

Pokhara UniversityFaculty of Management StudiesEntrance Examination- 2024Full Marks : 150Master of Computer Information SystemTime : 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 (%) |
|---------|--------------------------|---------------|
| А | Verbal Ability | 40 |
| В | Quantitative Ability | 40 |
| С | Logical Reasoning | 40 |
| D | Computational Foundation | 30 |
| | Total | 150 |

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 ($$ | | | |
|---|---|-----------------------|------------------------|
| <i>the co</i> | brrect answer on the separate answer she lect the pair of words that has the same re | <i>et</i> . lation | ship as lawyer : court |
| | | | |
| A) | professor : university | B) | author : book |
| C) | wine : grapes | D) | volume : litre |
| E) | apple : orange | | |
| | | \leq | |
| 2. Sel | lect the pair of words that has the same re | lation | ship as bee : hive |
| A) | soldier : war | B) | goat : bleat |
| C) | cow : cave | D) | monk : monastery |
| E) | car : van | | |
| | | | |
| 3. Ch | oose the closest meaning to the following | g word | 1: Calumniate |
| A) | to accuse falsely | B) | to accuse truthfully |
| C) | to denounce | D) | to ditch |
| E) | to hide | | |
| | | | |
| 4. Ch | oose the closest meaning to the following | g word | 1: Detest |
| A) | to support | B) | to love |
| C) | to hate intensely | D) | neglect |
| E) | to test | | |
| | 1 | | |
| 5. The man 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 | | | | |
| | | 1 | | | |
| 6. He | e is too important any delay | у. | | | |
| A) | to tolerate | B) | at tolerating | | |
| C) | to tolerating | D) | with tolerating | | |
| E) | No correction required | | | | |
| | | | | | |
| 7 | means extreme old age when a | man t | behaves like a fool | | |
| A) | Imbecility | B) | Senility | | |
| C) | Dotage | D) | Superannuation | | |
| E) | Grand dad | | | | |
| | | | | | |
| 8 | means that which cannot be c | orrect | ted | | |
| A) | Unintelligible | B) | Indelible | | |
| C) | Illegible | D) | Incorrigible | | |
| E) | Impossible | | | | |
| | | | | | |
| 9. Th | e study of ancient societies is called | | | | |
| A) | Anthropology | B) | Archaeology | | |
| C) | History | D) | Ethnology | | |
| E) | Chemistry | | | | |
| | | | | | |
| 10. A | 10. A person of good understanding knowledge and reasoning power is called | | | | |
| A) | Expert | B) | Intellectual | | |
| C) | Snob | D) | Literate | | |
| E) | Illiterate | | | | |

| 11. A person who insists on something is called | | | | |
|---|---|--------|---|--|
| A) | Disciplinarian | B) | Stickler | |
| C) | Instantaneous | D) | Boaster | |
| E) | Miser | | | |
| | | | | |
| 12. T | o keeps one's temper means | | | |
| 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. T | o catch a tartar means | | | |
| A) | To trap wanted criminal with great difficulty | B) | To catch a dangerous person | |
| C) | To meet with disaster | D) | To deal with a person who is more than one's match | |
| E) | None of these | | | |
| | | | | |
| 14. R | ead both the two statements and decide w | hich | of the following answer choice correctly | |
| depic | ts the relationship between these two stat | emen | is. | |
| I. Star years. | ndard of living among the middle class so | ociety | is constantly going up since part of few | |
| II. Inc | dian Economy is observing remarkable gr | rowth | | |
| A) | Statement I is the cause and statement II is its effect. | B) | Statement II is the cause and statement I is its effect. | |
| C) | Both the statements I and II are independent causes. | D) | Both the statements I and II are effects of independent causes. | |
| E) | Both the statements I and II are effects of some common cause | | | |
| | | | | |
| 15. The total of the ages of Ram, Shyam and Hari is 80 years. What was the total of their | | | | |

