | String |
| :--- | :--- | :--- | :--- |
| C) | Integer | D) | Float |
| E) | Array |  |  |

137. The ASCII code for the alphabet ' $d$ ' is $\qquad$ .

| A) | 0 | B) | 100 |
| :--- | :--- | :--- | :--- |
| C) | 100 | D) | 67 |
| E) | 10 |  |  |

138. Which one of the following is an input hardware?

| A) | Calendar | B) | Light Pen |
| :--- | :--- | :--- | :--- |
| C) | Processor | D) | Laptop |
| E) | CPU Fan |  |  |

139. An image on the screen is made up of $\qquad$

| A) | Labels | B) | Instructions |
| :--- | :--- | :--- | :--- |
| C) | Symbols | D) | Pictures |
| E) | Pixels |  |  |

140. In_, a schema defines how data is organized in a relational database.

| A) | Operating system | B) | Network |
| :--- | :--- | :--- | :--- |
| C) | Database | D) | SDLC |
| E) | Stored procedure |  |  |

141. Which SQL statement is used to list all student details?

| A) |
| :--- |
| SELECT * STUDENT; |
| C) |
| SELECT ! FROM STUDENT; |
| E) |
| SELECT * FROM STUDENT; | | D) |
| :--- |
| LIST * FROM STUDENT; |
| 142._ is not an Agile Framework |
| A) |


| C) | Crystal | D) | DSDM |
| :--- | :--- | :--- | :--- |
| E) | FDD |  |  |

143. ARP is a $\qquad$ layer protocol

| A) | Network | B) | Connection |
| :--- | :--- | :--- | :--- |
| C) | Application | D) | Distribution |
| E) | Transmission |  |  |

144. A Router operates in the $\qquad$ layer of ISO/OSI model

| A) | Presentation | B) | Application |
| :--- | :--- | :--- | :--- |
| C) | Session | D) | Network |
| E) | Physical |  |  |

145. Subnet Mask is used to identify the $\qquad$ portion of an IP address

| A) | Client | B) | Server |
| :--- | :--- | :--- | :--- |
| C) | Host | D) | Duplicate |
| E) | Network |  |  |

146. UDP does not need a $\qquad$ circuit to be established before transferring data.

| A) | Host | B) | Virtual |
| :--- | :--- | :--- | :--- |
| C) | Primary | D) | Physical |
| E) | Secondary |  |  |

147. The main memory communicates directly with the $\qquad$

| A) | Screen | B) | Polymorphism |
| :--- | :--- | :--- | :--- |
| C) | CPU | D) | Inheritance |
| E) | Mouse |  |  |


|  |  |  |  |
| :--- | :--- | :--- | :--- |
| 148. MIMD stands for |  |  |  |
| A) | Multiple Instruction Multiple Data | B) | Multiple Intrusion Multiple Data |
| C) | Mask Instruction Multiple Data | D) | Many Intrusion Many Data |
| E) | Multiple Instruction Many Diversion |  |  |

149. CREATE is a $\qquad$ SQL statement.

| A) | DCL | B) | DDL |
| :--- | :--- | :--- | :--- |
| C) | TCL | D) | DML |
| E) | DQL |  |  |

150. Unified Modeling Language is a $\qquad$ .

| A) | Testing Language | B) | Network Design Tool |
| :--- | :--- | :--- | :--- |
| C) | Programming Language | D) | Data Flow Diagram |
| E) | Modeling Language |  |  |

The End