| ages three years ago? | | | | |
|---|--|----------------|--|--|
| A) | 71 Years | B) | 72 Years | |
| C) | 77 Years | D) | 74 Years | |
| E) | 79 Years | | | |
| | | | | |
| 16. A same. | n institute organized a fete and 1/5 of the What fraction of the total number of stu- | girls dents | and 1/8 of the boys participated in the 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 watermelo | n cos | ts Rs. 5 each. X spends Rs. 38 on these | |
| fruits | . The number of pineapples purchased is | | | |
| A) | 2 | B) | 3 | |
| C) | 4 | D) | 5 | |
| E) | Data is not sufficient | | | |
| | | | | |
| 18. A | woman says, "If you reverse my own ag | e, the | figures represent my husband's age. He | |
| is, of | course, senior to me and the difference b | etwee | n our ages is one-eleventh of their sum." | |
| The v | voman's age is | | | |
| A) | 23 years | B) | 45 years | |
| C) | 34 years | D) | 55 years | |
| E) | None of these | | | |
| | | | | |
| 19. W | That is the product of all the numbers in the | he dia | l 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 | | | | |
| | I | | | | |
| 21. V | What comes next 120, 99, 80, 63, 48, ? | | | | |
| A) | 35 | B) | 38 | | |
| C) | 39 | D) | 40 | | |
| E) | 41 | | | | |
| | | | | | |
| 22.Co | orrect the sentence: | | | | |
| When | n slugs contract their bodies making | \leq | | | |
| A) | Harder and more compact | B) | Their selves harder and more compact | | |
| C) | Themselves hard and them more | D) | Itself harder and more compact | | |
| | compact | | | | |
| E) | It becomes harder and the more | | | | |
| | compact | | | | |
| | | | | | |
| 23. C | hoose the word which best expresses the | mean | ing 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 | | | | |
| | 1 | 1 | | | |
| 25. C | 25. Choose the word which best expresses the meaning of the word: Embezzle | | | | |

| A) | Misappropriate | B) | Balance |
|-------|--|--------|----------------------------|
| C) | Remunerate | D) | Clear |
| E) | Obtrusion | | |
| | 1 | 1 | |
| 26. 0 | Choose the word which is the exact oppos | ite of | the given word: ENORMOUS. |
| A) | Soft | B) | Average |
| C) | Weak | D) | Tiny |
| E) | Small | | |
| | | 1 | |
| 27. 0 | Choose the word which is the exact opposi- | ite of | the given word: Artificial |
| A) | Red | B) | Natural |
| C) | Truthful | D) | Solid |
| E) | Liquid | | |
| | | | |
| 28. 0 | Choose the word which is the exact opposi- | ite of | the given word: Exodus |
| A) | Influx | B) | Home-coming |
| C) | Return | D) | Restoration |
| E) | Family | | |
| | | | |
| 29. C | Choose the word which is the exact opposi- | ite of | the given word: Relinquish |
| A) | Abdicate | B) | Renounce |
| C) | Possess | D) | Deny |
| E) | Rule | | |
| | | 1 | |
| 30. C | Choose the word which best expresses the | mean | ing 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 | | | | |
|--|---|--------|--|--|
| <u> </u> | | | | |
| 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. T | he meaning of the phrase "To hit the nail | right | on the head" is | |
| 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. T | 'he meaning of the phrase "To set one's fa | ce ag | ainst" is | |
| 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. A | ncient cities were <u>destroyed</u> , but are | cheolo | ogists have found sufficient information | |
| to de | | | | |
| A) | Mostly fragmentary | B) | Obviously necessary | |
| C) | Unwittingly whole | D) | Partially famous | |
| E) | Fully necessary | | | |
| | | 1 | | |
| 35. T | o be a true leader, a manager must not be | too _ | any effective leader depends on the | |
| abilit | y of other people to 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 | | | | |
|---|--|--------------|---|--|
| A) | Difficult | B) | Expected | |
| C) | Diversified | D) | Unpredictable | |
| E) | Promising | | | |
| | | I | | |
| 37. U | Inlike birds that simply spread viruses fro "vessel" where viruses swap genes and b | m an ecom | animal to another animal, pigs are the, 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 p | proper sequence should be: | | | |
| A) | SRPQ | B) | QPRS | |
| C) | QPSR | D) | RQPS | |
| E) | RQSP | | | |
| - | | | | |
| 39. W | When he | | | |
| P : | did not know | | | |
| Q : | he was nervous and | | | |
| R : | heard the hue and cry at midnight | | | |
| S : | S: what to do | | | |
| The p | 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 B) **QSRP** C) **PSRQ QPSR** D) E) QPRS

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 Quantity B** Same recipe to make 30 cakes 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 from the information given. E) The question is wrong 42. (x - 2y)(x + 2y) = 4**Quantity A Quantity B** $x^{2} - 4y^{2}$ 8

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

| 43. 7x + | 43. $7x + 3y = 12$ $3x + 7y = 6$ | | | | |
|---|---|----------------------------------|--|--|--|
| 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 | | | | |
| | | L | | | |
| 44. In tr 90°. V | iangle ABC, the measure of angle A is 2. Which of the following could be the meas | 5° and th ure of an | ne measure of angle B is greater than ngle C? Indicate all possible values. | | |
| A) | 12 degrees | B) | 15 degrees | | |
| C) | 45 degrees | D) | 50 degrees | | |
| E) | 70 degrees | | | | |
| | | | | | |
| 45. Wha | at is the least integer 'n' such that $1/2^n < 0$ | 0.001? | | | |
| A) | 10 | B) | 11 | | |
| C) | 500 | D) | 501 | | |
| E) | 111 | | | | |
| | | | | | |
| 46. In th a nearby proporti | the sunshine, an upright pole 12 feet tall is y upright pole is casting a shadow 10 feet conal to the heights of the poles, what is the | casting long. If he height | a shadow 8 feet long. At the same time, the lengths of the shadows are t, in feet, of the taller pole? | | |
| A) | 10 | B) | 12 | | |
| C) | 14 | D) | 15 | | |
| E) | 18 | | | | |
| | | L | | | |
| 47. If a is the smallest prime number greater than 21 and b is the largest prime number less than 16, then 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 | 9: 12 and | their expenditure are in the ratio 8 : 9 : |
|----------|--|-----------|--|
| 15. If A | saves 1/4 of his income. Find the ratio c | of saving | s 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 | | |
| | | | |
| E) | 89:98:55 | 2) | |

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 | | |

| | | | 1 |
|--------|-------------|------------------------|----|
| 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 |
| ŕ | | , i | |
| 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 km/h, he reaches the office 5 minutes late. If he goes at a speed of 20 km/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 | | |



| 56. A radius | 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 22 tecl | 30 technicians working 5 hours a day can a hnicians working 3 hours a day repair 36 b | repair 12 oikes? | bikes in 11 days, in how many days will | | | | |
| A) | 75 | B) | 65 | | | | |
| C) | 45 | D) | 84 | | | | |
| E) | 88 | | | | | | |
| | | | | | | | |
| 58. Th | e successive discount of 20%40% and 109 | % is equi | ivalent to a single discount of | | | | |
| A) | 70% | B) | 60% | | | | |
| C) | 43.5% | D) | 48% | | | | |
| E) | 45% | | | | | | |
| | | | | | | | |
| 59. A Find th | car was sold at 10% loss. If it was sold at he selling price | Rs 460, t | here would have been a profit of 15%. | | | | |
| A) | 360 | B) | 400 | | | | |
| C) | 380 | D) | 420 | | | | |
| E) | 346 | | | | | | |
| | | | | | | | |
| 60. A 50m x 30m rectangular field has a 3m wide path outside the field . What is the area of the path? | | | | | | | |
| A) | 700 m ² | B) | 500 m ² | | | | |
| C) | 2100 m ² | D) | 500 m ³ | | | | |
| E) | 2101 m ² | | | | | | |
| | | 1 | | | | | |

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 30mph and travelled the rest of the distance at an average speed of 20 m/s. In terms of Y what was Shyam's average speed for the entire trip?

| - | - | | |
|----|----------------|----|----------------|
| A) | 100/(Y + 45) | B) | (200 - Y)/2 |
| C) | 6000/(300 - Y) | D) | 9000/(200 - Y) |
| E) | 9000/(200 + 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) | 9 1/3 Liters |
|----|-----------|----|---------------|
| C) | 10 Liters | D) | 13 2/3 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 | B) | When full container B holds 9 L of |
|----|---------------------------------------|----|---|
| | milk | | milk |
| | | | |
| C) | Container A is 4/5 full and container | D) | Container A is 1/5 full and container B |
| | B is 2/7 full | | is 2/8 full |
| | | | |
| E) | Container A is 3/5 full and container | | |
| l | 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) | t + u = 9 | B) | t - u = -5 |
|----|------------|----|------------|
| C) | -t + u = 9 | D) | t + u = -9 |
| E) | t + 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) | x < 3 | B) | Triangle ABC is a right triangle |
|----|--------|----|--------------------------------------|
| C) | x > 3 | D) | Triangle ABC is not a right triangle |
| E) | x > 10 | | |

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

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

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 | | |
| | L | 1 | |

| 75. If S is an integer which of the following must be odd? | | | | |
|--|---|-----------|--|--|
| A) | S + 1 | B) | 2S – 1 | |
| C) | $S^2 + 2$ | D) | S + 2 | |
| E) | 2S | | | |
| | | I | | |
| 76. If al | $\infty > 0$, then which of the following must | be true? | | |
| A) | a/b < 0 | B) | a > 0 | |
| C) | ab/c > 0 | D) | bc < 0 | |
| E) | a > 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 | $7^{x+2} 25^y = 3^9 5^{x-3}$, what is the value of y? | | | |
| A) | -3 | B) | -1 | |
| C) | -2 | D) | 0.5 | |
| E) | 2 | | | |
| | | | | |
| 79. Shy | am's age is 5 more than twice Ram's age | . In 20 y | ears, Ram's age tripled will be 7 more | |
| | yanı s'age doubled. How old will Silyanı | | | |
| A) | 21 | B) | 24 | |
| C) | 30 | D) | 31 | |
| E) | 62 | | | |
| | | | | |
| 80. If x which 3 | 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)

| Direc | Directions: For the following questions, select the best of the answer choices given. Tick ($$ | | | | |
|--------|---|--------|-----------------------------------|--|--|
| the co | prrect answer on the separate answer she | eet. | | | |
| 81. If | BAD is coded as YZW and FIGHT is co | oded a | s URTSG then HAG will be coded as | | |
| A) | GAH | B) | SZT | | |
| C) | WAG | D) | RST | | |
| E) | RTS | | | | |
| | | | | | |
| 82. If | FDF WY HJ SU stands for EXIT then | I DF | MO SU DF QS stands for | | |
| A) | FRUIT | B) | ENTER | | |
| C) | MOUSE | D) | TREES | | |
| E) | TEASE | | | | |
| | | | | | |
| 83. If | 52x3 = 812 and $4x5 = 1620$ then $6x7 =$ | | | | |
| A) | 6677 | B) | 6767 | | |
| C) | 2428 | D) | 2824 | | |
| E) | 3467 | | | | |
| | | | | | |
| 84. G | liven the sequence of numbers 2,5,11,14 | ,17,2 | l circle the odd one | | |
| A) | 21 | B) | 17 | | |
| C) | 3 | D) | 14 | | |
| E) | 54 | | | | |
| | 1 | 1 | | | |
| 85. G | 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 | 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 | |
| , | | , | 5 | |
| E) | The question is wrong | | | |
| <i>,</i> | | | | |
| · · · | | | | |
| | | | | |
| 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 | B) | Statement II is the cause and statement | | |
|----|--|----|--|--|--|
| | II is its effect | | I is its effect | | |
| | | | | | |
| C) | Both the statements I and II are | D) | Both the statements I and II are effects | | |
| | independent causes | | of independent causes | | |
| E) | Both the statements I and II are effects | | | | |
| | 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 | B) | Statement II is the cause and statement |
|----|---|----|--|
| | II is its effect | | I is its effect |
| C) | Both the statements I and II are independent causes | D) | Both the statements I and II are effects of independent causes |
| E) | Both the statements I and II are effects of some common cause | | |

92. **Statement:** In a one day cricket match, the total runs made by a team were 200. Out of these 160 runs were made by spinners.

Conclusions:

1. 80% of the team consists of spinners.

2. The opening batsmen were spinners.

| A) | Only conclusion I follows | B) | Only conclusion II follows |
|----|---------------------------|----|----------------------------|
| | | | |

| Either I or II follows | D) | Neither I nor II follows | | |
|---|--|--|--|--|
| Both I and II follow | | | | |
| | | | | |
| the legislature decides to fund the agricu | ltural | subsidy program, national radio, and the | | |
| business loan program, the only other sin | ngle p | rogram that can be funded is | | |
| hurricane preparedness. | B) | harbor improvements. | | |
| school music program. | D) | senate office building remodeling. | | |
| international airport. | | | | |
| | | | | |
| tatements: No women teacher can play. | Some | women teachers are athletes. | | |
| lusions: | | | | |
| 1. Male athletes can play. | | | | |
| II. Some athletes can play. | | | | |
| Only conclusion I follows | B) | Only conclusion II follows | | |
| Either I or II follows | D) | Neither I nor II follows | | |
| Both I and II follow | | | | |
| | | | | |
| tatements: All bags are cakes. All lamps | are ca | akes. | | |
| lusions: | | | | |
| I. Some lamps are bags. | | | | |
| II. No lamp is bag. | | | | |
| Only conclusion I follows | B) | Only conclusion II follows | | |
| Either I or II follows | D) | Neither I nor II follows | | |
| Both I and II follow | | | | |
| | 1 | | | |
| 96. Statements: All mangoes are golden in colour. No golden-coloured things are cheap. | | | | |
| Conclusions: | | | | |
| All mangoes are cheap. | | | | |
| Golden-coloured mangoes are not chea | p. | | | |
| Only conclusion I follows | B) | Only conclusion II follows | | |
| Either I or II follows | D) | Neither I nor II follows | | |
| | Either I or II follows Both I and II follow The legislature decides to fund the agricu business loan program, the only other sin hurricane preparedness. school music program. international airport. tatements: No women teacher can play. In lusions: I. Male athletes can play. II. Some athletes can play. II. Some athletes can play. Only conclusion I follows Either I or II follows Both I and II follow tatements: All bags are cakes. All lamps lusions: I. Some lamps are bags. II. No lamp is bag. Only conclusion I follows Either I or II follows Either I or II follows Both I and II follows Either I or II follows Both I and II follows Either I or II follows Either I or II follows Either I or II follows Either I or II follows Both I and II follows Either I or II follows Either I or II follows | Either I or II followsD)Both I and II followIBoth I and II followIThe legislature decides to fund the agricultral business loan program, the only other sile phurricane preparedness.B)school music program.D)international airport.D)international airport.Itatements: No women teacher can play.Some langes are play.II. Some athletes can play.B)Either I or II followsB)Both I and II followsB)Either I or II followsB)I. No lamp is bag.D)Only conclusion I followsB)Either I or II followsB)Either I or II followsB)Either I or II followsB)Either I or II followsD)Both I and II followsD)Both I and II followsD)Both I and II followsB)Either I or II followsD)Both I and II followsB)Either I or II followsB)Either I or II followsB)Both I and II followsB)Colden-coloured mangoes are not cheap.Golden-coloured mangoes are not cheap.Only conclusion I followsB)Either I or II followsB) <tr< td=""></tr<> | | |

| E) | Both I and II follow | | | |
|---|--|----------|--|--|
| | | <u> </u> | | |
| 97. S | tatements: Some doctors are fools. Some | e fools | s are rich. | |
| 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. T | he attainment of individual and organisat | ional | goals is mutually interdependent and | |
| linkee | d by a common denominator - employee | work | motivation. Organisational members are | |
| motiv | vated to satisfy their personal goals, and the | hey co | ontribute their efforts to the attainment of | |
| organ | nisational objectives as means of achievin | g thes | e personal goals. | |
| The p | bassage best supports the statement that m | otiva | tion - | |
| A) | encourages an individual to give | B) | is crucial for the survival of an | |
| , | priority to personal goals over | | individual and organisation. | |
| | organisational goals. | | J | |
| | | | | |
| C) | is the product of an individual's | D) | is the external force which induces an | |
| | physical and mental energy. | | individual to contribute his efforts. | |
| E) | makes organisation and society | | | |
| | inseparable. | | | |
| | | | | |
| | | | | |
| 99. O | ne of the important humanitarian by-proc | lucts of | of technology is the greater dignity and | |
| value | that it imparts to human labour. In a high | nly inc | dustrialized society, there is no essential | |
| differ | rence between Brahmin and Dalit, Muslin | n and | Hindu; they are equally useful and | |
| hence | e equally valuable for in the industrial soc | iety i | ndividual productivity fixes the size of | |
| the pa | ay cheque and this fixes social status. | | | |
| The passage best supports the statement that: | | | | |
| A) | technology decides individual's social | B) | castes and religions are man-made. | |
| | status. | | | |
| C) | human labour has dignity and value. | D) | all individuals, irrespective of caste and | |
| | 6 , | , | creed, are born equal. | |
| E) | industrial society is a great leveller of | | | |
| | men. | | | |
| | | | | |

| 100. Odometer is to mileage as compass is to | | | | | | |
|--|--|----|------------|--|--|--|
| A) | Speed | B) | Hiking | | | |
| C) | Needle | D) | Direction | | | |
| E) | Depth | | | | | |
| | | | | | | |
| 101.1 | Marathon is to race as hibernation is to | | | | | |
| A) | Winter | B) | Bear | | | |
| C) | Dream | D) | Sleep | | | |
| E) | Awake | | | | | |
| | | | | | | |
| 102. 0 | Cup is to coffee as bowl is to | | | | | |
| A) | Dish | B) | Soup | | | |
| C) | Spoon | D) | Food | | | |
| E) | Fork | | | | | |
| | | | | | | |
| 103. 1 | Exercise is to gym as eating is to | | - | | | |
| A) | Food | B) | Dieting | | | |
| C) | Fitness | D) | Restaurant | | | |
| E) | House | | | | | |
| | | | | | | |
| 104. 0 | Careful is to cautious as boastful is to | | | | | |
| A) | Arrogant | B) | Humble | | | |
| C) | Joyful | D) | Suspicious | | | |
| E) | Respect | | | | | |
| | | | | | | |
| 105.1 | 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 | B) | more people buy houses in the month |
|----|---|----|--------------------------------------|
| | thirteen years from now than it is | | of February than in any other month. |
| | today. | | |
| C) | during the winter months, the prices | D) | there were about 4 million homes for |
| | of single-family homes are the lowest. | | sale during the month of February. |
| E) | warm winter weather is likely to affect | | |
| | 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 | B) | ice cream store owners would be better | | |
|------------------------------|------------------------------------|----|--|--|--|
| | revenue than other low-fat foods. | | off carrying only low-fat ice cream. | | |
| | | | | | |
| C) | ice cream store owners no longer | D) | low-fat ice cream is more popular than | | |
| | think that low-fat ice cream is an | | other kinds of ice cream. | | |
| | unpopular item. | | | | |
| | | | | | |
| E) | consumers are fickle and it is | | | | |
| | impossible to please them | | | | |
| | | 1 | | | |
| | | | | | |
| 108. | 108. SCD, TEF, UGH,, WKL | | | | |
| A) | CMN | B) | UJI | | |
| C) | VIJ | D) | IJT | | |
| E) | TIJ | | | | |
| | | | | | |
| 109. ELFA, GLHA, ILJA,, MLNA | | | | | |
| A) | OLPA | B) | KLMA | | |
| | | | | | |

| C) | LLMA | D) | KLLA | | |
|--|---|--------|--------------------------|--|--|
| E) | MLLA | | | | |
| | | | | | |
| 110. | Look at this series: 58, 52, 46, 40, 34, | 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, Wh | at nur | nber 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 o | others | 2 | | |
| A) | Туге | B) | Steering wheel | | |
| C) | Engine | D) | Car | | |
| E) | Wind shield | | | | |
| | | | | | |
| 113. | Which word does NOT belong with the o | 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 | | | | |
| | | | | | |

| 115. | 115. Which word does NOT belong with the others? | | | | |
|------------|--|--------|--------------------------|--|--|
| A) | Leopard | B) | Cougar | | |
| C) | Elephant | D) | Lion | | |
| E) | Cheetah | | | | |
| | | 1 | | | |
| 116. | Which word does NOT belong with the o | thers | ? | | |
| A) | Couch | B) | Rug | | |
| C) | Table | D) | Chair | | |
| E) | Sofa | | | | |
| | | I | | | |
| 117. | The miser gazed at the pile of go | old co | oins in front of him. | | |
| A) | Avidly | B) | Admiringly | | |
| C) | Thoughtfully | D) | Earnestly | | |
| E) | Honestly | | | | |
| | | | | | |
| 118. | I saw a of cows in the field. | | | | |
| A) | Group | B) | Herd | | |
| C) | Swarm | D) | Flock | | |
| E) | Team | | | | |
| | | 1 | | | |
| 119. | He is so that he immediately beli | eve n | ny story of ghosts. | | |
| A) | Innocent | B) | Credulous | | |
| C) | Vociferous | D) | Credible | | |
| E) | Miser | | | | |
| | | | | | |
| | 120. Do you know? | | | | |
| 120. | Do you know? | | | | |
| 120. A) | Do you know? where she comes from | B) | where does she come from | | |

| E) | from does she come where | |
|----|--------------------------|--|
| | | |

Section IV: General Awareness (Full Marks: 30)

| Direc | Directions: For the following questions, select the best of the answer choices given. Tick ($$ | | | | |
|--------|---|--------|-------------------------------|--|--|
| the co | prrect answer on the separate answer she | et. | | | |
| 121. | The full form of HTTP is | · | | | |
| 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 D | ata Fl | ow Diagram? | | |
| A) | Arrow (Data Flow) | B) | Cartinality | | |
| C) | External Entity | D) | Process | | |
| E) | Data Store | | | | |
| | | | | | |
| 123. | Which one of the following is an Operating | ng Sy | stem? | | |
| A) | Ruby | B) | Python | | |
| C) | Small Talk | D) | Android | | |
| E) | Java | | | | |
| | | | | | |
| 124. | Which one of the following is a valid pha | se of | Waterfall Model? | | |
| A) | Prototyping | B) | Analysis | | |
| C) | Backlog | D) | Sprint Session | | |
| E) | JAD | | | | |
| | | | | | |
| 125. | is a memory used to h | old da | ata permanently. | | |
| A) | ROM | B) | Screen | | |
| C) | RAM | D) | Peripheral Device | | |

| E) | Output Hardware | | | | | |
|---|---|----------------------|-------------------|--|--|--|
| | | | | | | |
| 126. | A Router connects two or more | | | | | |
| A) | Screen | B) | Pixles | | | |
| C) | Clocks | D) | Speakers | | | |
| E) | Networks | | | | | |
| | | | | | | |
| 127. | words comprise of 32 bits. | | | | | |
| A) | Two | B) | Three | | | |
| C) | One | D) | Zero | | | |
| E) | Four | | | | | |
| | I | $\overline{\langle}$ | | | | |
| 128. | Octal number system has a base value equ | ual to | | | | |
| A) | 2 | B) | 16 | | | |
| C) | 4 | D) | 8 | | | |
| E) | 6 | | | | | |
| | | | | | | |
| 129. | Which one of the following is not a valid | emai | address format? | | | |
| A) | user.example.com | B) | use1@example.com | | | |
| C) | user@example.com | D) | user2@example.com | | | |
| E) | ALL | | | | | |
| | | | | | | |
| 130 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 | | | | | | |

| House pages | B) | Title pages | | |
|--|--|--|--|--|
| Web pages | D) | Cover pages | | |
| Entry pages | | | | |
| 1 | 1 | | | |
| URL stands for | | | | |
| Unified Resource Loader | B) | Universal Resource Locator | | |
| Uniform Revolution Location | D) | Unmatched Resource Location | | |
| Uniform Relay Line | | | | |
| | 1 | | | |
| A compiler converts a program into | | language. | | |
| Programming | B) | Conversion | | |
| Machine | D) | Debugger | | |
| Translation | | | | |
| | | | | |
| is an example of applicati | on so | ftware | | |
| Windows | B) | Powerpoint | | |
| Linux | D) | Compiler | | |
| Linker | | | | |
| | | | | |
| The computers used Integrate | d Cire | cuits (ICs) | | |
| Second Generation | B) | First Generation | | |
| Third Generation | D) | Fourth Generation | | |
| Fifth Generation | | | | |
| | I | | | |
| 136 is used to hold multiple values of the same type | | | | |
| Character | B) | String | | |
| Integer | D) | Float | | |
| Array | | | | |
| | House pages Web pages Entry pages URL stands for | House pagesB)Web pagesD)Entry pagesD)Unify pagesD)URL stands forB)Uniform Revolution LocationD)Uniform Revolution LocationD)Uniform Relay LineD)A compiler converts a program intoProgrammingB)MachineD)TranslationD)TranslationD)LinuxD)LinuxD)LinkerD)The computers used Integrated CirclesSecond GenerationB)Third GenerationD)Fifth GenerationD)Fifth GenerationD)IntegerD)ArrayD) | | |

| 137.7 | The ASCII code for the alphabet 'd' is | | · | |
|---|---|--------|-------------------------------------|--|
| A) | 0 | B) | 100 | |
| C) | 100 | D) | 67 | |
| E) | 10 | | | |
| | | | | |
| 138. \ | Which one of the following is an input ha | rdwa | re? | |
| A) | Calendar | B) | Light Pen | |
| C) | Processor | D) | Laptop | |
| E) | CPU Fan | | | |
| | | | | |
| 139. / | An image on the screen is made up of | | | |
| A) | Labels | B) | Instructions | |
| C) | Symbols | D) | Pictures | |
| E) | Pixels | | | |
| | | | | |
| 140. 1 | In, a schema defines how d | ata 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; | B) | SELECT ALL FROM STUDENT; | |
| C) | SELECT ! FROM STUDENT; | D) | LIST * FROM STUDENT; | |
| E) | SELECT * FROM STUDENT; | | | |
| | | | | |
| 142. | is not an Agile Framew | ork | | |
| A) | Scrum | B) | RUBY | |
| | | | | |

| C) | Crystal | D) | DSDM | |
|---|-------------------------------------|--------|--------------------------------------|--|
| E) | FDD | | | |
| | I | | I | |
| 143. | ARP is a layer protocol | | | |
| A) | Network | B) | Connection | |
| C) | Application | D) | Distribution | |
| E) | Transmission | | | |
| | | | | |
| 144. | A Router operates in the layer o | f ISO | /OSI model | |
| A) | Presentation | B) | Application | |
| C) | Session | D) | Network | |
| E) | Physical | | | |
| | | | | |
| 145. | Subnet Mask is used to identify the | | portion of an IP address | |
| A) | Client | B) | Server | |
| C) | Host | D) | Duplicate | |
| E) | Network | | | |
| | | | I | |
| 146. | UDP does not need a circuit to | o be e | stablished before transferring data. | |
| A) | Host | B) | Virtual | |
| C) | Primary | D) | Physical | |
| E) | Secondary | | | |
| | I | 1 | | |
| 147. The main memory communicates directly with the | | | | |
| A) | Screen | B) | Polymorphism | |
| C) | СРИ | 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 SQL | stater | nent. | | |
| A) | DCL | B) | DDL | | |
| C) | TCL | D) | DML | | |
| E) | DQL | | | | |
| | | | | | |
| 150. | 150. Unified Modeling Language is a | | | | |
| A) | Testing Language | B) | Network Design Tool | | |
| C) | Programming Language | D) | Data Flow Diagram | | |
| E) | Modeling Language | | | | |

The End